

**SECTION 106 TECHNICAL REPORT: VOLUME 2 BUILT
ENVIRONMENT**

**SR 520 BRIDGE REPLACEMENT AND HOV PROGRAM, I-5 TO
MEDINA: BRIDGE REPLACEMENT AND HOV PROJECT**

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Acronyms and Abbreviations

APE	area of potential effects
Arboretum	Washington Park Arboretum
BMPs	best management practices
CCMP	Community Construction Management Plan
CENPA	Center for Experimental Nuclear Physics and Astrophysics
CFR	Code of Federal Regulations
CWA	Civil Works Administration
dBA	A-weighted decibels
DEIS	Draft Environmental Impact Statement
DOCOMOMO	Documentation and Conservation of the Modern Movement
DOCOMOMO WeWa	Documentation and Conservation of the Modern Movement, Western Washington
DOE	U.S. Department of Energy
FHWA	Federal Highway Administration
Gray Lane	Gray Lane Preservation and Planning
HAER	Historic American Engineering Record
HOV	high-occupancy vehicle
HPI	Historic Property Inventory
I-5	Interstate 5
ICF	ICF International
MOHAI	Museum of History and Industry
mph	miles per hour
NHPA	National Historic Preservation Act
NOAA	National Oceanic and Atmospheric Administration
NPS	U.S. National Park Service
NRHP	National Register of Historic Places
PA	Programmatic Agreement
SDOT	Seattle Department of Transportation
Seattle Parks Board	Seattle Board of Park Commissioners
SHPO	State Historic Preservation Officer
SR	State Route
TCP	traditional cultural property
USACE	United States Army Corps of Engineers
UW	University of Washington
WER	Washington Emergency Relief Administration
WISAARD	Washington Information System for Architectural and Archaeological Records Data
WPA	Works Progress Administration
WSDOT	Washington State Department of Transportation

Chapter 1

Introduction

The Washington State Department of Transportation (WSDOT) proposes to replace the State Route (SR) 520 Portage Bay and Lake Washington bridges and make other highway improvements under the SR 520, Interstate 5 (I-5) to Medina: Bridge Replacement and High-Occupancy Vehicle (HOV) Project (project). As part of the environmental documentation for the project and to comply with Section 106 of the National Historic Preservation Act (NHPA), WSDOT, acting on behalf of the Federal Highway Administration (FHWA), is required to determine if significant historic properties are located in the project's area of potential effects (APE) and to evaluate the project's effects on these properties. A *historic property* as defined in 36 Code of Federal Regulations (CFR) 800.16(l)(1) is any "historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP)."

WSDOT retained consultants to conduct investigations in the project APE to identify and evaluate cultural resources for historic significance; assess project effects on identified historic properties; and recommend mitigation measures or additional investigation, as needed. In 2005, WSDOT initiated the environmental compliance process and retained CH2M Hill to conduct the historic resource investigations in the APE in compliance with National Environmental Policy Act (NEPA) and Section 106 of the NHPA (Section 106). Since the initiation of the environmental review for the project, both the details of construction and the project APE have changed. WSDOT retained Gray Lane Preservation and Planning (Gray Lane) and ICF International (ICF) in 2010 to prepare this Section 106 Technical Report (technical report), which presents the methods used to inventory, evaluate, and assess the project's effect on historic properties, synthesizes results of the numerous investigations conducted within the APE, and discusses recommendations for additional investigations.

This report has been prepared in two volumes and presents the methods, results, conclusions, and recommendations for the inventory and evaluation of historic properties within the APE. Volume 1 includes all work conducted to identify, evaluate, and assess archaeological resources and traditional cultural properties (TCPs). Volume 2, presented here, describes the methods and results of the identification and evaluation process for historic built environment resources within the APE and also includes an effects assessment and potential mitigation measures.

WSDOT established the APE for this project (the geographic area within which an undertaking may directly or indirectly cause alterations to the character or use of historic properties) in consultation with affected tribes, the State Historic Preservation Officer (SHPO), and other consulting parties. The APE for this project consists of the following four footprints:

- the known or anticipated construction footprint (referred to as the limits of construction) that includes staging and laydown areas;
- a buffer area (one property deep or 200 to 300 feet from the limits of construction, as appropriate) that includes sufficient area to encompass historic structures, commercial buildings and residences, historic districts, and public facilities (including parks and bridges) that might be directly or indirectly affected by demolition, change of land use, noise, dust, vibration, degraded visual quality, or other effects;

- additional areas outside the limits of construction, determined through consultation, such as the entire Roanoke Park Historic District, the entire Washington Park Arboretum (Arboretum)¹, all currently identified potential construction haul routes, potential 6(f) mitigation sites, and all the navigable waters of Portage Bay; and,
- additional sites at the Port of Olympia and the Port of Tacoma that were formerly considered for pontoon construction and staging that are not contiguous with the rest of the APE.

This investigation included a reconnaissance-level historic resources survey, which included all historic resources within the APE constructed prior to 1972. When the significance of a property could not be determined based on the reconnaissance-level survey, more intensive research was conducted. The results are organized by six contiguous geographical segments that comprise the APE along the project corridor—I-5/Roanoke, Portage Bay, Montlake, West Approach, Lake Washington, and Eastside Transition—as well as two sites at the Port of Tacoma and the Port of Olympia, initially investigated for possible pontoon production and transport.

A total of 366 built environment historic properties were identified in the APE (Exhibit 1-1). This total includes previously identified properties, the properties presented in the 2009 *Draft Cultural Resources Discipline Report* (CH2M Hill 2009a), and properties identified during the additional historic resources survey investigations in 2010. The historic properties include two historic districts, contributing elements to the historic districts, and individual properties located outside the historic district boundaries that are either listed or eligible for listing in the NRHP. Exhibits 5-2 and 5-2a through 5-2j in Chapter 5 show the locations and NRHP eligibility of the surveyed properties in all parts of the APE.

Exhibit 1-1. Number of Built Environment Historic Properties Located in the Area of Potential Effects

Segment	Historic Properties
I-5/Roanoke	146
Portage Bay	31
Montlake	174
West Approach	3
Lake Washington	4
Eastside Transition	2
Port of Tacoma and Port of Olympia	6
Total	366

Note: The historic property totals include previously identified properties, as well as those properties newly surveyed as a part of this project. These totals could change as design and construction proceed; they reflect information known at the time of this report.

This overview does not include the Foster Island traditional cultural property (TCP), which is addressed in Volume 1 of this report.

WSDOT, on behalf of FHWA, has evaluated each historic resource located in the APE, and for those that qualified as historic properties under 36 CFR 800, has assessed the Preferred Alternative's

¹ A small, non-contiguous portion of the Arboretum, east of the main park and southeast of Foster Island, is not included in the APE.

effects on each property's seven aspects of integrity (i.e., the property's location, design, setting, materials, workmanship, feeling, or association). The assessment resulted in one of four potential findings:

- **Does Not Alter Integrity:** Either no historic properties are present, or there is no effect of any kind, neither harmful nor beneficial, on historic properties.
- **Alters Integrity:** The undertaking affects historic properties, but does not diminish the characteristics that qualify the property for listing in the NRHP.
- **Diminishes Integrity:** There is an effect from the undertaking which alters the characteristics that qualify the property for listing in the NRHP in a way that diminishes the integrity of the historic property. This includes diminishing the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.
- **Temporarily Diminishes Integrity:** There is an effect from the undertaking, and that effect temporarily (during construction of the project) alters the characteristics that qualify the property for listing in the NRHP in a way that diminishes the integrity of the historic property. This includes diminishing the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

WSDOT, on behalf of FHWA, has determined that the Preferred Alternative would adversely affect historic properties, per provisions outlined in 36 CFR 800.5(a)(1). As described in Chapter 6 of this document, several historic properties located in the APE would experience a direct or indirect alteration of characteristics that would diminish one or more aspects of their integrity, either temporarily or permanently. A Programmatic Agreement (PA) is being developed, in consultation with SHPO, ACHP, and other Section 106 consulting parties, to identify means for avoiding, minimizing, and mitigating adverse effects.² Chapter 8 of this document provides an overview of potential mitigation measures that have been identified at the time of this document's publication.

² Subsequent to the preparation of this document, the PA was signed by all required signatories on June 7, 2011.

Early Exploration and Settlement

The first European to enter Puget Sound was Captain George Vancouver, an officer in the British Royal Navy. In command of the ship *Discovery*, Vancouver embarked on an expedition to explore the Pacific region in 1791 with diplomatic, commercial, and geographic features along the way (Bagley 1916:3–6). After Vancouver, the next to explore the area was Charles Wilkes in 1841. Wilkes, an American, surveyed the North American Pacific coast and is credited with naming Elliott Bay after his midshipman (Thomas 2004:139).

Within a few years, the fledging United States secured its claim on the Oregon Territory, encompassing the areas today known as the states of Oregon and Washington. Under the Oregon Treaty of 1846, settlement throughout the Pacific Northwest began in earnest, as Americans were attracted to the green, expansive valleys (Hayes 1999:171). Immigration accelerated with the Donation Land Claim Act of 1850 and the Homestead Act of 1862, both of which lured settlers to the area with the promise of free land (McCarthy 2009:66). In the fall of 1851, a group of Midwestern settlers, led by Arthur Denny, arrived at what is now Alki Beach in West Seattle. Shortly thereafter, they moved eastward across Elliott Bay to a place called Duwamps or the “Little Crossing-Over Place.” Much preferring this second location to the windswept beach, the Denny party settled and renamed the community after the local Native American leader, Chief Seattle (Coman and Gibbs 1949:56; Thrush 2007:37).

Despite Denny’s friendship with and respect for Chief Seattle, peaceful coexistence with the native peoples of Puget Sound was short lived. Only a few short years after the first Euroamerican settlement in the Puget Sound area, Native Americans witnessed areas important to their traditional lifeways occupied and altered by the new settlers (Thrush 2007:79–80). After the establishment of the Washington Territory in 1853, the new territorial governor began drafting agreements that required the removal of the area’s Native American populations to make the land available for further Euroamerican settlement. Enacted in three councils called the Medicine Creek Treaty (south Puget Sound), the Point Elliot Treaty (northern and eastern Puget Sound, including Seattle), and the Point No Point Treaty (Hood Canal to the Strait of San Juan de Fuca), these agreements called for lands to be handed over to the state in exchange for rights to traditional gathering areas, money, and the relocation of native peoples to designated reservations (Buchanan 1859; Buerge 1989:22–23; Gates 1955:56–58; Klinge 2007:35; Pierce 1855; Slauson 2006:3).

With the signing of the treaties, an entirely new social system was devised for native peoples. Under these agreements, native peoples were to relocate to designated reservations that were placed close enough to industry so that entrepreneurs could still use natives for labor. Reservations were envisioned as a vehicle for Native Americans’ assimilation into the Euroamerican society. However, in the absence of traditional social systems and subsistence, they replaced the natives’ seasonally based lifestyle, centered on hunting and gathering, with a different roaming lifestyle based on seasonal wage labor to feed their families. As a result, Seattleites’ frustration continued with Native Americans’ perceived lack of stability. On the other hand, natives were not content with the reservation system either (Klinge 2007:35–36).

Many Native Americans living in Seattle refused to relocate to reservations. One possible reason for this unwillingness is that they would likely have to share the reservations with tribal rivals and were waiting in vain to be given a reservation of their own. On the streets of Seattle, native people begged for food and assistance, which they believed they were due from the city, a practice which white residents despised (Klingler 2007:36). In 1855, native frustration over treaty agreements forcing them to leave their homelands to live on the alien soil of reservations exploded in the Yakima Indian War. Several regional tribes, including the Yakama and Wenatchee, united together and crossed the mountains. Warriors raided settlements along their route and even launched an attack on the city of Seattle itself (Buerge 1989:23). As Seattleites huddled under the protective defenses of the U.S. Navy sloop *Decatur's* cannon fire, their original goal of Native American assimilation faded (Klingler 2007:37). In 1865, Seattle passed an ordinance restricting Indian encampments to only the most outlying regions of the area, often next to muddy tideflats (Klingler 2007:38).

After the expulsion of native peoples from their land, Seattle entered a decade of economic depression sparked by the conflict, as some settlers fled the region entirely (Klingler 2007:37). However, gradually Seattle reemerged as a land of opportunity because of its ample timber and coal supplies that brought new settlers to the area. By 1890, Seattle had grown to become the second largest city on the west coast (Abbott 2008:62). Only a few short years later, Seattle became the center of many hopeful people's imaginations during the Klondike Gold Rush of 1897. Then, in 1909, the Alaska-Yukon-Pacific Exposition showcased Seattle, celebrated its achievements, and demonstrated its economic potential to the world (Diller 1915:10). By 1910, only 60 years after its founding, Seattle had grown to a population of 230,000 people (Giles 1914:30).

As Seattle evolved, neighborhoods were built and communities developed reflecting the area's diverse population and progress. Within the APE, an important spectrum of Seattle history is captured in the development, evolution, and challenges faced by these areas. Discussed in more detail below, these include the I-5/Roanoke, Portage Bay, Montlake, the West Approach, Lake Washington, and the Eastside Transition geographical segments as well as the Port of Olympia and the Port of Tacoma.

I-5/Roanoke Segment

The I-5/Roanoke segment contains the Eastlake, Roanoke Park, and Capitol Hill neighborhoods. Although Eastlake was first established as the home of white collar workers, Roanoke Park and Capitol Hill emerged as neighborhoods of Seattle's elite and as a result, developed in a remarkably different way from each other.

Eastlake

In the late 1800s, the area around Lake Union emerged as one of Seattle's early industrial centers. A few scattered settlers and speculators developed the land around the lake during the 1870s, sparked by progress in the burgeoning coal industry. Prior to this time, vast quantities of high-quality coal were discovered near Newcastle, but a lack of transportation infrastructure made it too costly to mine and export from Seattle. This condition changed with the completion of the Seattle Coal and Transportation Company's transport system in 1871, which consisted of coal cars moved by both railroads and barges to Seattle's wharves. Almost overnight, a small city sprung up at an important junction in the system on the south end of the lake, located near Westlake Avenue and Roy Street

(Bagley 1916:126; Droker 1977:20,23; Goodyear 1887:106–107). Still, the system was unwieldy and expensive, requiring that coal be transferred many times between railroads and barges before it reached its final destination in Elliott Bay (Droker 1977:19–21; Goodyear 1887:106–107).

Industrial development in Seattle and around Lake Union continued to increase in the 1880s with the completion of the transcontinental railroad in 1883. The railroad fostered new investment in the city's infrastructure and intensive extraction of Seattle coal and timber resources. During this time, railroads, electric street cars, and boat launches made all of Lake Union accessible for the first time (Droker 1977:19–24). David Denny, one of Seattle's early founders, established the first electric street car company to provide service to the area now known as the Eastlake neighborhood, bounded by Lake Union to the west and north, on the east by the present-day I-5 freeway, and on the south by Mercer Street. Operated by the Rainier Power and Railway Company, the tracks extended north along Lake Union's eastern shore and across the lake on a wooden trestle, roughly where I-5 now crosses (Droker 1977:29).

By the 1890s, all of the land along Lake Union's shores was platted, and in 1891, the Eastlake neighborhood was annexed into the city of Seattle (Droker 1977:24,29). Starting in 1897, businesses in the area helped supply miners with everything they required for the journey to the goldfields during the Klondike Gold Rush. However, the timber industry still remained Eastlake's primary enterprise (Droker 1977:31–32). Many sawmills, furniture manufacturers, box and barrel makers, and board and paper processors were established on Lake Union during this period (Droker 1977:50).

In 1911, construction began on the Lake Washington Ship Canal to connect Lake Union with Puget Sound, increasing Lake Union's prominence as an industrial center and bringing even more workers into the Eastlake neighborhood. Completion of the Montlake Cut in 1916 and the Salmon Bay locks in 1917 enabled uninhibited ship movements from Lake Washington to Puget Sound through Lake Union. This greater accessibility attracted even more industry to the Eastlake area. Soon thereafter, electricity plants, ship dry docks, and plane manufacturers appeared (Dorpat 1987:9; Droker 1977:51–52).

The heavy industrial development in the Lake Union area led to a high demand for labor. In response, residential growth in the Eastlake neighborhood expanded alongside the industry. Although many large, single-family homes were built in the northern sections of Eastlake, other areas consisted of primarily apartment homes and multifamily dwellings (Morrow 1994:14). When these housing sources filled up, Lake Union workers began to use houseboats for temporary shelter (Droker 1977:55-57). By the 1920s, apartment buildings were the primary form of housing in the area (Morrow 1994:14). As the number of vacant lots dwindled, older single-family dwellings were eventually subdivided into multifamily residences or torn down for the construction of new apartment buildings (Pryne 1992:A1).

In the 1960s, the Eastlake neighborhood was disrupted by the construction of I-5. Completed in 1962, the highway route cut off Eastlake from the Roanoke and Capitol Hill neighborhoods to the east, effectively defining and partially isolating the community (Morrow 1994:14). Nevertheless, Eastlake's position close to downtown Seattle helped the neighborhood maintain a healthy resident population. In the late twentieth century, industry around Lake Union declined and many of the former industrial developments were replaced or renovated to support marinas, upscale restaurants, and more gentrified business activities (Dorpat 1987:9).

Roanoke Park

The neighborhood which would become Roanoke Park was originally platted under the partnership of David Denny and Henry Fuhrman in 1890 (DAHP 2009:2; O'Connor et al. 2009:7-2). Denny was one of Seattle's earliest settlers and Fuhrman, a native of Germany, was a successful businessman who had made his way across the United States until he settled with his family in Seattle in 1890 (Lewis Publishing Company 1903:488; Crowley 1998). Together, Denny and Fuhrman platted 160 acres along Lake Union (Lewis Publishing Company 1903:488).

Roanoke Park is bounded by East Shelby Street in the north, Harvard Avenue East to the west, East Roanoke Street to the south, and Tenth Avenue East to the east. The community is perched on a relatively flat plateau with precipitous drops on three sides and a steep upward slope to the south toward Capitol Hill. As a result, the neighborhood stands separate from the surrounding residential areas (DAHP 2009:2; O'Connor et al. 2009:7-2).

The first development in the area was an electric line built by Denny in 1891. A branch from the Eastlake line, the trolley line ran up Broadway, terminating at East Lynn Street (DAHP 2009:2-3). Shortly thereafter, the first home was constructed in Roanoke Park in 1899. However, it was not until after the turn of the century that the area saw more significant development (O'Connor et al. 2009: 8-1).

By 1910, two local improvements spurred the development of Roanoke Park: an electric trolley extension and the creation of Roanoke Park. In 1908, the trolley line was extended through the neighborhood and out to the north, connecting again with the Eastlake line and a line continuing northward toward the University of Washington campus (DAHP 2009:2-3). Around this same time, Roanoke Park was established. The park was built on a lot, and once owned by corrupt City Treasurer Adolf Krug; it was seized and transferred to the City of Seattle in 1900. In turn, the City moved the parcel over to the Seattle Parks Department's jurisdiction in 1908. The 1903 Olmsted plan, a comprehensive plan outlining the future vision for all of Seattle's public parks, had envisioned Roanoke Park becoming the north end of Interlaken Park. Interlaken Park, located to the southeast in the Capitol Hill neighborhood, was to be connected to Roanoke's large, semi-circular area of walkways, entrance gates, shelters, and a Portage Bay overlook. This vision changed abruptly in 1910, when instead of a promenade of walkways and shelters, the Seattle Parks Department built only a few walks among broad lawns, flowers, and shrubbery (Sherwood 1974c).

Attracted by the transportation options and elegant park, many homes were soon built for Seattle's influential elite in Roanoke Park. Often designed by notable local architects, the homes reflected a diverse collection of early twentieth century architecture. Thus, Roanoke Park emerged as an early street car suburb of Seattle, attractive for its public spaces and transportation links to downtown. Roanoke's successful development is also likely due to the fact that the neighborhood overlooked the 1909 Alaska-Yukon-Pacific Exposition where Seattle proclaimed its achievements and demonstrated its potential to the world (Diller 1915:10; O'Connor et al. 2009:8-1).

The 1930s brought change to the Roanoke Park neighborhood. By 1939, the neighborhood was largely developed. Changes in its population were also notable in the desired function of the park (O'Connor et al. 2009:8-1). As many young families began to settle in the neighborhood, some sought to use the park for more active recreational use rather than a tranquil natural setting. In 1932, some locals asked the Mayor of Seattle to allow ball games on the grounds. Strictly forbidden previously, the Seattle Board of Park Commissioners (Seattle Parks Board) resisted for several

decades, favoring the use and safety of younger children in the park. Finally, in 1964, a basketball hoop was installed in the center of the park, partially lifting the long-standing ban (Sherwood 1974c).

In the 1960s, the setting of the Roanoke Park neighborhood was altered by construction of I-5 on the west edge of the district and then SR 520 just south of the district. Development in the 1960s and beyond continued to influence the neighborhood, including the construction of St. Patrick's Church in 1961. However, in spite of its many hardships, the community experienced a period of rejuvenation after the 1970s as "the Roanoke Park district became a well-kept secret to the mostly longtime resident families who continued to love it and who had developed a long-standing tradition of celebrating it and striving to perfect it notwithstanding the size of the challenge when confronted with the huge machinations of progress" (O'Connor et al. 2009: 8-19).

The Roanoke Park Historic District was listed in the NRHP in July 2009. There are 101 properties in the district, 80 of which are contributing elements, including Roanoke Park itself and the individually listed William H. Parsons House.

Capitol Hill

The Capitol Hill neighborhood, located on a long ridge overlooking downtown, was named by the neighborhood's primary developer, James Moore, in 1901 (Williams 2001:13-15). Prior to this, the area had been known as Broadway Hill and was positioned around a wagon road cut through the forest to a cemetery at its peak, later named Lake View Cemetery (Williams 2001:19,63-65).

Moore was a very successful developer and his exploits in Capitol Hill were additional impressive accomplishments. Moore marketed the exclusive character of the area to attract Seattle's elite to the neighborhood. By 1913, enough mansions lined 14th Avenue North to earn it the nickname "Millionaire's Row" (Williams 2001:26). Each estate was individually designed, primarily by well-known architects, in lavish grandeur and in a wide range of architectural styles including Tudor Revival, Georgian Revival, Classic Revival, Queen Anne, English Cottage, Classic Box, and Craftsman (Williams 2001:24-26).

As transportation improved, the Capitol Hill neighborhood became accessible to Seattle residents and as a result, grew rapidly. The character of the neighborhood began to change from only single family, elite homes, to eventually include numerous multifamily structures. Housing types were placed adjacent to one another, sometimes with grand houses next to new apartment dwellings. These apartments featured upscale designs and quality construction in an effort to attract the growing middle class, discourage poor tenants, and overcome the prejudice of surrounding mansion dwellers (Williams 2001:33).

A high percentage of Capitol Hill's residents during this period were Catholics. Served by numerous institutions including the Holy Names Academy (1907) at 22nd Avenue and Aloha Street, St. Joseph's Church (1907) and School (1908) on 18th Avenue, and Saint Nicholas School (1910) on Broadway Avenue North, these families established a grand and intimate community (Williams 2001:37,104, 140,142,145). In the early part of the nineteenth century, the area north of St. Joseph's was one of the most heavily Catholic neighborhoods north of San Francisco and west of St. Paul, Minnesota (Seattle Post-Intelligencer 2010).

On Broadway, between Pike and Roy Streets, Capitol Hill's busiest cultural and commercial district developed. Here the Broadway High School—Seattle's first building constructed specifically to be a

high school—opened on the corner of Broadway and East Pine Street in 1902 (Williams 2001:128). Between East Republican Street and East Harrison Street, a block-long Broadway Market was completed in 1928. With a collection of independently owned small shops, the Broadway Market was a progenitor of the modern-day supermarket, soon copied by the Safeway Corporation and other large companies. Within its 25,000 square feet, the market offered a wide variety of shopping opportunities including dairy products, bakeries, meat markets, hair salons, flower shops, delicatessens, and a pharmacy (Williams 2001:158–159).

In later years, the composition of stores along Broadway changed (Williams 2001:38,175). To address increasing housing and retail needs, Broadway Avenue was redeveloped into a medium-density community. Although the area now serves a broader mix of incomes, it is considered to be a desirable Seattle neighborhood (Wilson 1992:D3). Today Capitol Hill is bounded by Fuhrman Avenue East on the north, I-5 on the west, East Pike Street on the south, and 24th Avenue East on the east.

Portage Bay Segment

The Portage Bay segment contains the community of Portage Bay and the public space of the Montlake Playfield. Located on topography lower than surrounding areas, these two locations bordering the portage arm of Lake Union developed later than surrounding areas and dealt with challenges derived from their proximity to the marshy lake.

Portage Bay

The neighborhood of Portage Bay extends along the western shore of Union Lake's eastern arm. This portion of the lake was named "Portage Bay" by the Seattle Port Commission in 1913 to prevent confusion with the more popularly known main portion of the lake. The Portage Bay neighborhood developed along the edge of this bay, occupying the lower topography of today's Fuhrman Ave East and Boyer Avenue East (originally platted 12th Avenue East), north of SR 520 and east of I-5.

Like Roanoke Park, the northern portion of this segment (north of East Shelby Street) was originally platted in the early 1890s under the partnership of David Denny and Henry Fuhrman (Baist 1905:12; Lewis Publishing Company 1903:488). The land located south of East Shelby Street, along Boyer Avenue East, west to 11th Avenue East and south to East Edgar Street, was first platted by Cheshiahud, a local Native American resident, also known as Lake Union John. The platted land, known as John's Addition, was originally homesteaded by Cheshiahud who lived on 5 acres of Lake Union shoreline until shortly after his wife's death in 1906. Thereafter, Cheshiahud joined the flight of many other Native Americans from the Seattle area, primarily caused by the disruptions that increasing settlement by non-natives had on traditional subsistence patterns, village locations, and social networks. Cheshiahud sold his land, making him one of the richest Native Americans in Puget Sound, and moved to the Port Madison Reservation (Kroll Map Co. 1920, 1924; Thrush 2007:77,90).

Although homes were built as early as 1900, this new neighborhood's principal period of development occurred in the 1920s, with a second period of development in the 1950s. Relatively isolated on the far side of Capitol Hill, the Portage Bay neighborhood developed later than the neighboring, higher elevation areas. In 1912, only about 15 homes had been built in the Portage Bay neighborhood, accounting for approximately 8% of the available lots. In comparison, lots in neighboring areas were already approximately 75% occupied. The Portage Bay neighborhood's

undeveloped character, however, quickly changed as infrastructure improvements increased the appeal of the area (King County Department of Assessments 2010).

The Portage Bay neighborhood experienced significant improvements and investments in infrastructure in the early 1900s. In 1905, only one, 6-inch water main existed in the area, running down East Hamlin Street (Baist 1905:14,17). By 1912, water mains had been installed for all streets, and sewers were in place for all streets except one (Baist 1912). Most roads were paved by 1920 except for a few small segments (Kroll Map Co. 1920). By 1924, residents began to flock to the area and the fledgling Portage Bay neighborhood lots were approximately 70% occupied with new homes (Kroll Map Co. 1924).

Through the 1930s and 1940s, residential development slowed in the Portage Bay neighborhood. Its empty lots, covering approximately 30% of the total, remained vacant well into the late 1930s. This drop in development is likely due to the impacts of the Great Depression followed by World War II, which drew attention and resources away from domestic building and construction (Gilbert 1989; Marsh 2005:5).

Shortly after the close of the war, a new wave of development began in the Portage Bay neighborhood. In the 1950s, many large, more modern residences were built in the neighborhood. These new homes were primarily placed on empty lots that remained open from the first years of development. However, it is likely that older homes were also demolished and replaced by newer construction.

The Portage Bay neighborhood has maintained its status as a quiet, primarily single-family residential area since the 1950s. This often required the residents' active attention, as they fought many attempts to rezone areas for multifamily housing or commercial interests (Hooper 1947; Kraus 1985).

Montlake Playfield

One important civic improvement was made during the Great Depression in the Portage Bay segment. In 1929, local property owners petitioned the Seattle Parks Board to establish a playfield in the vicinity of the Montlake neighborhood to entertain the increasing youth population in the growing community. In response, the Seattle Parks Board and City Council selected a site on the southeastern corner of Portage Bay and began work in 1931. Dedicated in 1935, the Montlake Playfield included a recreation center, playfield, and archery range (Sherwood 1974a).

During the 1960s and 1970s, a series of improvements were made to the Montlake Playfield. Located on low topography, the playfield was plagued by swampy and marsh-like conditions, making it susceptible to vermin and mosquito infestations. Starting in 1960, the Seattle Parks Department began filling in the playfields. With the construction of I-5, additional fill from excavations was placed in the area, often haphazardly and intended for later spreading. This unsorted material put uneven pressure on the viscous peat below, estimated to be 20 feet deep, and portions of the playfield buckled and heaved (Sherwood 1974a). In 1966, more sand and gravels from the Ravenna Sewer Tunnel excavations were dumped in the park. Finally, in 1968 a bond measure passed that provided the funding necessary to begin restoration of the playfields. As part of the restoration, 30 lots to the west were added to the park. In 1975 and 1976, a baseball field, soccer and football field, track, and new recreation center were added to the Montlake Playfield's facilities (Gould 2000; Sherwood 1974a). Today the playfield contains one NRHP-eligible Seattle Landmark

building, the Montlake Community Center, and is located within the boundaries of the Montlake Historic District.

Montlake Segment

The Montlake segment encompasses the community of Montlake. This area developed in close association with the canal proposed during the late 1800s between Lake Washington and Lake Union.

Montlake

The community now known as Montlake, extending from the Arboretum on the east, to Portage Bay on the west, to the Montlake Cut on the north, and Interlaken Park and Interlaken Boulevard to the south, was first conceived by Harvey L. Pike. Pike, who joined the rush of speculators to the Montlake area, was drawn to the area's potential. With proximity both to downtown Seattle and one of several potential locations to connect Lake Washington to Puget Sound, an idea first conceived at Seattle's founding, Montlake was a land of potential in the second half of the nineteenth century. Although this dream of a canal was not fully realized well into the nineteenth century, today known as the Montlake Cut connecting Lake Union to Lake Washington, the envisioned real estate profit was enough to lure Pike and many others into the area starting in the 1860s.

Lacking the funds to buy the property outright, Pike obtained the land in 1861 in exchange for his future labor to clear the land (Smith 2004:11). In the years following, Pike slowly began to improve the land, clearing it and unsuccessfully attempting to dig a canal. In 1869, Pike hired draftsman S.C. Harris to draft plans for what he called Union City. This plan, which was formalized on December 6, 1870, included a standard street grid configuration between East Miller Street and Edgar Street with a large swath in the middle reserved for an envisioned canal. The second addition, which Pike submitted in 1875, covered much of the land that makes up Montlake today, stretching to the south of his 1870 plat and today's SR 520 (Smith 2004:11–14). Despite his enthusiastic start, Pike sold his land and moved out of Seattle before his dream of Union City could be realized (Smith 2004:15).

After Pike's departure, the lands he originally platted changed hands many times. In 1909, they were once again owned by one man, James M. Corner. Corner, in turn, hired Calvin and William Hagan to administer the architectural and real estate tasks needed to develop the land. The Hagan brothers replatted the area, changed the proposed street names, and renamed the community the Montlake Park Addition to capture the excellent potential for mountain views from its lots (Sherwood 1974a; Smith 2004:29–30). Over the following years, the Hagans planned and oversaw the installation of paved streets and utilities including water, sewer, gas, and electric, as well as the sale of the lots (Sherwood 1974a; Smith 2004:30).

In 1909, the same year that Montlake was platted, the Alaska-Yukon-Pacific Exposition, located just to the north, brought marked transportation improvements to the area. Trolley car lines and a new road from Seattle along Interlaken Boulevard to Lake Washington made Montlake a convenient suburb of Seattle (Sherwood 1974a). Several years after the Exposition, the canal connecting Lake Washington with Lake Union, first attempted by Pike, became a reality, resulting in the north end of the neighborhood becoming waterfront property (Sherwood 1974a).

The neighborhood south of SR 520, originally known as Interlaken, was developed separately from, though basically concurrently with, the northern part of the neighborhood. John Boyer of the Interlaken Land Company filed his plat in December 1905. Bordered on the west by Interlaken Park and on the east by Washington Park, the plat featured 20 irregularly shaped blocks located on either side of 24th Avenue East to the north of East Galer Street. Boyer imposed restrictive covenants requiring that homes constructed east of 24th Avenue could cost not less than \$3,000, and those west of 24th not less than \$5,000, ensuring above-average construction values (Gould 2000; Smith 2010).

As the neighborhood lots were gradually filled in through the years, homes in Montlake developed into an eclectic, varied group. Few areas have the same architectural style. In some areas, developers attempted to bring uniformity to the area, reflected by clusters of a particular architectural style. However, most areas emulate architectural styles as varied as the personalities of their owners since most homes in Montlake were not designed by notable architects, but rather chosen from a pattern book. From mansions to small bungalows, Montlake homes include a variety of styles including Tudor Revival, Craftsman, and Ranch (Smith 2004:183–195).

In the second half of the twentieth century, Montlake residents fought challenges to their solitude. One major change was the construction of SR 520. Finished in 1962, this freeway assumed the canal route outlined by Pike that was free of development since the actual canal was built farther to the north. This new transportation link continued on to cross Lake Washington, bringing increased traffic through the community. Although they were not able to stop its construction, the Montlake community did successfully ward off plans to widen the bridge over the Montlake Cut, to remove the center strips of Montlake Boulevard East, and the completion of the R.H. Thomson Expressway, which would have cut through the Arboretum (Baker 2006:11; Sherwood 1974a; Smith 2004:93–112).

The Montlake Community Club, an organization of neighborhood residents, has expressed interest in having the Montlake neighborhood considered for nomination for listing in the NRHP. In pursuit of this goal, the Montlake Community Club has undertaken volunteer efforts to map out district boundaries, begun to survey each property in the district, and gathered history on the neighborhood to prepare a historic context. So far, the volunteers have gathered information on approximately 1,000 properties in the district, and their efforts continue. The Montlake Community Club remains committed to exploring the potential of a historic district listed in the NRHP that encompasses their neighborhood and its many historic properties.

West Approach Segment

The West Approach segment encompasses the community of Madison Park and the Arboretum. During different periods, these two areas developed as entertainment centers, both public and private, for the increasing numbers of Seattle residents. Also included in the West Approach segment is the historic-era Miller Street Landfill. Like the Montlake neighborhood, this landfill developed in close association with the Montlake Cut canal.

Madison Park

In the 1864, Judge John J. McGilvra acquired 420 acres of land on the western shore of Lake Washington, including Foster Island. A New Yorker who had practiced law with Abraham Lincoln in

Chicago, he was appointed as the U.S. Attorney for the Washington Territory when Lincoln became president. McGilvra and his wife, Elizabeth, built their home on the mainland to the southeast of Foster Island, in an area now known as Madison Park, and cut a trail from downtown Seattle through the wilderness to their front steps. In a short time, McGilvra's dock became a busy private landing as residents around Lake Washington traveled to Seattle for business by rowing or sailing across the lake and then continuing on using his established trail (Hines 1893:284–285; Grant 1891:448–449; Thomas 2004:16-18).

The McGilvras were the only residents in the area until the 1880s (Thomas 2004:18). They eventually began developing their property as a lakefront resort and entertainment center. To make it easier to reach the development, McGilvra negotiated an extension of the Madison Street Cable Railway from Capitol Hill to the waterfront. In exchange, McGilvra gave the company 21 acres of lakefront property and \$50,000 to develop the area into picnic grounds (Thomas 2004:19–20). McGilvra named his road from the city, as well as the waterfront park, in honor of the fourth president, James Madison (Sherwood 1974b).

By 1889, a new dock and ferry slip were completed at Madison Park and cable car service began along the new route. McGilvra's investments were successful and in 1890 he constructed a five-turreted "Music Palace," capable of seating 500 people, as well as a baseball grandstand that could entertain as many as 1,200 fans (Sherwood 1974b; Thomas 2004:19-20). During this period, McGilvra began leasing small plots of his land and only allowed small summer cottages or tent houses to be built on them (Thomas 2004:26). It was not long before other Lake Washington residents wanted better access to Madison Park. In 1900, public ferry service was established between Kirkland and Madison Park with double-ended boats spacious enough for wagons and horses (Thomas 2004:31).

In the mid 1900s, Madison Park changed from a popular transfer station and amusement center to a quiet, affluent residential area at the end of a transportation line. With the opening of the Montlake Cut in 1916, the water level dropped and overnight, many of the waterfront attractions were left high and dry. In the 1920s, the McGilvra estate released their property, resulting in the sale of the small lots, lifting their construction limitations, and transferring the management of the Madison Park to the Seattle Parks Department (Sherwood 1974b). As a result, Madison Park's characteristic streets of small cottages began to change. As families in the community sought to live in the area year-round, many of these small homes were largely remodeled or demolished altogether and replaced with much larger homes (Thomas 2004:124).

Change in Madison Park continued into the mid-nineteenth century. In 1940, the Lacey V. Murrow Bridge was built to the south from Seattle to Mercer Island. This development caused a decrease in ferry traffic and within 10 years, the Madison Park-Kirkland Ferry ceased operations (Thomas 2004:73–74). As a result, the number of Madison Park visitors began to decrease and the area developed into a quiet waterfront community with a small shopping district (Thomas 2004:104–110).

Miller Street Landfill

After the Montlake Cut was completed in 1916, Lake Washington levels dropped, opening a vast expanse of marshland just to the east of Montlake. Unightly, and prone to vermin infestations, Seattleites had been filling in these coastal areas for several decades, envisioning new development potential (Hanley 1931). In 1910, the Seattle municipality began offering waste collection and

disposal in some areas of the city for the first time (Thomson 1910). The city developed sanitary landfills placed conveniently throughout the city, and soon disposed of all waste in these facilities (Engineering Publishing Company 1918:29). One such landfill, the Miller Street Landfill, was already started when the canal was completed. The new, swampy lands created by the drop in lake levels after the opening of the Montlake Cut only hastened the landfill's use (Carroll 1935).

As the marshlands and city of Seattle grew, so too did the Miller Street Landfill. In 1917, 10,000 cubic yards of material were deposited in the landfill which serviced approximately 25% of the city (Anderson Map Company 1911; Murray 1917; Seattle Engineering Department 1910, 1920). The landfill was covered with soil in an effort to hold down odors and vermin, a task that required 10,000 cubic yards in 1929 (Barkhuff 1929). By 1934, the Miller Street Landfill measured approximately 1,000 feet north-south and 1,125 feet east-west (Department of Health and Sanitation 1934).

Montlake residents began petitioning for the closure of the Miller Street Landfill in 1931, citing its proximity to the residential neighborhood. The landfill was finally closed on January 31, 1936, and all refuse was redirected to the Ravenna Fill (BOLA and Kiest 2003:37; City Comptroller 1936; Seavotto 1931; Winkenwerder 1936).

Washington Park Arboretum

The mainland area currently occupied by the Arboretum was purchased in 1864 by Jackson Pope and Frederic Talbot. Pope and Talbot owned a lumber and cattle empire in California and were looking to expand to the Pacific Northwest. Initially, the men bought an 80-acre tract from the government for \$100. Later, they increased their holdings to more than 200 acres. In 1874, Pope and Talbot's timber interests in the Pacific Northwest were organized as the Puget Mill Company, a subsidiary of the San Francisco-based Pope & Talbot Company (Bagley 1916:278; Kroll Map Co. 1920:10; Thomas 2004:21–22).

Starting in 1896, the Puget Mill Company began logging from 33rd and 37th Avenue North and from Union Bay south to East Valley Street (Thomas 2004:22). Envisioning a future for their land beyond timber but short on cash, the Puget Mill Company struck a deal with the City of Seattle to pave the way for real estate development on some of their acreage. The city agreed to construct a \$35,000 water main to some parcels of the Puget Mill Company's land, and in return, the Puget Mill Company deeded 62 acres to the city (Thomas 2004:33). These 62 acres then became the early beginnings of Washington Park (Bagley 1916:278).

Created from 1900 to 1904, Washington Park was one of Seattle's first parks. More acreage was added in following years and, by 1916, the city owned a total of 165.22 acres (Bagley 1916:278). The city's last acquisitions of land for Washington Park took place with the 1917 purchase of Foster Island from the McGilvra Estate, and then several irregular-shaped lots comprising the southwest corner of the park in 1920-1921 (Easton 1989:24; City of Seattle 2008:15).

The city's development of its various parks, including Washington Park, began in 1903 when it hired John Charles Olmsted and Frederick Law Olmsted, Jr., of the Olmsted Brothers Landscape Architectural Firm of Brookline, Massachusetts. Plagued by years of development stagnation as a result of disagreement and differing political visions, the Seattle Parks Board retained the Olmsteds to create a plan for Seattle's parks that would give direction and help the department run more

efficiently. The system was envisioned as a chain of parks and parkways linking existing parks, such as Washington Park, creating new parks, and stitching them together with park boulevards.

The Olmsteds, popular and revolutionary landscape designers, presented their first plan for Seattle's park system on October 19, 1903 to the Seattle City Council (Bagley 1916:274-275). The Olmsted plan created a greenbelt of 37 parks and boulevards stretching from Woodland Park, through what is now the university campus and along Lake Washington Boulevard, south to Seward Park (BOLA and Kiest 2003; Ott 2010; Takami and Keith 2003). The Olmsted philosophy focused not only on the physical beauty of the landscape, natural resources, and the vistas, but also on the vital relationship between parks and people. Most of the parks and connecting boulevards designed by the Olmsted Brothers in Seattle were built by 1908. The Seattle system is one of the most fully realized and best preserved Olmsted park and boulevard systems in the United States.

For the early part of the twentieth century, the Olmsteds' Seattle-wide plan was generally followed for Washington Park. However, their vision of the park as an open, public space changed beginning in the mid-1930s. Since the 1920s, the University of Washington had been looking for a suitable place to create a botanical garden. In 1934, the Seattle Parks Board answered the university's plea by signing an agreement to let it build an arboretum in Washington Park. Two years later, the University of Washington Arboretum Foundation was formed and, together with the Seattle Garden Club, brought the Olmsted team back to Seattle to landscape the grounds (Klinge 2004:149). The firm drafted the plan for the new Arboretum, a "veritable jewel" of Seattle, in March 1936 (Boren 1936:22). J. Frederick Dawson, the chief designer, worked closely with the Seattle Parks and Recreation Department's staff landscape architect, Frederick Leissler. Between 1937 and 1942, Works Progress Administration (WPA) laborers completed much of the basic infrastructure, still present today, that was outlined in this 1936 plan (Institute of Forest Products et al. 1969:5; University of Washington n.d.:1).

The area around Foster Island and along the shoreline was included in both the 1904 and 1936 Olmsted plans. Envisioned as a series of lagoons, this area was initially an extensive marshland that had developed after the lowering of Lake Washington (Boren 1936:22). By the 1930s, at least two landfills, one of which was the Miller Street Landfill, were also located here (University of Washington 1935). Prior to the late 1960s, landfills were typically located within mainly steep ravines, low-lying swampy areas, former borrow pits, and tidal areas as a way to efficiently reclaim the land and beautify the city (Department of Health and Sanitation 1915:29; Phelps 1978:204-05). To develop the lagoons outlined in the Olmsted plan, dredge spoils were used to both raise the marshland adjacent to the lagoons and likely address these unsightly refuse deposits by covering the exposed trash (CH2M Hill 2009:60). Extensive dredging took place to excavate four lagoons (University of Washington n.d.:5). In 1939, plantings of 16 species of bamboo and 3,500 Japanese irises were added to existing flowering cherry trees and Eastern dogwoods installed by WPA crews just a few years earlier (Arboretum Foundation 1940:7). Although various specimen trees remain, the introduction of SR 520 changed this early landscape. Most of the original plantings are now gone and as a result of significant cutting and filling, the arboretum lost approximately 54 acres of lagoon from SR 520 construction (Institute of Forest Products et al. 1969:5; University of Washington 1967:74).

Lake Washington Segment

The Lake Washington segment encompasses portions of Lake Washington and, on the lake's eastern shoreline, the community of Medina. Today, Lake Washington is spanned by the Albert D. Rosellini (Evergreen Point) Bridge, a major transportation artery between the eastside and Seattle. These areas are defined by transportation challenges presented by Lake Washington.

Lake Washington

The first European to explore today's Lake Washington was Colonel Isaac N. Ebey. In 1850, Ebey ventured up the Duwamish River by canoe and explored the lake for several days, noting the thick forest and vegetation clinging to the shoreline. Ebey named the body of water Geneva but it was also invariably called Dawamish or Duwamish on early government maps. In 1854, Thomas Mercer, an early pioneer of Seattle who later went on to become a county commissioner and judge, suggested the name Lake Washington (Bagley 1916:27,38,46; Rochester 1993:89).

Lake Washington's early image, described by pioneers, was not very attractive. Described as "a sluggish body of water lined with sawmills and fit mostly for storing logs" (McDonald 1955a:82), Lake Washington was a shallow, flood-prone basin. Mercer first proposed the concept of a channel connecting Lake Washington to the Puget Sound during an 1854 celebration (McDonald 1955a:82). In the 1860s, Harvey Pike, who owned land along the portage route, was the first to attempt to dig the canal. Using only a pick, shovel and wheel barrow, Pike believed that the lake would effectively dig the canal for him once a furrow was opened. Horribly wrong, Pike found the compact, dense soils resilient and his efforts never got beyond a small ditch (Droker 1977:19; Smith 2004:12).

In 1871, planners began to more clearly envision a larger canal as a solution to the lake's inundations. Government engineers slated Lake Washington as a potential freshwater moorage in an effort to provide further justification of the canal's expense (McDonald 1955a:82). However, the potential of the canal was not fully realized until increasing numbers of natural resources, including timber and coal, were harvested from the areas surrounding Lake Washington, requiring a transportation route to the Puget Sound in the 1880s.

Aiming to help with flood control and provide a navigable route for the transport of logs, coal, and farm produce, a shallow, 16-foot-wide excavation was completed in 1885 (Chrzastowski 1983:4,6). Known locally as the Portage Canal, this narrow canal was constructed just south of what is now the Museum of History and Industry (MOHAI). The Portage Canal took advantage of the natural difference in the lake-water levels, which produced a current to transport logs or small boats from the bustling timber and sawmill operations, through the chute from the higher Lake Washington to Lake Union (Chrzastowski 1983:6; Sherwood 1974a). A significant step forward, the Portage Canal was limited in its transportation capabilities and provided no flood protection so it was not long before a more inclusive solution was sought.

In 1906, Hiram Chittenden became the new head engineer for the United States Army Corps of Engineers (USACE), Seattle district. Arriving in the Pacific Northwest after completing his assignments to control flooding along the Ohio River and California's Central Valley, Chittenden immediately began to push for a solution to the flooding problems of Lake Washington (Klinge 2007:69-70). In 1910, construction began on a navigable ship canal between Lake Union and Lake Washington. The Montlake Cut, as it was known, was a water passage between these two lakes and was completed in 1916. To construct the canal, USACE dredged a straight channel between Lake

Washington and the eastern edge of Union Bay. Dredging also continued in Union Bay after completion of the Montlake Cut, largely in soft mud and sand. Some of this dredged material was used to fill shallow water or marshes in lands surrounding the canal (Plummer 1991:3). When the last barriers of soil and rock were removed, Lake Washington was lowered 10 feet (3 meters) to the level of Lake Union between August and October 1916 (Galster and Laprade 1991:228). The lowering of Lake Washington eliminated the lake's outlet to the Black River, and the Cedar River was diverted into Lake Washington. The drop in the lake level exposed new waterfront property around the entire perimeter of the lake, creating expansive marshes in some cases (Eastside Heritage Center 2006:7; Klinge 2007:71-72).

After the completion of the Montlake Cut, Lake Washington faced new challenges and changes wrought by pollution, a new consequence of the growing local population. Considered a large enough water body to handle raw sewage, Seattle had 33 separate sewers dumping directly into the lake in 1922. By 1955, sewage quantities discharged into the lake totaled 20 million gallons a day. These increased flows were more than the ecosystem of the lake could effectively handle, and by 1958, signs along the shoreline identified the beaches as unsafe for bathing. Thirty years of relentless clean up and proper water treatment followed until Lake Washington was once again both fishable and swimmable (Eastside Heritage Center 2006:16-17).

Governor Albert D. Rosellini (Evergreen Point) Bridge

The second floating bridge span built across Lake Washington—4 miles north of the Lacey V. Murrow Bridge built in 1940—was the Governor Albert D. Rosellini Bridge (Evergreen Point Bridge). Construction began in 1960 and in August of 1963, the Evergreen Point Bridge was ceremoniously opened (Reynolds 1988:F1). At the time, the Evergreen Point Bridge was the largest floating span in the world at 1.4 miles long. Exemplifying an engineering feat of outstanding proportions, the Evergreen Point Bridge was considered by some to be a “modern wonder of the world” (Seattle Times 1966:34). Some years later in 1988, the bridge was officially renamed the Governor Albert D. Rosellini Bridge—Evergreen Point after the former governor under whose administration the bridge was originally built (Gough 1988:A1). Today, more than 100,000 cars traverse the bridge every day (Gough 1988:A1). The bridge has been determined NRHP eligible under Criteria A and C, with Criteria Consideration G for its exceptional importance.

Medina

Along the shores of Lake Washington, the thick, tall trees first drew lumbermen to the area today known as Medina, stretching from Evergreen Point south to Meydenbauer Bay, west of Clyde Hill. During the 1880s, men worked to fell the great forests. Isaac Bechtel, an Ontario, Canada native, was responsible for logging most of Medina, Bellevue, and Mercer Island during this time. Bechtel and his sons cut and gathered so many logs in Meydenbauer Bay that at times it was said, “you could walk across on them” (McDonald 1955b:84).

Much of the land along the shoreline was soon clear of timber, and berry farms and orchards were developed in the new open spaces (McDonald 1965:142). Drawn by the rural charm and excellent views, Seattle businessman Thomas Dabney became Medina's first permanent settler in 1886. In 1891, Dabney built a dock at Dabney's Landing, located near present-day Medina City Hall, attracting other residents to the area. The following year, the new community named its town Medina Heights after the second holiest Muslim city. Mrs. Samuel Belote, a local resident, picked out the name from

geography books and chose it over Dabney's flowery title of "Flordeline" (Cornwall 2002:67; McDonald 1955b:84, 1965:142-143; Rochester 1993:10).

During the early 1900s, more lakeshore estates emerged in Medina Heights. This trend began in 1905 when Edward Webster, the secretary and general manager of Seattle's Independent Telephone Company, erected a home called "The Gables." Several similar homes followed and on February 18, 1914, Medina Heights was officially platted with large waterfront tracts. In the following years, the area was promoted as an exclusive residential area, located away from the bustle of city life but close enough to enable the trip to be made quickly (McDonald 1965:142-143; Rochester 1993:10-1). A 1913 newspaper advertisement claimed that the trip from Medina to Leschi Park, located on the west side of Lake Washington, could be reached by ferry within 10 minutes and the Smith Tower, a symbol for Seattle commercialism, could be reached within 25 minutes (Cornwall 2002:67).

In 1919, Medina's first marketing campaign characterized the area as "the heart of the charmed land" (Rochester 1993:11). Large, impressive homes built by Seattle's elite lined the shores of Lake Washington. Despite their elegance, many homes were only occupied part of the year, often intended as summer homes for the elite. When a golf club was organized and yachts were moored in front of the large estates, the area's obvious abundant and lavish wealth earned it the nickname the Gold Coast (Corsaletti 1982:86; McDonald 1965:143).

In 1940, the Lacey V. Murrow Bridge was completed to the south, between Mercer Island and Seattle, opening the Lake Washington eastside to greater development (Cornwall 2002:68). Although much of this new development took place in Bellevue to the southeast, Medina Heights grew concerned that its large-lot residences, lack of commercial areas, and personalized public services would be threatened. As a result, on July 26, 1955, Medina Heights incorporated as Medina. The city implemented strict zoning regulations and was zoned completely residential with businesses only able to operate in existing stores with the exterior shell maintained as it was originally built (McDonald 1965:143; Woodward 1971:168-169).

Eastside Transition Segment

The Eastside Transition segment contains the communities of Hunts Point, Yarrow Point, and Clyde Hill. Although incorporated separately, these communities share similar values and face parallel challenges as each municipality works diligently to maintain its way of life.

Hunts Point

In 1871, Marshall Blinn acquired what is today known as Hunts Point, a finger of land stretching into Lake Washington just east of Medina and north of Clyde Hill (McDonald 1955b:84). Blinn, a master millwright, came to Seattle in 1854 and soon emerged as a successful lumbering and shipping magnate. Together with several partners, Blinn founded Seabeck, Washington, a lumbering town located about 20 miles west of Seattle and described in 1885 as "the liveliest place on Puget Sound" (Seattle Times 1958:101). After he left Seabeck, Blinn was involved in several other, less successful ventures in the Seattle area, including a run for Congress, a stock ranch east of the mountains, and an effort to ship ice into the city (Conover 1960:38; Seattle Times 1958:101). After Blinn's death in 1888, Leigh S.J. Hunt bought the property (McDonald 1955b:84).

Hunt, a high school principal from Iowa, came to Seattle in the 1880s. Joining up first with Jacob Furth, the head of the Seattle National Bank, Hunt soon became involved in real estate, mines, street railways, and banks. He was an optimistic man and people gravitated to him. In 1886, Hunt bought the Seattle Post-Intelligencer and, with no prior newspaper experience, brought his dynamic force to the newspaper. Shortly thereafter, Hunt bought land along the eastern shores of Lake Washington, including the areas today known as Hunts Point and Yarrow Point (Bagley 1916:193; Conover 1948:4; Cornwall 2002:67). In 1888, Hunt built a large, 14-room home on the shore of the lake, complete with lawns, barns, gardens, the Yarrow Point fountain, and a park with deer (Knauss 2002:17; Seattle Times 1937:23). Hunt named his estate “Yarrow” after a poem by William Wordsworth describing a glorious estate. Thereafter, the arm of land was known as Yarrow Point (Cornwall 2002:67).

Hunt’s interest in Hunts Point, his namesake spit of land, appears to have been limited. At one point, Hunt logged portions of the area to pursue a better view from his mansion on Yarrow Point (Cornwall 2002:67). Later, he deeded portions of the point to Jacob Firth and Bailey Gatzert (McDonald 1955b:84, 1965:142).

In 1892, Francis Boddy purchased Hunts Point (McDonald 1955b:84). Boddy, a pioneer landscape architect and gardener from England, designed and supervised the construction of many Seattle outdoor spaces including the Kinnear Park, Leschi Park, and the Central Seattle Public Library grounds, as well as the grounds of prominent Seattleites including Henry Yesler, Judge Thomas Burke, and Frank Waterhouse. Prior to coming to Seattle in 1889, Boddy worked on the Westlake Park in downtown Los Angeles, California (Seattle Times 1941:3). On Hunts Point, Boddy began a dairy and greenhouse business, building a sawmill to supply himself with lumber and selling some of the excess (McDonald 1955b:84).

Although still maintaining a rural character spotted with orchards and gardens, after the turn of the century, Hunts Point saw more residential development (Eastside Heritage Center 2006:66). In 1904, James Brewster purchased the tip of Hunts Point, and within 2 years, built a large home. William Meydenbauer, for whom Meydenbauer Bay is named, built a vacation cottage on Hunts Point in 1906 (McDonald 1955b:84). The area soon became known for its elite homes and mansions. Interest in developing Hunts Point increased with the completion of the Lacey V. Murrow Bridge (1940) and the planned Evergreen Point Bridge (1963) because of the easier access the bridges afforded the area. In 1955, Hunts Point incorporated in an effort to protect the community from encroaching development (Cornwall 2002:68). Today, the town remains an exclusive community of mansions housing an upper class population (Seattle Times 2006:C2).

Clyde Hill

Patrick Downey homesteaded much of the land that now makes up Clyde Hill in 1881. Born in Ireland, Downey came to the United States in 1860 and followed the Gold Rush to California. Eventually, Downey settled in the Seattle area, taking up a claim on a ridge on the eastern shore of Lake Washington and building a log cabin. In 1890, President Benjamin Harrison signed a land grant to Downey, assuring his claim in the area (Brazier 1969:160; Seattle Times 1960:33, 1983:102).

In the early years, Downey named a local dock on Meydenbauer Bay “Clyde Landing” after the Clyde River in Scotland. This name was later adopted by the community of Clyde Hill that grew around him. Downey married an Iowa native, Victoria, and brought her to the new home in 1892. After he cleared the land, Downey started a strawberry farm and large dairy with 30 to 40 cows. As the

family grew, eventually having a total of 13 children, the Downeys built a new home in August 1903, which still stands today (Brazier 1969:160–161; McDonald 1955c:45; Seattle Times 1960:33, 1983:102).

With the growth of the Downey family and the arrival of more settlers, public services were needed in the area. The first school in the area had an enrollment of nine children and was started in 1886 in one of the Downey's berry field outbuildings. This building was used during the summer while a one-room building on Bellevue's main street was constructed by local residents, including Downey. Although the children had to travel a farther distance than before, they no longer had to study in a grove of trees to escape the summer heat. By 1900, local enrollment had reached 70 students (McDonald 1955c:45).

Next to arrive in the area were religious services. Starting in 1910, the Downeys opened up their home to the community and a priest visiting from Kirkland would say mass (Brazier 1969:160; Seattle Times 1983:102). Later, Downey donated land on which the first Sacred Heart Catholic Church was built by the Seattle Archdiocese (Brazier 1969:160).

Like many other cities along the Gold Coast in the mid 1900s, Clyde Hill sought incorporation as a way to maintain its community's way of life. Touted as a way "to avoid becoming a city" (Seattle Times 1953:21), Clyde Hill was incorporated in 1955 (Woodward 1971:168). The city's first actions were to institute zoning regulations calling for lots to be at least 0.50 acre in size (Woodward 1971:168). Clyde Hill was also made exclusively an all-residential area, and in 1971, only two businesses were present in the area (Woodward 1971:168). In the process of incorporating, Clyde Hill turned down Bellevue's annexation request. Unsure of the direction the new Bellevue government would take, Clyde Hill opted for self government (Seattle Times 1953:21).

In the years following, Clyde Hill would continue to pursue its zoning preferences and governing independence. Threatened by plans such as a new taller church, the community took its complaints and zoning standards to court. The local Catholic diocese, seeking to exceed the Clyde Hill height limit with its 48-foot-tall, one million dollar church, was eventually able to overturn the city, citing a lack of cause to deny the building permit (Seattle Times 1957a:33, 1957b:19). By 1960, the new Sacred Heart Catholic Church compound was in place, including a school, convent, auditorium, rectory, and church with a seating capacity for 1,000 (Smith 1960:89). Despite this setback, Clyde Hill continued to maintain its residential character well into the twentieth century, still limiting the area to only one business in 1984 (Duncan 1984:45,51). Instead, Clyde Hill shoppers today venture over to neighboring Bellevue for their consumer needs (Bach 2006:B1).

Yarrow Point

As with Hunts Point, Leigh S.J. Hunt bought what is today Yarrow Point in 1888 (McDonald 1955b:84). Hunt built his estate, Yarrow, here on the shores of Lake Washington. Thereafter, the arm of land was known as Yarrow Point (Cornwall 2002:67). Surrounding a large, 14-room home, the Yarrow estate included lawns, barns, gardens, the Yarrow Point fountain, and a park with deer (Knauss 2002:17; Seattle Times 1937:23).

Around 1888, Hunt deeded some land at the base of Yarrow Point to his friend, Jacob Furth, the founder of the Puget Sound National Bank. Furth developed the land, including some of present-day Wetherill Nature Preserve, into a country summer estate complete with fruit orchards, vegetable

gardens, strawberry fields, and pastures of milk cows and sheep. Furth's wife named the home Barnabee, after her favorite Shakespearean actor, Henry Clay Barnabee (Knauss 2002:18).

In about 1902, Edward P. Temper brought a different kind of elite agriculture to Yarrow Point. Trading some land on Bainbridge Island for 300 feet of waterfront, Temper began planting English holly on his Yarrow Point property. Waiting 18 years for the holly to mature, Temper planted strawberries between the rows before the holly plants were fully developed. By 1920, the Temper ranch was finally producing holly and was one of the largest such establishments in the United States. The family continued until just after World War II when tax rates increased to the point that the holly operation was no longer profitable. In 1960, the Tempers sold the land for real estate development (Knauss 2002:19–20).

The first real estate development on Yarrow Point was made by George F. Meacham. Meacham, a Scotsman, filed the first plat for Yarrow Point in 1907 (Knauss 2002:15). Giving the streets Scottish names, Meacham's development began the community's trend toward elite, suburban living built on working for wages and not agricultural production. Although other small agricultural operations existed on Yarrow Point in the early nineteenth century, rising costs and land values led many residents to sell their property for real estate development (Knauss 2002:15,19–20).

Interest in developing Yarrow Point only increased with the completion of the Lacey V. Murrow Bridge (1940) and the planned Evergreen Point Bridge (1963). In June of 1959, Yarrow Point incorporated to have more control over local zoning and a strong influence in its local government (Knauss 2002:25). After its incorporation, Yarrow Point established zoning regulations outlining the minimum lot size and only permitting single-family dwellings. Together, the community developed strategies to address needs for road improvements, sidewalks, paths, and utilities (Knauss 2002:30-32). Through hard work, the community has maintained Yarrow Point's "beauty and comfortable atmosphere" to this day (Knauss 2002:32).

Port of Olympia and Port of Tacoma

Port of Olympia

The area that became the Port of Olympia began as a peninsula known as Cheet-woot. Cheet-woot, which means "bear" in Nisqually, resembled the shape of a bear at high tide. This spit of land was used by the Nisqually, Duwamish, and Squaxin Island tribes as a place to trade, gather shellfish, and camp in the winter (Stevenson 1984). It was not until the mid-nineteenth century that Euroamerican settlers came to inhabit the area (Stevenson 1982:3–4; Wilma 2003).

In 1831, the Hudson's Bay Company established an outpost in the nearby settlement of Nisqually, sparking interest in the area. In 1846, Americans Levi Lathrop Smith and Edmund Sylvester claimed the beaches of Cheet-woot and named the area Smithfield. Together, the two men built the area's first wharf (Newell 1985:12-13; Stevenson 1982:4, Wilma 2003).

The first Puget Sound Collection District and Custom House was established at Olympia in February of 1851. The Custom House required that all ships entering Puget Sound come down to Olympia, which brought considerable prestige to the growing community (Stevenson 1982:5). By 1852, shipments out of Olympia expanded to include coal, lumber, and fish (Stevenson 1982:5). In the

years following, steamship travel out of Olympia increased, the wharfs were expanded, and shipbuilding flourished (Stevenson 1982:7).

Along with increasing commerce, the growing population of settlers and immigrants rapidly pushed the area's native peoples from their lands. On December 26, 1854, the Treaty of Medicine Creek was signed by many tribes in the Puget Sound area, including those that had traditionally used Cheet-woot. With the treaty, the tribes were able to maintain permanent rights of access to traditional hunting and fishing grounds, but were confined to designated reservations and surrendered most of their lands in exchange for \$32,500 (Crowley 2003).

Port Development

By the 1870s, the lack of a railroad terminus and ever-present dredging needs drew the attention of Olympia residents. Passed up by the Northern Pacific Railroad for nearby Tacoma in 1873, Olympians came together to build their own railroad spur to the port, supplying everything from land and money to labor and provisions for workers (Miller 1921:245–246). In 1878, Olympia successfully connected the spur to the mainline railroad in Tenino. However, the shallow harbor with its famously extensive mudflats made the connection between the new rail line and the port facilities inefficient. Following an 1885 survey, the city hired a dredge and constructed a long wharf, measuring 4,798 feet and requiring 927 piles, to connect the port to deep water (Stevenson 1982:7). The U.S. Army Corps of Engineers (USACE) continued dredging efforts from 1909 to 1911. Excavated soils were used to reclaim tidelands in the vicinity and resulted in the creation of an additional 29 blocks for development, including much of what is now downtown Olympia (Stevenson 1982:8).

A countywide vote established the Port District in Olympia on November 7, 1922. The new Port of Olympia facilitated additional expansions of the existing port facilities, including improvements for better navigation of the harbor, which attracted a growing amount of ship traffic (Stevenson 1982:10). During the years following the establishment of the Port District, Olympia emerged as a significant exporter of materials to locations around the world.

The sudden growth in cargo loads during World War II demanded additional facilities. During the 1940s, channel dredging continued, rail lines were expanded, and new buildings erected, including what is now the Port of Olympia administration building, a cold storage facility, and an improved shipping wharf (Stevenson 1982:18).

Port of Tacoma

British and American settlement in the southern Puget Sound region near Tacoma had drastically affected local Native American groups by the mid-nineteenth century. Many area tribes were relocated during this period. In 1854, the Medicine Creek Treaty called for the abandonment of most southern Puget Sound villages and required Native Americans to relocate to the Puyallup, Muckleshoot, or Squaxin Island reservations (Ruby and Brown 1992). The Puyallup Reservation included the area now encompassed by the Port of Tacoma and the Concrete Technology Corporation facility.

Tacoma emerged as a prominent center for commerce and industry in the late nineteenth century, during which time much of the reservation land previously assigned to the Puyallup Tribe was encroached upon by the community's urban and industrial growth. In 1873, the Northern Pacific Railroad (then the Milwaukee Railroad and Union Pacific Railroad) extended the region's first

transcontinental railroad line into Tacoma. Terminating at Commencement Bay near the foot of present-day Division Avenue, the railroad line directly connected Tacoma with the Great Lakes region and initiated a period of economic growth in the city. Tacoma grew around this focal point of trade and distribution on Commencement Bay, which served as a transfer point for goods from the railroad to steamships (Fairbanks and Martinez 1981).

At the time of the railroad's arrival, much of the Port of Tacoma as it exists today was not yet developed. The mouths of Wapato and Hylebos creeks were located to the north and south of what is now the Concrete Technology Corporation facility, and areas to the west and northwest of East 11th Street still remained under the waters of Commencement Bay. Beginning in 1889, the Thea Foss Waterway (formerly City Waterway) was the first waterway in the former tideflats of Commencement Bay to be dredged for increasing the accessibility to industries established around the terminus of the railroad line. Eight waterways have been dredged in the former tideflats since, significantly changing the landforms in the area (Morgan 1979).

By the turn of the twentieth century, much of the northern portion of the tideflats had been filled in with dredged materials. Privately owned docks were constructed over the remaining tideflats to reach the bay's deeper waters. Private development of the bay continued until the Port of Tacoma was established in November 1918 by a countywide referendum. The port was established during a period of economic prosperity, largely sustained by the local timber industry. Other industries on the Tacoma waterfront included lumber and shingle mills, shipyards, flour mills, and electrometallurgical and electrochemical plants (Fairbanks and Martinez 1981).

The Port of Tacoma began developing 240 acres of the Commencement Bay tideflats in 1919. At this time, dredged materials from the enlarged waterways were redeposited on top of wetland areas to provide suitable land for development (Long 2003). This and subsequent dredging activities have created an artificial cap of imported fill material between at least 5 and 10 feet thick across most of the port's property (Cultural Resource Consultants 2008). The Blair Waterway extended to East 11th Street when it was first constructed. Both the Blair and Hylebos waterways were dredged several times between the 1930s and 1960s, extending both farther southeast.

The existing Hylebos Waterway Bridge was constructed in 1939, and this bridge, coupled with a wood trestle bridge erected across the Blair Waterway farther south on East 11th Street, provided northeast Tacoma residents with a direct link to the city center (Miller and Bowden 2006). The wood trestle East 11th Street Bridge was removed in 1951, and the Blair Waterway was deepened and further extended. A new bridge, the Port Industrial Waterway Bridge, was constructed in 1951 to provide increased access for vessels to pass through the waterway, while maintaining the important north-south linkage; this bridge was demolished in January 1997 (Long 2008).

The port served as a major center of wartime industry—focusing on shipbuilding and chemical production—between 1939 and the end of World War II. Port development has continued; the port remains a principal shipping hub in the region and is known as the major distribution point for goods being shipped through Alaska.

Chapter 3 describes the research and field methods used to identify and evaluate historic built environment properties for this project. The research design and survey methods for this project fall into four primary categories: records and archival research, development of the historic context, Section 106 of the NHPA consultation, and field survey and historic resource inventory.

The objective of the investigations was to identify previously recorded historic properties located in the APE, assess the significance of resources in the APE, and ultimately, identify additional historic properties in the APE through a reconnaissance-level field survey. This chapter describes where and how the information was gathered, and how it informs the results of the archival research and field survey. Results of the studies are presented in Chapter 5.

Records and Archival Research

Archival research is the foundation on which historic contexts are based and provides direction for the survey. For this project, the archival research was structured to identify and describe general trends, groups, and events in the history of communities within the APE, and information regarding how events or people may have affected these communities' development.

Intensive research of primary and secondary source data was conducted to identify previously recorded historic properties, historical developments that influenced the project area, and important architectural, engineering, and development trends that would help inform the historic significance of resources within the APE. According to the *Washington State Standards for Cultural Resource Reporting* (DAHP 2010:9), archival or background research should include, but is not limited to, the following components:

- The research should address issues and development topics relative to the study area.
- Research sources should include historic maps, tax records, photographs, previous research, and review of records and databases managed by local, state, and federal agencies.
- Research sources should include consultation with “knowledgeable experts” and the public as appropriate.

Archival research undertaken as part of a reconnaissance-level survey involves conducting a general analysis of each property and gathering data specific to each property included in the survey.

Background information that provided a historic and cultural context for this evaluation was generated from a variety of sources. Previous cultural resource studies, as identified in Volume 1, Chapter 3, provided invaluable ethnographic and historic background material, including relevant ethnographic reports, oral histories, local histories, newspaper articles, census data, city directories, historical photographs, and historical maps.

The following lists the contacted individuals and organizations and the extensive information provided on known and expected historic properties associated with communities within the APE:

- Washington State DAHP—Dr. Allyson Brooks, SHPO; Mr. Greg Griffith, Deputy SHPO; Mr. Michael Houser, State Architectural Historian:
 - Determinations of NRHP Eligibility at DAHP,
 - Historic Resources Inventory files at DAHP,
 - Historic Property Inventory (HPI) files at DAHP’s online database, the Washington Information System for Architectural and Archaeological Records Data (WISAARD), and
 - NRHP nomination forms at DAHP;
- City of Seattle Historic Preservation Division (Department of Neighborhoods)— Ms. Elizabeth Chave, Landmarks Preservation Board; Ms. Karen Gordon, Seattle City Historic Preservation Officer:
 - List of Seattle landmarks and landmark nominations;
- King County Historic Preservation Program;
- Sanborn Fire Insurance Company (maps);
- King County Assessor’s Office;
- Seattle Municipal Archives:
 - Database of photographs;
- Seattle Public Utilities Engineering Department (records vault):
 - City maps, plat books, historical aerial photos;
- Seattle Department of Parks and Recreation—Mr. Terry Dunning;
- Historic Seattle Preservation Foundation;
- Friends of Seattle’s Olmsted Parks —Mr. Larry Sinnott;
- HistoryLink (online encyclopedia of Seattle, King County, and Washington State history);
- University of Washington:
 - Suzzallo Library,
 - Burke Museum,
 - Special Collections and Manuscripts,
 - School of Architecture Library, and
 - School of Architecture—Professor Jeffrey Ochsner and Professor Grant Hildebrand;
- Museum of History and Industry (MOHAI)—historic photographs database;
- Seattle Public Library—Seattle Room;
- Kirkland Public Library;
- Kirkland Historical Society—City of Kirkland Historical Survey;
- Bellevue Public Library;
- Bellevue Public School System—Mr. Brian Harding;

- Bellevue Historical Society—Ms. Mary Ellen Piro and Ms. Katie Innes:
 - Bellevue Historical/Cultural Survey;
- National Oceanic and Atmospheric Administration (NOAA) Northwest Fisheries Science Center—Mr. John Herkelrath and Mr. John Rheaume;
- Documentation and Conservation of the Modern Movement (DOCOMOMO) U.S. —Seattle Chapter;
- USACE—Seattle District Cultural Resources Staff;
- Previously completed analyses of the *SR 520 SR 520: I-5 to Medina Bridge Replacement and HOV Project, Draft Environmental Impact Statement and Section 4(f) Evaluation (DEIS)* (CH2M Hill 2009b), *SR 520: I-5 to Medina Bridge Replacement and HOV Project, Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation (SDEIS)* (CH2M Hill 2009c), and background information reported in associated environmental analyses prepared for the project:
 - Noise—existing and predicted noise and vibration levels on historic properties (Michael Minor and Associates 2009),
 - Visual quality and aesthetics—assessment of existing visual and aesthetic qualities in areas around historic properties and effects analysis on visual quality in these areas (Parametrix 2009a),
 - Land use, economics, and relocation—information on relocations and changes in land use that may affect historic properties (CH2M Hill 2009d),
 - Air quality—information on existing and predicted air quality levels that might affect the setting of historic properties (CH2M Hill 2009e),
 - Traffic—information on existing and predicted traffic conditions that could affect historic properties (Parametrix 2009b),
 - Navigable waterways—information on potential effects on marine-related historic properties (Parametrix 2009c), and
 - Recreation—information on effects on recreation resources, as those resources may also be historic properties (CH2M Hill 2009f).

As a result of these research efforts, WSDOT has identified previously identified historic properties; the historic context through which newly recorded resources can be evaluated (described below); and enough information about communities in the APE to identify additional historic properties.

Development of the Historic Context

The historic context presented in Chapter 2 is a narrative statement that describes a broad pattern of historical development of the communities in the APE. These patterns of historical development are often represented by historic resources; the historic context establishes the significant themes and property types of the neighborhoods located in the APE. These themes include a variety of subjects including, but not limited to, transportation development, residential development, maritime activities, social organizations, and scientific or educational institutions.

The historic context for this project was developed on the basis of archival research and background data on the history of western Washington, Seattle, and the communities that intersect or are adjacent to SR 520. The preparation of this historic context involved the following:

- identifying the concept, themes, chronological period, and geographical areas;
- collecting information about the communities in the APE;
- collecting information on previously recorded historic properties located in the APE; and
- identifying trends in settlement and development.

Section 106 Consultation

Consultation with interested and affected parties is an essential and critical aspect of the Section 106 process. Because of the size and scope of the project, as well as the historic and cultural significance of many resources in the APE, WSDOT contacted, or was contacted by, several groups who were invited to participate as Section 106 consulting parties, per provisions in 36 CFR 800.2(c)(5)(d)(i). Unless otherwise indicated, these parties were invited to participate in Section 106 consultation on March 2, 2009.

Below is a list of the participating non-tribal consulting parties. For more information on consultation with tribes, please see Volume 1 of this report.

- DAHP,
- City of Seattle Department of Neighborhoods, Historic Preservation Program,
- King County Historic Preservation Office,
- University of Washington,
- NOAA Northwest Fisheries Science Center,
- Washington Trust for Historic Preservation,
- Historic Seattle Preservation Foundation,
- Friends of Seattle's Olmsted Parks,
- Washington Park Arboretum Foundation,
- Portage Bay/Roanoke Community Council,
- Montlake Community Council,
- Concerned Citizens of Montlake—SR 520¹,
- North Capitol Hill Neighborhood Association²,
- Seattle Yacht Club,
- Shelby/Hamlin residents³,

¹ This group was invited to be a Section 106 consulting party on November 30, 2010.

² This group acknowledged their status as a Section 106 consulting party on July 10, 2010

³ This group was invited to be a Section 106 consulting party in January 2011.

- Documentation and Conservation of the Modern Movement, Western Washington (Docomomo WEWA),
- Historic Bridge Foundation, and
- Eastlake Community Council.

Some consulting parties including Docomomo WEWA, the Historic Bridge Foundation, and the Eastlake Community Council have not actively taken part in the Section 106 consultation process. However, the remaining parties have been actively participating and have contributed valuable input to the determination of the APE, identification of historic properties, and assessment of effects. As described in Chapter 7 of this report, the Section 106 consulting parties are also actively participating in the development of the PA, which identifies measures for avoiding, minimizing, and mitigating the Preferred Alternative's adverse effects on historic properties.

WSDOT invited consulting parties to participate in project and Section 106 briefings on May 28, June 4, October 20, and October 21, 2009. These meetings focused on the Section 106 process, the APE, determinations of NRHP eligibility for resources located in the APE, and early discussions of potential effects on historic properties. Individual meetings with consulting parties were also held in 2009 and early 2010, as requested. This time period coincided with the publication of the SDEIS (CH2M Hill 2009c), and some consulting parties provided written comments during the NEPA public comment period.

In June 2010, WSDOT retained the services of SRI Foundation, who led the Section 106 consultation process to better understand the issues regarding the Preferred Alternative's potential effects on historic properties. SRI Foundation developed a consultation plan that includes the following steps:

- **June 2010:** Conducted an introductory meeting with all consulting parties to introduce them to the SRI Foundation consultants and provide an overview of the Section 106 process.
- **July 2010:** Met with consulting parties to introduce and describe the Preferred Alternative and answer questions about potential temporary and permanent effects.
- **July-August 2010:** Collected comments from consulting parties about potential project effects.
- **September 2010:** Brainstormed with consulting parties on measures to resolve adverse effects.
- **November-December 2010:** Continued conversations about resolving adverse effects.
- **January 10, 2011:** First draft of the PA was sent to consulting parties for their review and comment.
- **January 25, 2011:** Met with consulting parties to further discuss the Section 106 consultation process, and to answer questions pertaining to the first draft of the PA.
- **February 2011:** Collected comments from the consulting parties on the first draft of the PA.
- **March 16, 2011:** Met with consulting parties to discuss implementation of the commitments contained within the PA, to review development of the Community Construction Management Plan, and to answer questions pertaining to the second draft of the PA.
- **April 2011:** Collected comments from the consulting parties on the second draft of the PA.
- **May 2, 2011:** Sent final draft of the PA to consulting parties.
- **June 7, 2011:** PA signed by all required signatories.

As of the date of this report's publication, consultation is ongoing, and SRI Foundation, on behalf of WSDOT, will continue to work closely with Section 106 consulting parties to ensure that their views are considered.

Field Survey and Historic Resource Inventory

WSDOT, in consultation with DAHP, conducted an extensive field survey to identify potential historic properties located in the APE. At minimum, all resources were surveyed at the "reconnaissance" level, as defined by DAHP. However, many resources—particularly those within one parcel of the Preferred Alternative's construction footprint—were conducted at the "intensive" level.

DAHP defines reconnaissance-level surveys as "visual or predictive surveys that identify the general distribution, location, and nature of cultural resources within a given area" (DAHP 2010). The survey generally does not include ownership information; historic use or name of the property; the study unit theme (provided in the HPI forms); the names of the architect, builder, or engineer; an in-depth statement of significance; or a bibliography. For this survey, however, when the significance of a property could not be determined based on the reconnaissance-level survey, more intensive research was conducted on certain properties. For the majority of properties located within one parcel of the construction footprint, an intensive-level survey was conducted.

The survey involved examining and photographing every building and structure in the APE that was determined to be constructed before 1972. This date was selected to include all resources 50 years old at the time of the survey, in addition to any that might become 50 years old through the course of the project construction.

The senior architectural historians who contributed to this project (listed in Exhibit i-9 of the comprehensive report introduction) conducted the parcel-by-parcel field survey of properties in the APE between 2007 and 2010. There were multiple surveys in this period because of APE expansions as a result of consultation with DAHP and other parties. Survey dates include:

- **April–June, 2009:** Led by Lori Durio Price, Senior Architectural Historian, CH2M Hill, with contributions from Connie Walker Gray, WSDOT and
- **June–July, 2010:** Led by Chris Hetzel, Senior Architectural Historian, ICF International, with contributions from Lori Durio Price and Sara Orton, CH2M Hill, and Connie Walker Gray and Leslie Schwab, WSDOT.

All resources were surveyed within the last 5 years in accordance with DAHP guidelines. The following steps were taken to identify, evaluate, and record historic resources:

- Construction dates were established using data from the King County Tax Assessor, and properties built before 1972 were identified for the pedestrian field survey.
- Sanborn Fire Insurance Maps (Sanborn Map Company 1893, 1904, 1916, 1930) were consulted to assess the general location and distribution of historic buildings and structures over time.
- A parcel-by-parcel pedestrian survey of all properties located in the APE that were built before 1972 was conducted by senior architectural historians.
- Each historic resource was visually evaluated, photographed from the public right-of-way, and noted for its significant visual characteristics, including:

- the precise location of each resource,
- the architectural style (if identifiable),
- the type and materials of significant features,
- the existence of alterations and overall physical integrity, and
- potential historic districts located in the APE.

An HPI form was prepared for each historic resource. The forms were prepared using information on the physical description of each resource collected in the field. A Statement of Significance for each resource was prepared based on historic research of the history of the project area and neighborhoods.

A total of 692 built environment properties located in the APE were surveyed and inventoried (Appendix A).

Identification of Historic Properties

Section 106 requires the identification of all historic properties listed or eligible for listing in the NRHP that are located in the APE. Senior historians (listed in Exhibit i-9 of the comprehensive report introduction) completed the identification of historic properties by evaluating the surveyed properties in the APE in accordance with NRHP evaluation criteria, and made recommendations for eligibility for listing in the NRHP on each property surveyed. WSDOT, on behalf of FHWA, then made determinations of eligibility. WSDOT submitted those determinations to DAHP for concurrence. DAHP correspondence is included in Appendix B of this document. DAHP concurred on the eligibility of these properties in August and October 2009. After the release of the SDEIS (CH2M Hill 2009c), additional properties were identified and evaluated. WSDOT, in consultation with DAHP, has identified all historic properties within the APE as specified in 36 CFR 800. 4 (b).

Chapter 4 Literature Search

A literature and records search was conducted using WISAARD to identify previously documented historic resources in APE. WISAARD contains all records and reports on file with DAHP recorded since 1995. Nine cultural resources studies of built environment resources were previously completed within the search area. A listing of these investigations, which provide information on the built environment, is provided in Exhibit 4-1.

A total of 21 historic resources were previously recorded in the APE. These resources occur in each of the project's geographic segments and the pontoon production and transport sites. Exhibits 4-2, 4-3, 4-4, 4-5, and 4-6 summarize these resources in each segment, including information about prior evaluations and NRHP eligibility. See Appendix C for copies of the nominations for previously recorded properties.

Exhibit 4-1. Previously Identified Cultural Resources Studies

Author and Date	Report Title	Description	Results
Courtois 1998	Sound Transit Central Link Light Rail Draft EIS Historic and Archaeological Resources Technical Report	Performed reconnaissance survey of the project area	73 individual historic properties, two historic districts, two historic district expansions, and one multiple property resource were identified
Courtois 1999	Central Link Rail Transit Project Historic and Prehistoric Archaeological Sites Historic Resources Native American Traditional Cultural Properties Paleontological Sites	Performed reconnaissance survey of the project area	74 individual historic properties, two historic districts, two historic district expansions, and one multiple property resource were identified
CH2M Hill 2004	SR 520 Bridge Replacement and HOV Project: Draft EIS Cultural Resources Discipline Report	Performed reconnaissance survey of the project area	Numerous historic resources identified in the APE
Gray 2008	Cultural Resources Survey of SR 520 Urban Partnership Agreement Variable Tolling Project, Evergreen Point Bridge, Seattle	Conducted a field survey	Determined Evergreen Point Bridge is potentially NRHP eligible
CH2M Hill 2009b	SR 520: I-5 to Medina Bridge Replacement and HOV Project Supplemental Draft EIS, Cultural Resources Discipline Report	Performed reconnaissance survey of the project area	Numerous historic resources identified in the APE

Author and Date	Report Title	Description	Results
Livingston 2009	Medina to SR 202: Eastside Transit and HOV Project Environmental Assessment Cultural Resources Technical Memorandum	Conducted a built environment survey	Three built environment NRHP-eligible properties and one WHR-eligible property identified
Gray and Juell 2009	Cultural Resources Survey Lake Washington Congestion Management Program SR 520/I-90 Active Traffic Management Project	Conducted a windshield survey	No newly identified cultural resources identified in the APE
Bartoy 2010	I-90/SR 520 Urban Partnership Survey Agreement Active Traffic Management System, Determination of No Effects and Request for Concurrence	Conducted a pedestrian survey of several locations along I-90 and SR 520; only two locations were surveyed in the APE	No newly identified cultural resources identified in the APE
Archer 2010	Request for Concurrence: Area of Potential Effects and finding of No Adverse Effect; SR 520 Evergreen Point Toll Signing Project, King County, WA	Conducted a windshield survey of the project area	No newly identified historic cultural resources identified in the APE

Previously Recorded Historic Resources in the I-5/Roanoke Segment

The literature review identified six previously recorded historic resources in the I-5/Roanoke segment of the APE (Exhibit 4-2).

Exhibit 4-2. Previously Recorded Historic Resources in the I-5/Roanoke Segment

Property ID	Property Name	Street Address/ Location	Construction Date/Period of Significance	Eligibility Status
10	Denny-Fuhrman (Seward) School	2515 Boylston Avenue East	1893, 1905, 1917	Designated Seattle Landmark; Seward School Lunchroom and Gymnasium listed in the WHR; not previously evaluated for NRHP eligibility
16	L'Amourita Apartment Building	2901 Franklin Avenue East	1909	NRHP eligible and designated a Seattle Landmark
37	Roanoke Park Historic District	Roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street and 10th Avenue East	1899–1939	NRHP listed under Criterion A; 80 contributing elements out of 101 properties (including individually listed William H. Parsons House); WHR listed
38	William H. Parsons House (Harvard Mansion)	2706 Harvard Avenue East	1903	Individually NRHP listed under Criteria A and C and contributing element of Roanoke Park Historic District; designated Seattle Landmark
600	I-5 Bridge Over Lake Washington Ship Canal	Lake Washington Ship Canal Bridge	1958	NRHP eligible under Criteria A and C
601	Over Lake Washington Ship Canal in Portage Bay	University Bridge	1919	NRHP eligible under Criteria A and C

Previously Recorded Historic Resources in the Portage Bay Segment

The literature review identified no previously recorded historic resources in the Portage Bay segment of the APE.

Previously Recorded Historic Resources in the Montlake Segment

The literature review identified six previously recorded historic resources in the Montlake segment (Exhibit 4-3).

Exhibit 4-3. Previously Recorded Historic Resources in the Montlake Segment

Property ID	Property Name	Street Address/ Location	Construction Date/Period of Significance	Eligibility Status
53	Montlake Cut	Lake Washington Ship Canal	1916	NRHP listed under Criteria A and C as part of Lake Washington Ship Canal multiple property listing; designated Seattle Landmark
54	Montlake Bridge	Montlake Boulevard Northeast over the Lake Washington Ship Canal	1924	NRHP listed under Criterion C (Historic Bridges/Tunnels in Washington State); and designated Seattle Landmark
55	Seattle Yacht Club—Main Station	1807 East Hamlin Street	1919	NRHP listed under Criterion A; WHR listed; and designated Seattle Landmark
126	Montlake Community Center	1618 East Calhoun Street	1935	Designated Seattle Landmark; not previously evaluated for NRHP eligibility
203	Canoe House (Naval Military Hangar/ University Shell House)	University of Washington Campus	1918	NRHP listed under Criterion C
215	Nuclear Reactor Building (More Hall Annex)	University of Washington Campus	1961	NRHP listed under Criteria A and C

Previously Recorded Historic Resources in the West Approach Segment

The literature review identified two previously recorded historic resources in the West Approach segment (Exhibit 4-4).

Exhibit 4-4. Previously Recorded Historic Resources in the West Approach Segment

Property ID	Property Name	Street Address/ Location	Construction Date/Period of Significance	Eligibility Status
200	Seattle Japanese Garden	Washington Park Arboretum 1075 Lake Washington Boulevard East	1960	Designated Seattle Landmark; not previously evaluated for NRHP eligibility
201	Arboretum Aqueduct (Arboretum Sewer Trestle)	Over Lake Washington Boulevard in the Arboretum	1912	NRHP listed under Criterion C (Historic Bridges/Tunnels in Washington State); WHR listed; designated Seattle Landmark

Previously Recorded Historic Resources in the Lake Washington Segment

The literature review identified only one previously recorded historic resource in the Lake Washington segment of the APE. The Governor Albert D. Rosellini Bridge (Evergreen Point Bridge) (ID 206), built in 1968, was previously determined eligible for listing in the NRHP. Although it has not yet reached 50 years of age, it was considered eligible for listing in the NRHP under Criteria Consideration G for its exceptional importance. It is eligible for listing in the NRHP under Criteria A and C. The SHPO concurred with this eligibility determination on January 26, 2009.

Previously Recorded Historic Resources in the Eastside Transition Segment

The literature review identified two previously recorded historic resources in the Eastside Transition segment (Exhibit 4-5).

Exhibit 4-5. Previously Recorded Historic Resources in the Eastside Transition Segment

Property ID	Property Name	Street Address/ Location	Construction Date/Period of Significance	Eligibility Status
235	Arntson House	2851 Evergreen Point Road	1953	NRHP eligible under Criterion C
232	Helen Pierce House	2857 Evergreen Point Road	1920	Not NRHP eligible; WHR eligible

Previously Recorded Historic Resources in the Pontoon Production and Transport Areas

The literature review identified two previously recorded historic resources in the Pontoon Production and Transport areas (Exhibit 4-6).

Exhibit 4-6. Previously Recorded Historic Resources in the Pontoon Production and Transport Areas

Property ID	Property Name	Street Address/ Location	Construction Date/Period of Significance	Eligibility Status
700	Hylebos Bridge	Hylebos Waterway and East 11th Street	1939	Not NRHP eligible; WHR eligible
702	Fire Station #15	3510 East 11th Street	1928–1929	NRHP listed under Criteria A and C
703	Concrete Technology Corporation—Administration Building	1123 Port of Tacoma Road, Tacoma	1956	NRHP eligible as contributor to historic district
704	Concrete Technology Corporation—Research Building	1123 Port of Tacoma Road, Tacoma	1951	NRHP eligible as contributor to historic district

Property ID	Property Name	Street Address/ Location	Construction Date/Period of Significance	Eligibility Status
705	Concrete Technology Corporation—Laboratory Building	1123 Port of Tacoma Road, Tacoma	1951	NRHP eligible as contributor to historic district
706	Concrete Technology Corporation—Structural Plant	1123 Port of Tacoma Road, Tacoma	1956	NRHP eligible as contributor to historic district
802	Port of Olympia Office	915 Washington Street	1944	NRHP eligible under Criterion C

Previously Recorded Historic Resources in the Potential Section 6(f) Sites

The literature review did not result in the identification of previously recorded historic resources in the vicinity of the potential Section 6(f) sites.

Chapter 5 Results

This chapter presents the results of the survey conducted for the SR 520 project to identify historic built environment properties located in the APE. The results are organized by the six contiguous geographical segments that comprise the APE along the project corridor: I-5/Roanoke, Portage Bay, Montlake, West Approach, Lake Washington, and Eastside Transition—as well as two sites at the Port of Tacoma and the Port of Olympia, investigated for possible pontoon production and transport, and two other locations that were investigated as possible Section 6(f) replacement sites.

A total of 366 built environment historic properties were identified in the APE. Per 36 CFR 800.16(l)(1), a historic property is any “historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP.” The total of historic properties includes previously identified properties, the properties presented in the 2009 *Cultural Resources Discipline Report, SR 520: I-5 to Medina Bridge Replacement and HOV Project, Supplemental Draft Environmental Impact Statement and Section 4(f) Evaluation* (CH2M Hill 2009a), and properties identified during the additional historic resources survey investigations in 2010. The historic properties include two historic districts, contributing elements to the historic districts, and individual properties located outside the historic district boundaries that are either listed or eligible for listing in the NRHP. SHPO concurred with the NRHP eligibility findings for all properties within the APE. Exhibit 5-1 shows the historic property totals by segment.

Exhibit 5-1. Number of Surveyed and Historic Resources in the APE

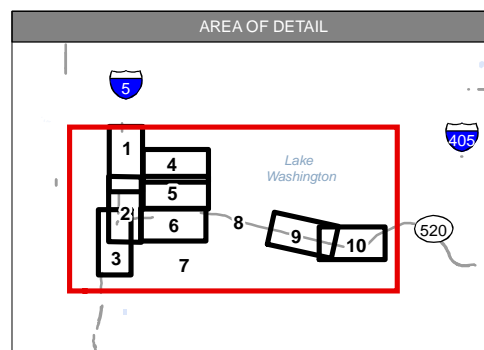
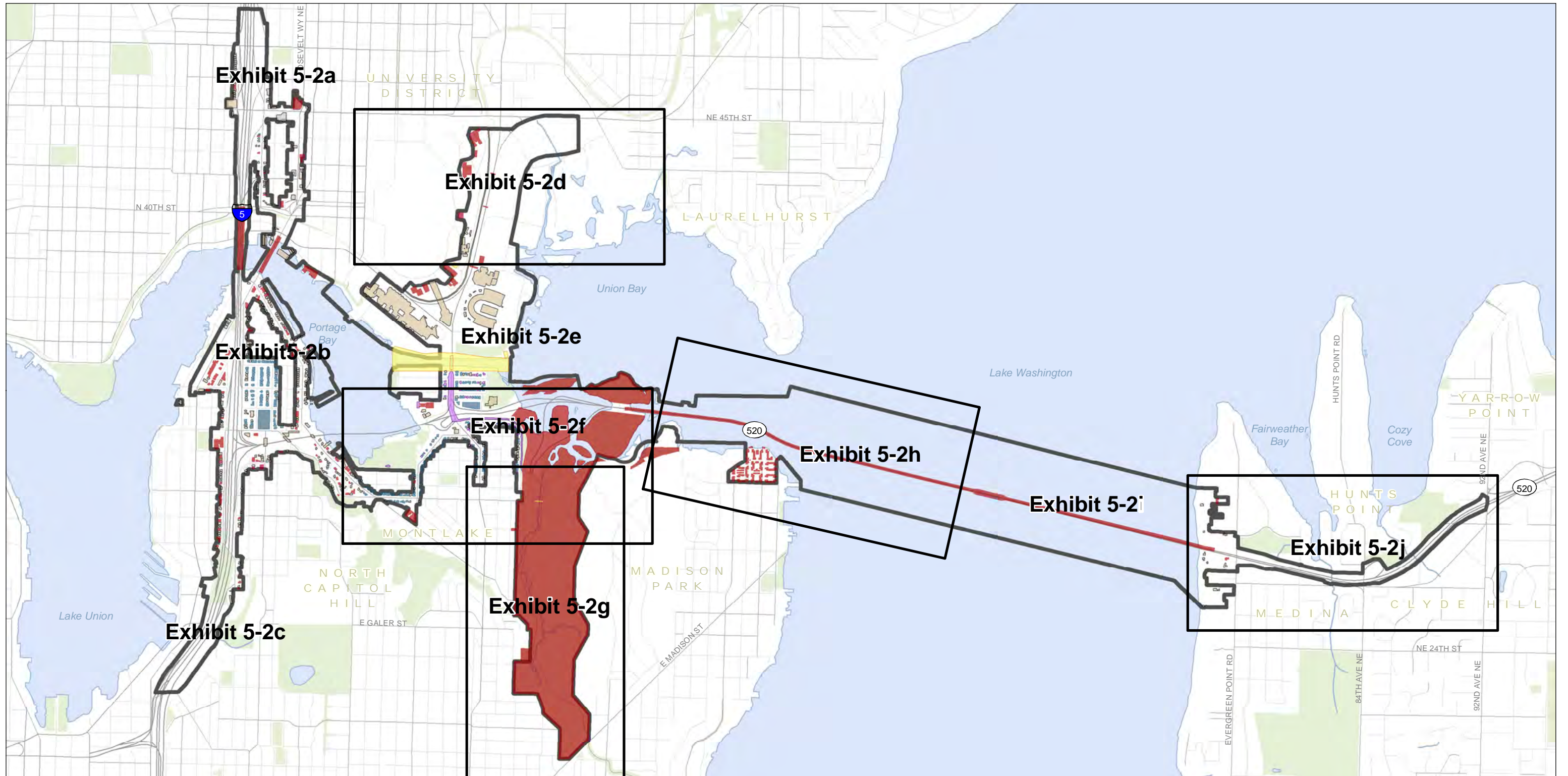
Segment	Resources Surveyed	Historic Properties ¹
I-5/Roanoke Segment	296 ¹	146
Portage Bay Segment	135	31
Montlake Segment	230	174
West Approach Segment	3	3
Lake Washington Segment	4	4
Eastside Transition Segment	10	2
Pontoon Production and Transport	14	6
Total	692	366

¹ The historic property totals include previously identified properties, as well as those properties newly surveyed as a part of this project. These totals could change as design and construction proceed; they reflect information known at the time of this report.

Exhibits 5-2 and 5-2a through 5-2j show the locations and NRHP eligibility of the surveyed properties in all parts of the APE.

¹ This includes the 80 contributing resources within the Roanoke Park Historic District. However, because they are contributing resources to the NRHP-listed district, they were not individually evaluated as part of this survey.

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NRHP Eligibility of Surveyed Resources

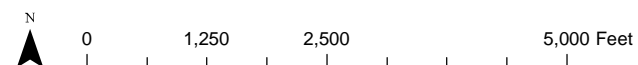
- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible
- Not NRHP Eligible; WHR Eligible /NRHP Not Eligible

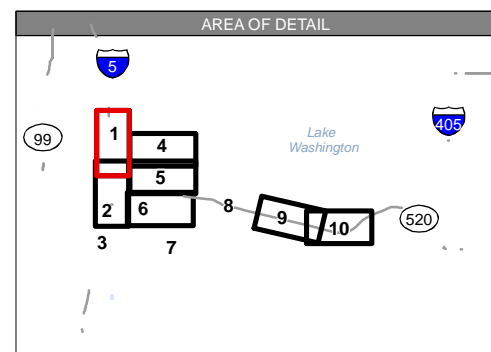
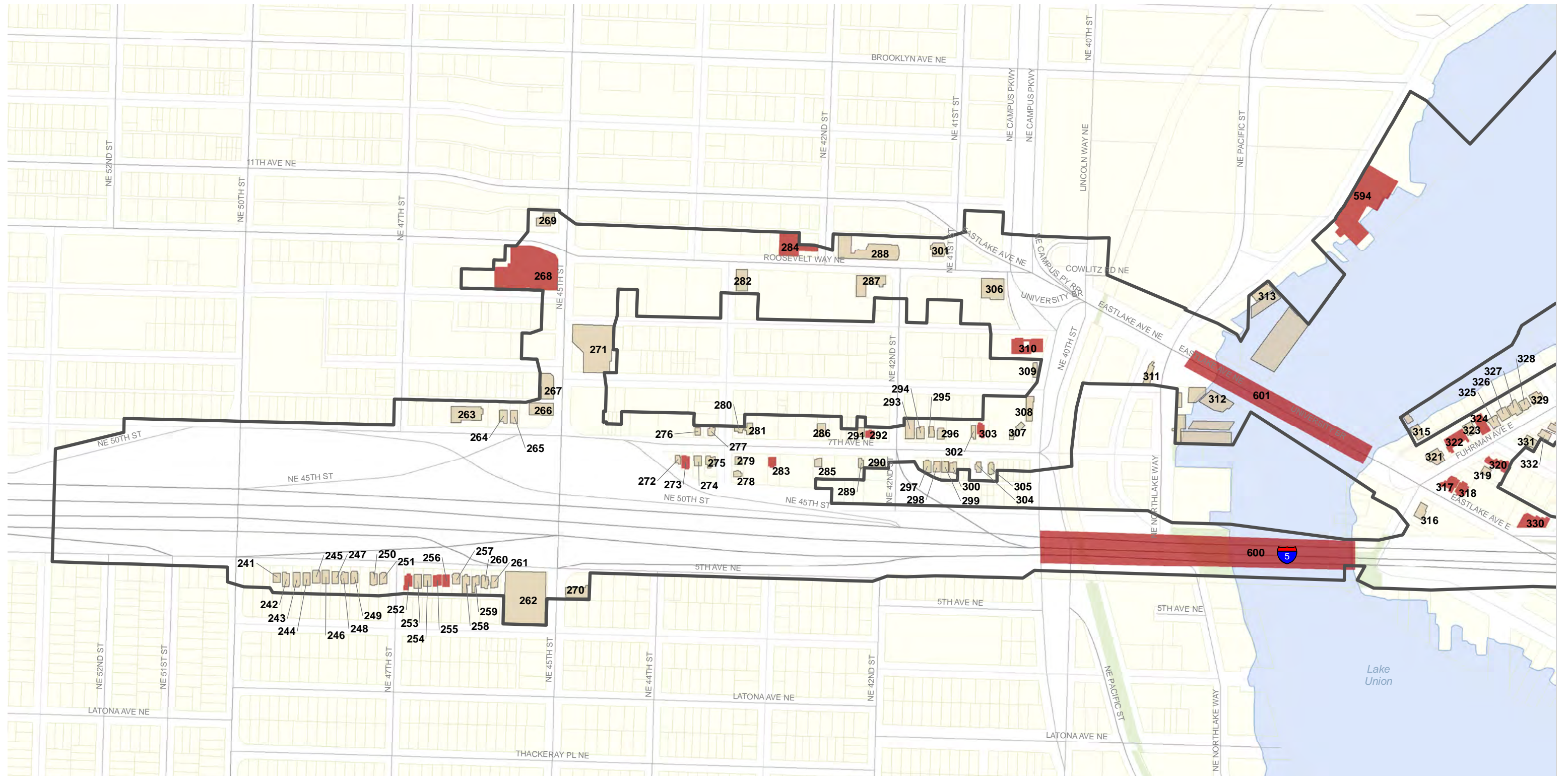
- Area of Potential Effects
- Park

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5-2. Overview of Area of Potential Effects Showing Surveyed and Historic Properties

SR 520, I-5 to Medina: Bridge Replacement and HOV Project





- NRHP Eligibility of Surveyed Resources**
- NRHP Listed
 - NRHP Eligible
 - Contributing
 - Contributing and Eligible
 - Not NRHP Eligible
- Montlake Historic District
 - Roanoke Park Historic District
 - Area of Potential Effects
 - Parcel
 - Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

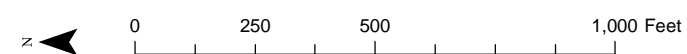
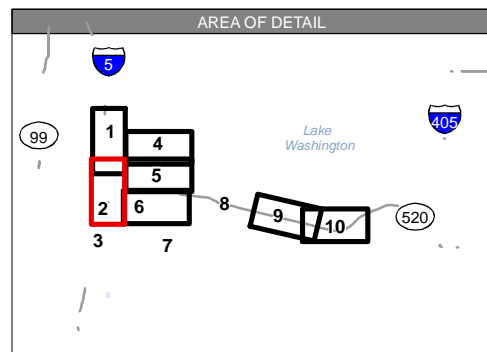
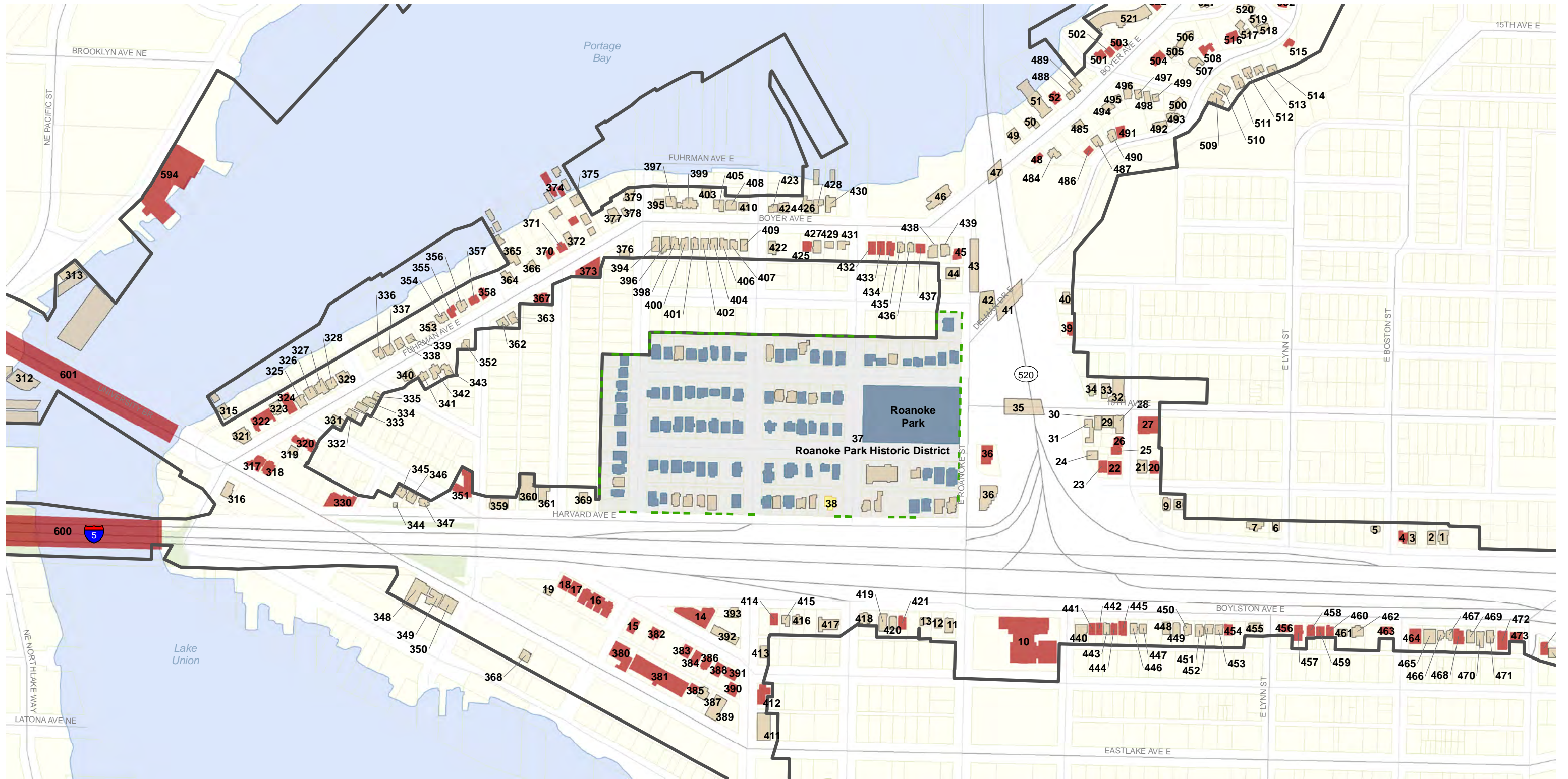


Exhibit 5-2a. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 1

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- NRHP Eligibility of Surveyed Resources**
- NRHP Listed
 - NRHP Eligible
 - Contributing
 - Contributing and Eligible
 - Not NRHP Eligible
- Montlake Historic District
 - Roanoke Park Historic District
 - Area of Potential Effects
 - Parcel
 - Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

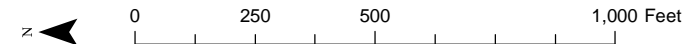
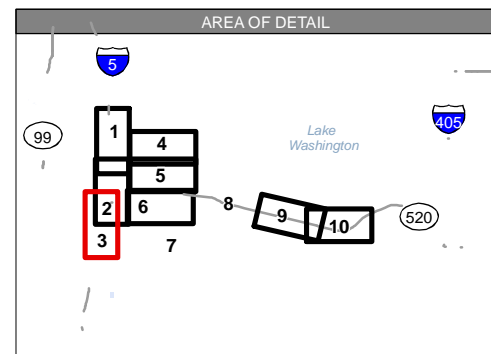
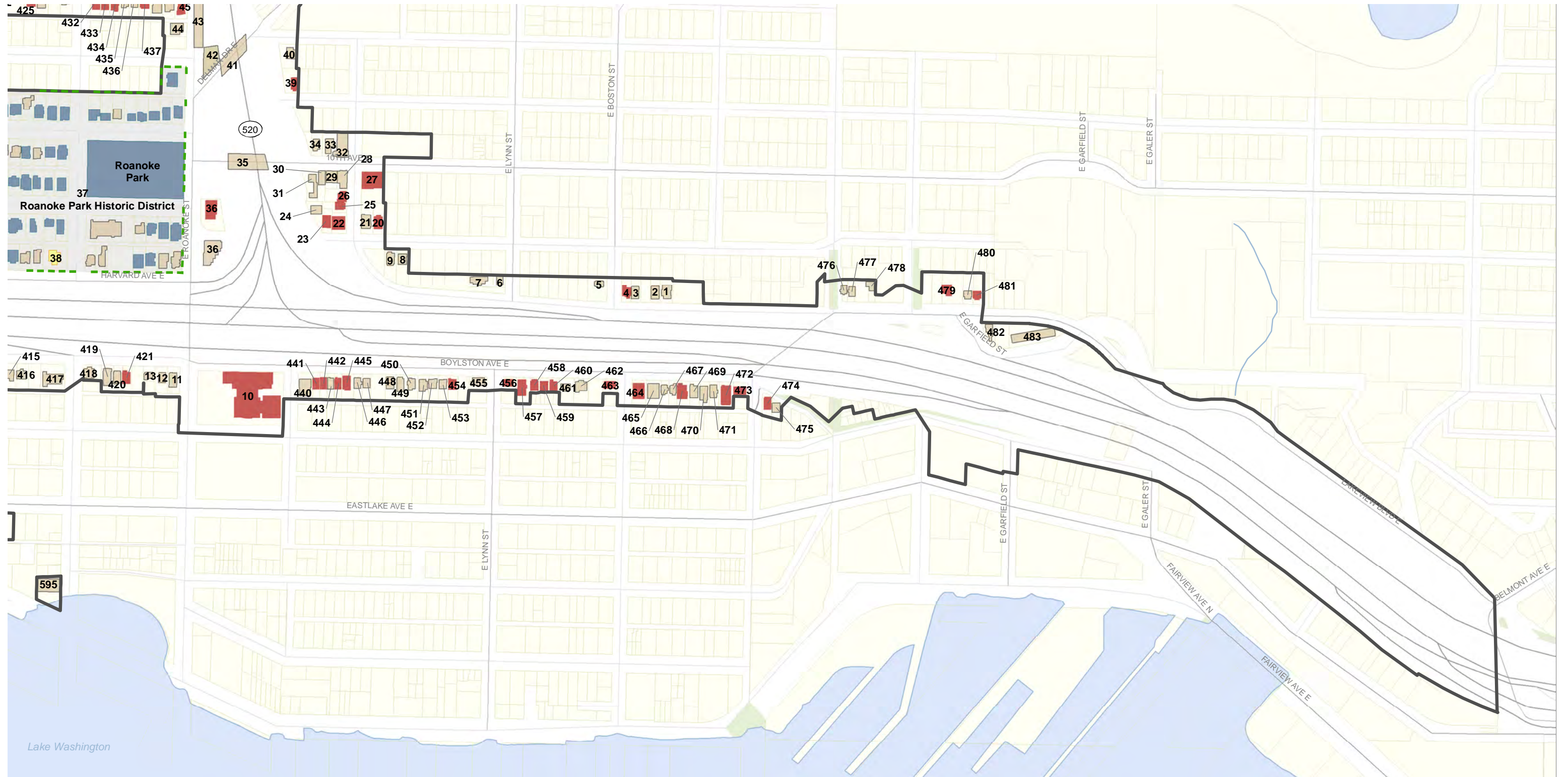


Exhibit 5-2b. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 2

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



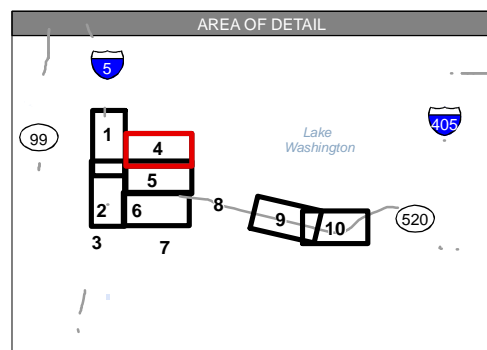
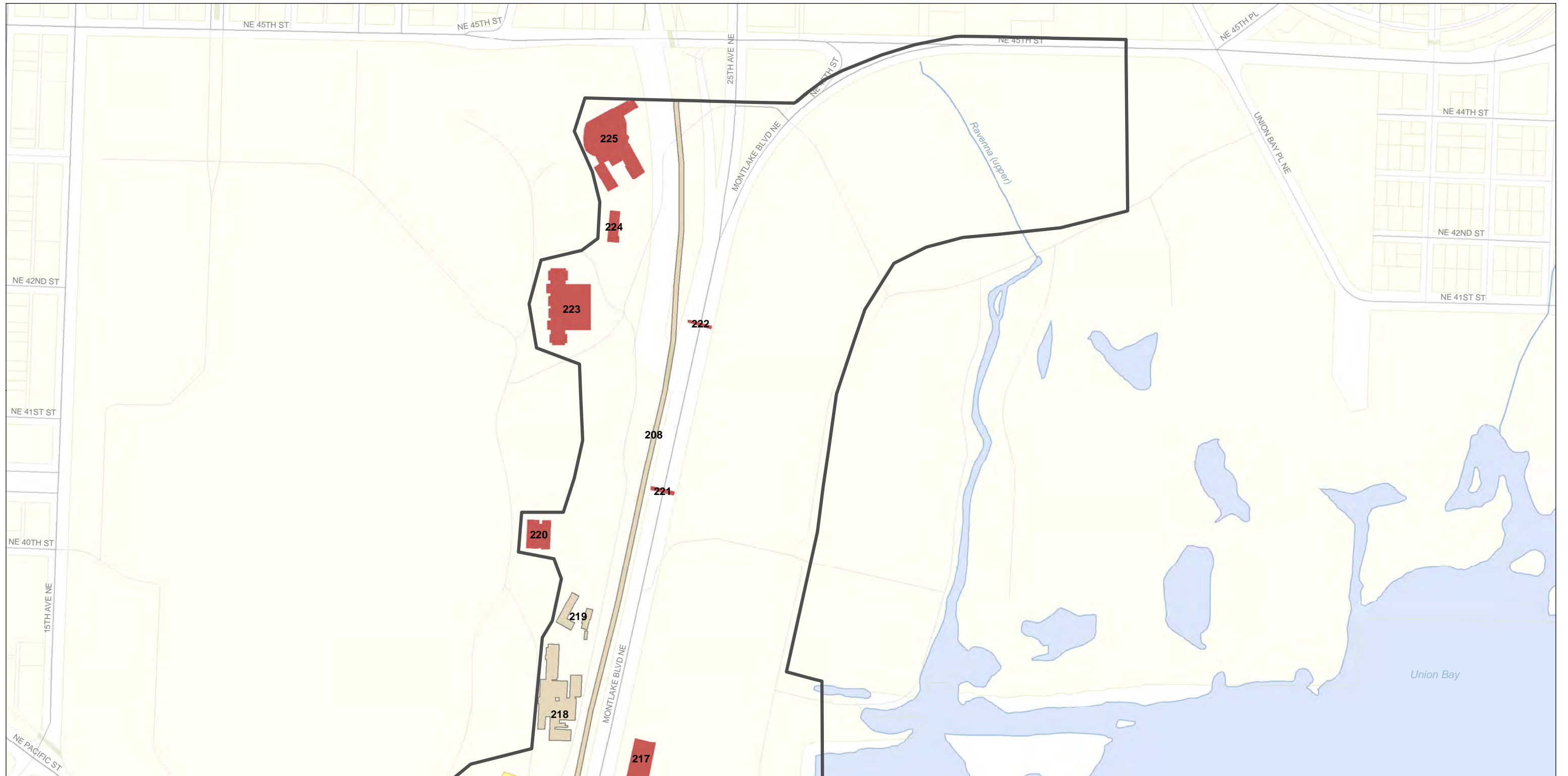
- NRHP Eligibility of Surveyed Resources**
- NRHP Listed
 - NRHP Eligible
 - Contributing
 - Contributing and Eligible
 - Not NRHP Eligible
- Montlake Historic District
 - Roanoke Park Historic District
 - Area of Potential Effects
 - Parcel
 - Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 5-2c. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 3
SR 520, I-5 to Medina: Bridge Replacement and HOV Project



NRHP Eligibility of Surveyed Resources

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible
- Not NRHP Eligible; NRHP Not Eligible / WHR Eligible

- Montlake Historic District
- Roanoke Park Historic District
- Area of Potential Effects
- Parcel
- Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

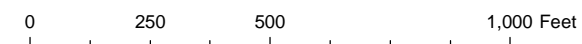
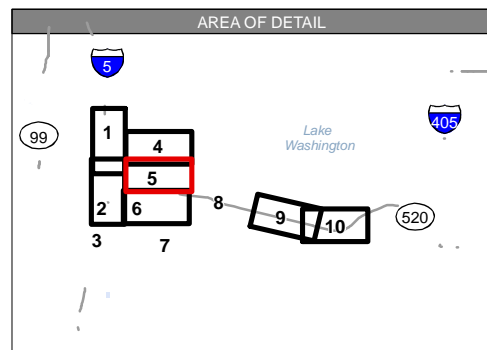
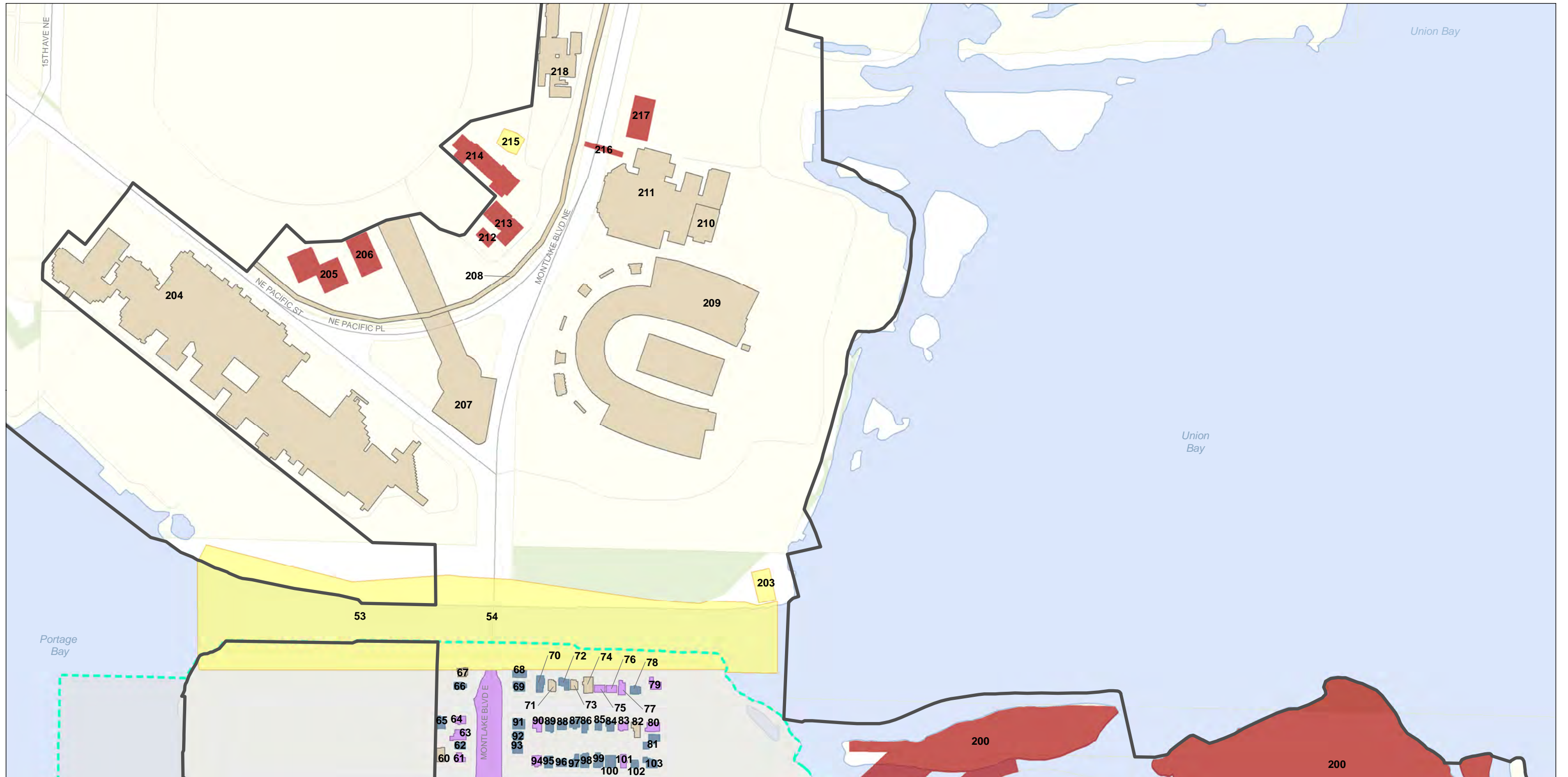


Exhibit 5-2d. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 4

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



NRHP Eligibility of Surveyed Resources

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible
- Not NRHP Eligible; NRHP Not Eligible / WHR Eligible

- Montlake Historic District
- Roanoke Park Historic District
- Area of Potential Effects
- Parcel
- Park

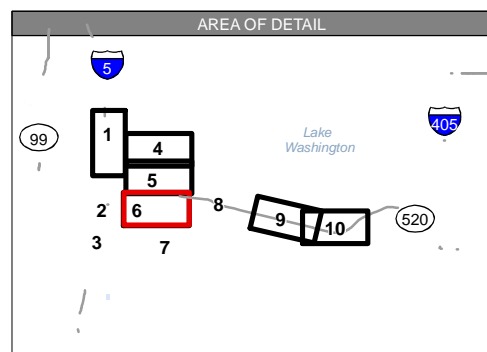
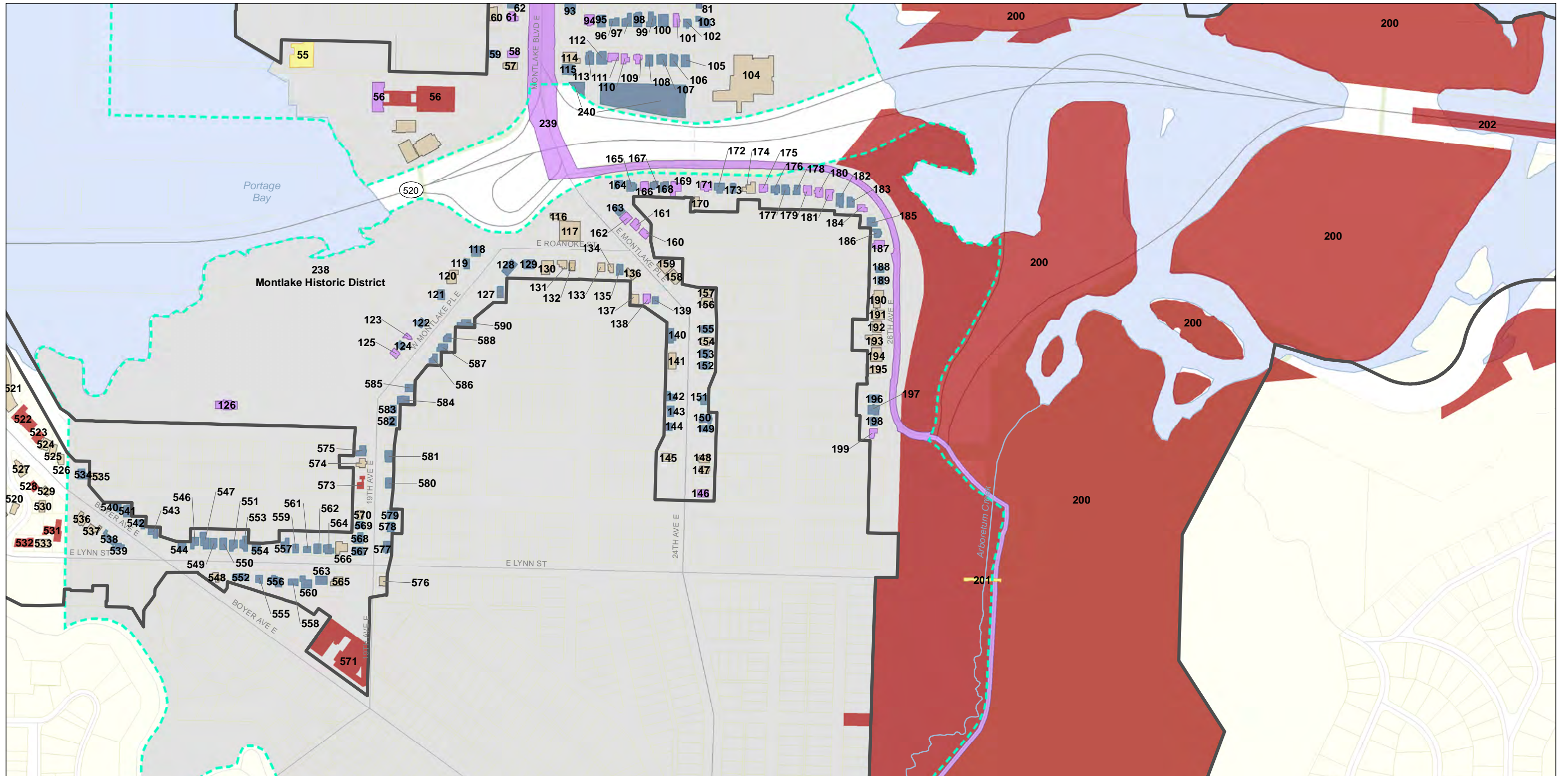
NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 5-2e. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 5

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



NRHP Eligibility of Surveyed Resources

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible
- Not NRHP Eligible; NRHP Not Eligible / WHR Eligible

- Montlake Historic District
- Roanoke Park Historic District
- Area of Potential Effects
- Parcel
- Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

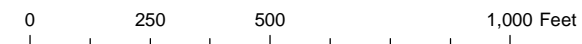
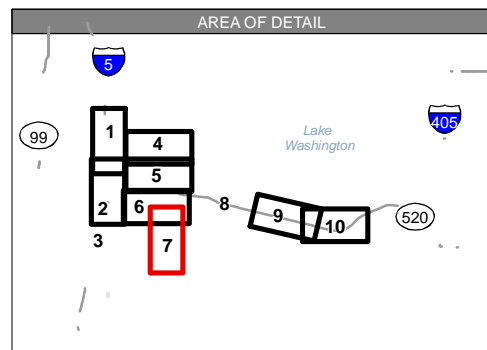
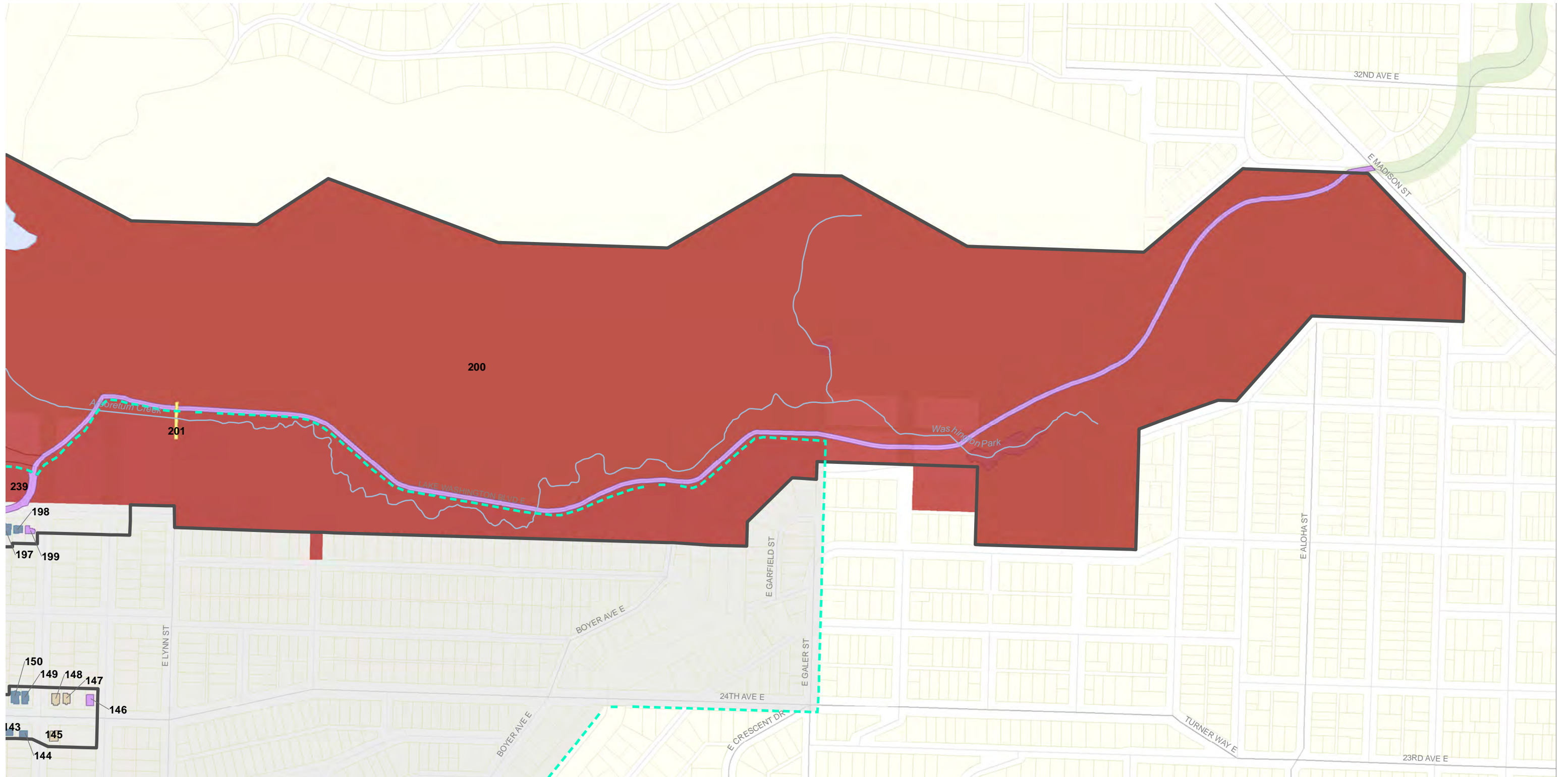


Exhibit 5-2f. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 6

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- NRHP Eligibility of Surveyed Resources**
- NRHP Listed
 - NRHP Eligible
 - Contributing
 - Contributing and Eligible
 - Not NRHP Eligible
- Montlake Historic District
 - Roanoke Park Historic District
 - Area of Potential Effects
 - Parcel
 - Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

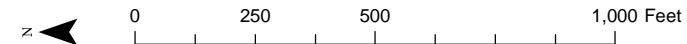
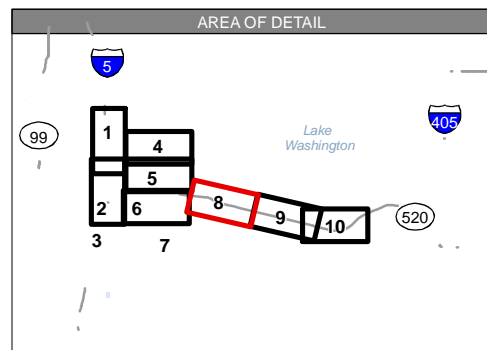


Exhibit 5-2g. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 7

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



NRHP Eligibility of Surveyed Resources

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible
- Not NRHP Eligible; NRHP Not Eligible / WHR Eligible

- Montlake Historic District
- Roanoke Park Historic District
- Area of Potential Effects
- Parcel
- Park

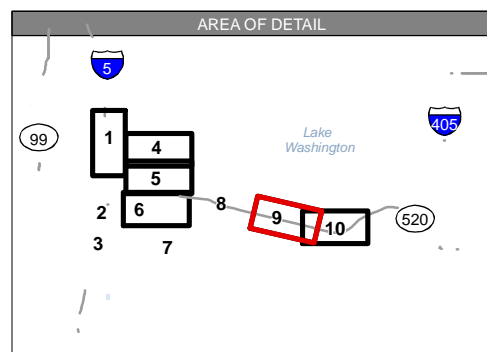
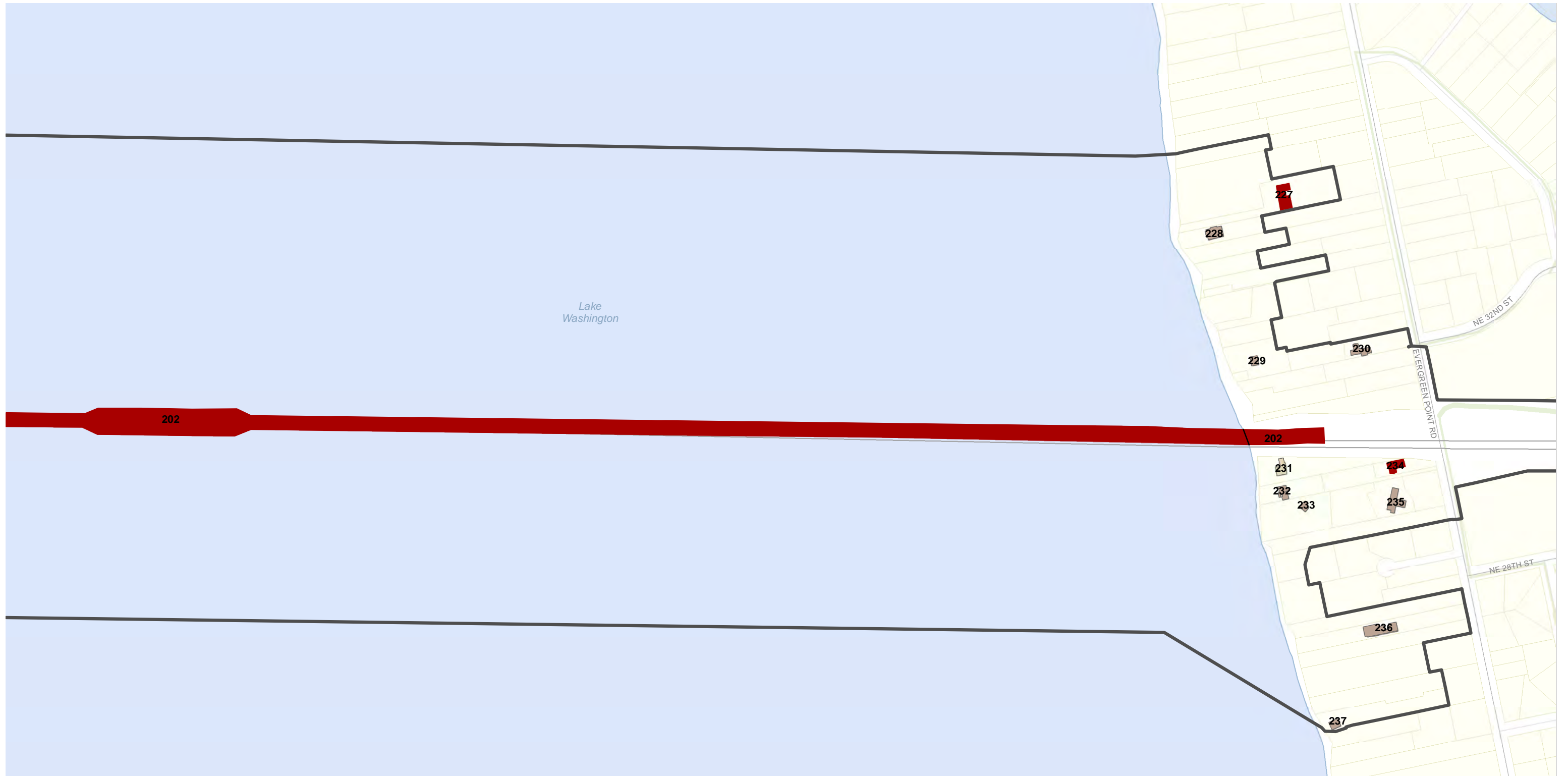
NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 5-2h. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 8

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



NRHP Eligibility of Surveyed Resources

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible
- Not NRHP Eligible; NRHP Not Eligible / WHR Eligible

- Montlake Historic District
- Roanoke Park Historic District
- Area of Potential Effects
- Parcel
- Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

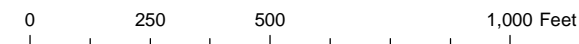
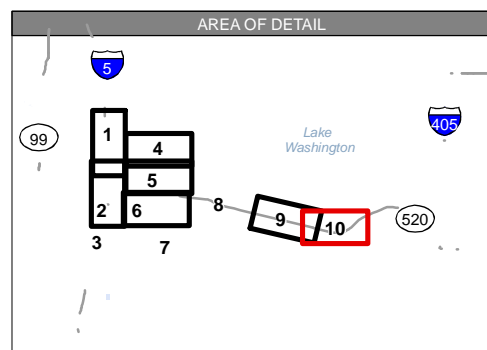
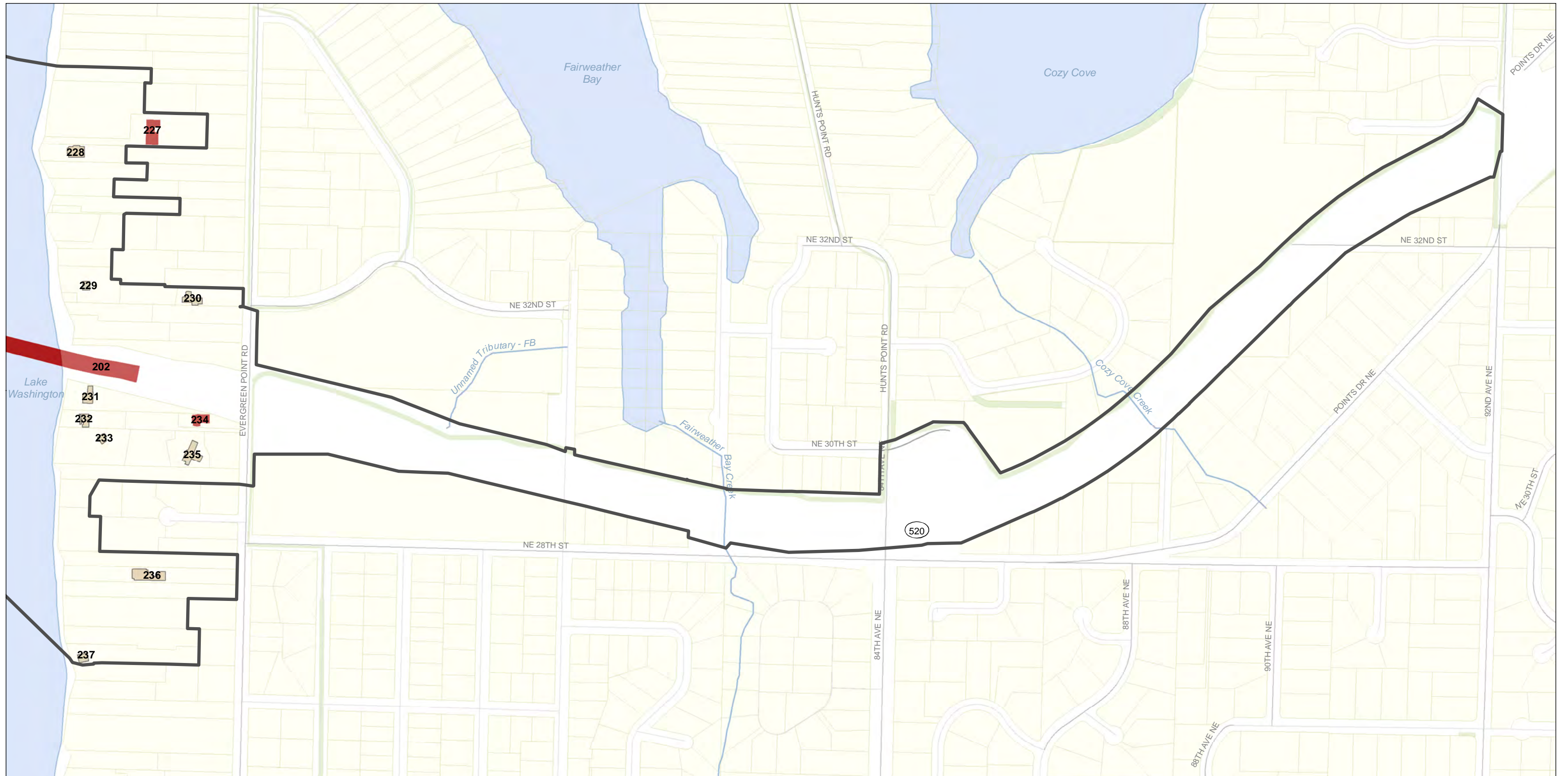


Exhibit 5-2i. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet 9
SR 520, I-5 to Medina: Bridge Replacement and HOV Project



NRHP Eligibility of Surveyed Resources

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible
- Not NRHP Eligible; NRHP Not Eligible / WHR Eligible

- Montlake Historic District
- Roanoke Park Historic District
- Area of Potential Effects
- Parcel
- Park

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A - "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

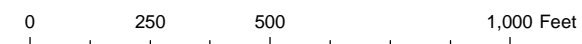


Exhibit 5-2j. Area of Potential Effects Showing Surveyed and Historic Properties, Sheet10

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

I-5/Roanoke Segment

The historic resources survey of the I-5/Roanoke Segment identified 216 properties in this segment of the APE constructed prior to 1972. This total does not include the 80 contributing properties contained within the boundaries of the Roanoke Park Historic District, which is individually listed in the NRHP and located in this part of the APE. The Roanoke Park Historic District includes the William H. Parsons House (Harvard Mansion) at 2706 Harvard Avenue East as a contributing element. The William H. Parsons House is also individually listed in the NRHP, the Washington Heritage Register (WHR), and is a designated City of Seattle landmark. In addition to the Roanoke Park Historic District and the Parsons House, two other previously recorded properties were identified in the I-5/Roanoke segment (Exhibit 5-3): the Denny-Fuhrman (Seward) School at 2515 Boylston Avenue East and the L'Amourita Apartment Building at 2901 Franklin Avenue East. These properties are also designated City of Seattle landmarks and are listed in the WHR. Also in this segment are the Lake Washington Ship Canal Bridge, eligible for listing under Criteria A and C, and the University Bridge over the Ship Canal which is listed in the NRHP under Criteria A and C.

The 216 identified properties were evaluated to determine their eligibility for listing in the NRHP. Based on NRHP evaluation criteria (36 CFR 60.4), 67 of the newly identified properties were determined to be eligible for listing in the NRHP. These properties are listed in Exhibit 4-1, and their locations and NRHP eligibility are presented in Exhibits 5-2a, 5-2h, and 5-2i. No other identified properties in the I-5/Roanoke Segment are considered eligible for listing in the NRHP.

Appendix A provides a complete list of the properties surveyed in this segment, (with the exception of the NRHP-listed Roanoke Park Historic District contributing resources). Appendix C contains copies of the nomination forms for the previously recorded resources. Appendix D includes the HPI forms for those resources not previously recorded.

Historic Properties in the I-5/Roanoke Segment

This section summarizes the historical significance of all the historic properties identified in the I-5/Roanoke segment of the APE. The SHPO concurred with the eligibility determinations for these properties on August 27, 2009 and November 10, 2010, unless otherwise indicated.

Roanoke Park Historic District

Property ID 37—Period of Significance 1899 to 1939

Listed in the NRHP under Criteria A and C

The boundaries of Roanoke Park Historic District are roughly East Roanoke Street, Harvard Avenue East, East Shelby Street, and 10th Avenue East, and include Roanoke Park, located at 910 East Roanoke Street (Exhibit 5-4). The entire Roanoke Park Historic District is included in the APE and was listed in the NRHP in July 2009. The historic district as a whole and the individual properties within the district were not resurveyed for this project because it is already listed in the NRHP and the properties had been surveyed within the previous 5 years. There are 101 properties in the historic district, 80 of which are contributing elements, including Roanoke Park and the individually listed William H. Parsons House (ID 38). The NRHP nomination form for the district is included in Appendix C (O'Connor et al. 2009). The following paragraphs detail some of the defining characteristics of the historic district's historic significance.

Exhibit 5-3. NRHP Eligible Properties Identified in the I-5/Roanoke Segment

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*4	Harvard Avenue East	1980 Chung House	1932	Eligible	Eligible under Criterion C
*10	Boylston Avenue East	2515 Denny-Fuhrman (Seward) School	1893; 1899; 1905; 1917	Eligible	Three buildings - Eligible under Criteria A and C Designated Seattle Landmark 1893/99 building is also listed on the WHR
*14	Boylston Avenue East	2815 Shelby Apartments	1928	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957
*15	Franklin Avenue East	2847 Gilmore House	1907	Eligible	Eligible under Criterion C
*16	Franklin Avenue East	2901 L' Amourita Apartments	1909	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957 Designated Seattle Landmark
*17	Franklin Avenue East	2919 Franklin Apartments	1927	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957

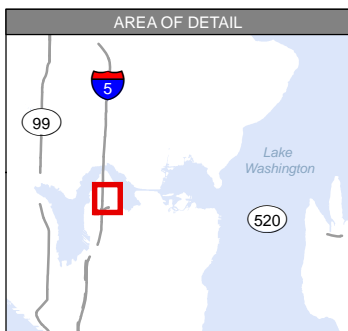
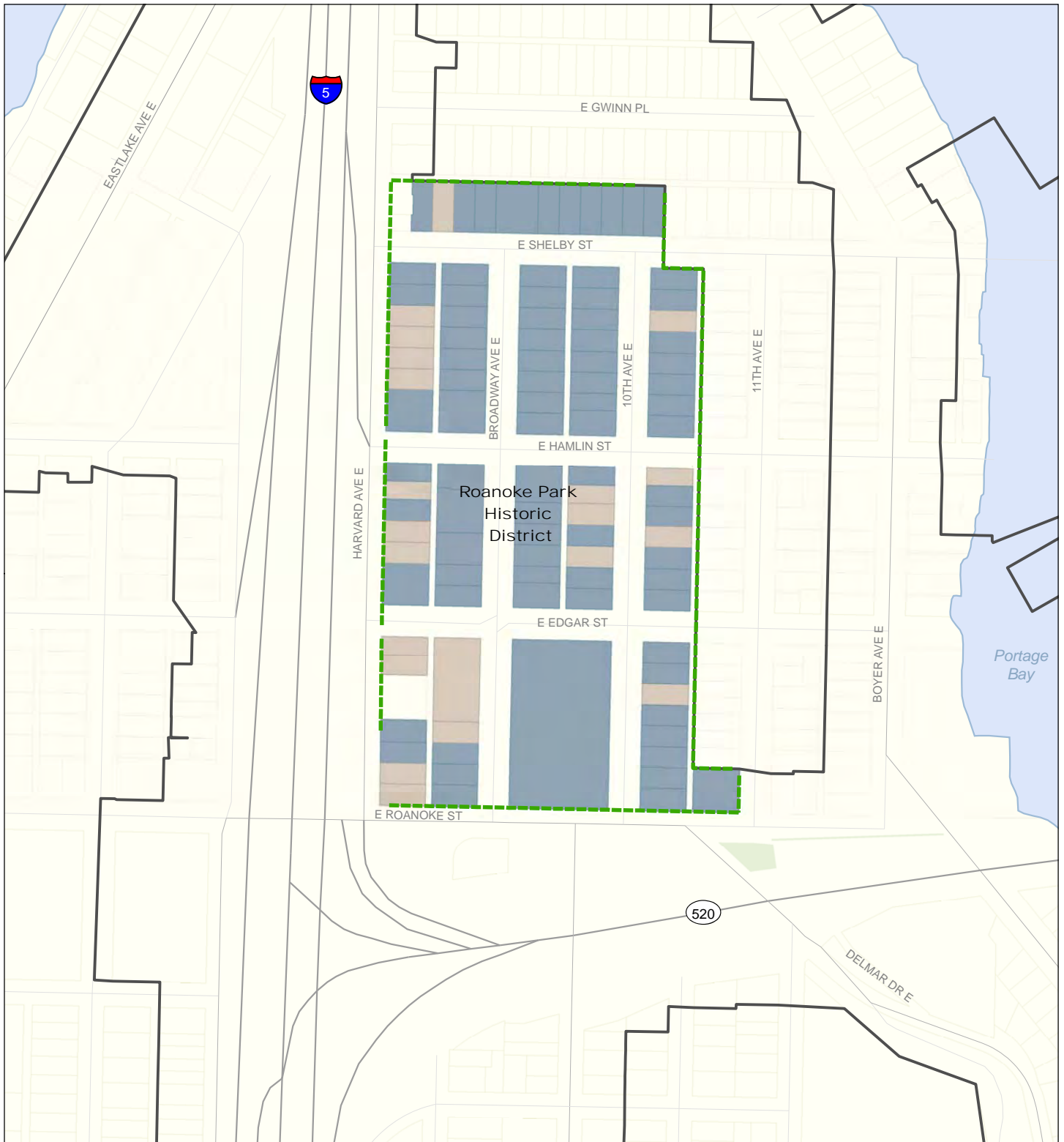
Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*18	Franklin Avenue East	2923 Franklin Apartments	1927	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957
20	Broadway Avenue East	2352 Talder House	1909	Eligible	Eligible under Criterion C
*22	East Miller Street	904 East Miller Condominium	1911	Eligible	Eligible under Criterion C
*23	Broadway Avenue East	2408 Sugamura House	1910	Eligible	Eligible under Criterion C
25	East Miller Street	910 Wicklund-Jarr House	1905	Eligible	Eligible under Criterion C
26	East Miller Street	914 Glover Homes	1910	Eligible	Eligible under Criterion C
27	10th Avenue East	2351 Keuss Building	1930	Eligible	Eligible under Criterion C
*36	East Roanoke Street	901 Fire Station #22	1965	Eligible	Eligible under Criterion C
37	Roughly bounded by East Roanoke Street, Harvard Avenue East, East Shelby Street and 10th Avenue East	Roanoke Park Historic District	1899 to 1939	Eligible	Listed under Criteria A and C WHR listed
*38	Harvard Avenue East	2706 William Parsons House	1903	Contributing Listed	Contributing to the Roanoke Park Historic District Listed under Criteria A and C WHR Listed Designated Seattle Landmark
*39	Federal Avenue East	2422 Boyd House	1907	Eligible	Eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
45	East Roanoke Street	1118 Andrew Gunby House	1940	Eligible	Eligible under Criterion C
*252	5th Avenue Northeast	4559	1919	Eligible	Eligible under Criterion C
*255	5th Avenue Northeast	4545	1919	Eligible	Eligible under Criterion C
*256	5th Avenue Northeast	4541	1919	Eligible	Eligible under Criterion C
*268	Roosevelt Way Northeast	4501 Performance Bicycles	1926	Eligible	Eligible under Criteria A and C
*273	7th Avenue Northeast	4311	1918	Eligible	Eligible under Criterion C
*283	7th Avenue Northeast	4247	1919	Eligible	Eligible under Criterion C
*284	Roosevelt Way Northeast	4212-4214 Hardwick's Swap Shop	1924; 1967	Eligible	Eligible under Criterion C
*292	7th Avenue Northeast	4206	1925	Eligible	Eligible under Criterion C
*303	7th Avenue Northeast	4030	1925	Eligible	Eligible under Criterion C
*310	9th Ave Northeast	4001	1964	Eligible	Eligible under Criterion C
*317	Eastlake Avenue East	3242 The Martello	1916	Eligible	Eligible under Criterion C Designated Seattle Landmark
*318	Eastlake Avenue East	3240	1909	Eligible	Eligible under Criterion C
*320	Fuhrman Avenue East	3261	1952	Eligible	Eligible under Criterion C
*322	Fuhrman Avenue East	3240 Lanai Apartments	1955	Eligible	Eligible under Criterion C
*324	Fuhrman Avenue East	3226	1928	Eligible	Eligible under Criterion C
*330	Harvard Avenue East	3206	1924	Eligible	Eligible under Criterion C Designated Seattle Landmark

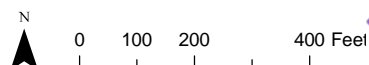
Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*351	Franklin Avenue East	3100 Wembley Court	1924	Eligible	Eligible under Criterion C Designated Seattle Landmark
380	Eastlake Avenue East	2852 Valencia Apartments	1957	Eligible	Eligible under Criterion C
381	Eastlake Avenue East	2828-2840 Coronado Apartments	1958	Eligible	Eligible under Criterion C
*382	Franklin Avenue East	2837	1942	Eligible	Eligible under Criterion C
383	Franklin Avenue East	2821	1926	Eligible	Eligible under Criterion C
384	Franklin Avenue East	2819 Franklin Arms Apartments	1901	Eligible	Eligible under Criterion C
385	Eastlake Avenue East	2822 Buena Vista Apartments	1925	Eligible	Eligible under Criterion C
386	Franklin Avenue East	2811	1924	Eligible	Eligible under Criterion C
388	Franklin Avenue East	2807 The Joyce Apartment	1928	Eligible	Eligible under Criterion C
390	East Hamlin Street	220	1949	Eligible	Eligible under Criterion C
391	East Hamlin Street	222 Hamlin House	1928	Eligible	Eligible under Criterion C
412	Franklin Avenue East	2733	1950	Eligible	Eligible under Criterion C
*414	Boylston Avenue East	2727	1909	Eligible	Eligible under Criterion C
*441	Boylston Avenue East	2411	1914	Eligible	Eligible under Criterion C
*442	Boylston Avenue East	2407	1914	Eligible	Eligible under Criterion C
*444	Boylston Avenue East	2401	1926	Eligible	Eligible under Criterion C
*445	Boylston Avenue East	2359	1908	Eligible	Eligible under Criterion C
*454	Boylston Avenue East	2315	1909	Eligible	Eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*456	East Lynn Street	625	1904	Eligible	Eligible under Criterion C
*457	Boylston Avenue East	2239	1900	Eligible	Eligible under Criterion C
*458	Boylston Avenue East	2235	1909	Eligible	Eligible under Criterion C
*459	Boylston Avenue East	2231	1909	Eligible	Eligible under Criterion C
*460	Boylston Avenue East	2227	1915	Eligible	Eligible under Criterion C
*463	Boylston Avenue East	2203	1925	Eligible	Eligible under Criterion C
*464	East Boston Street	269 Primrose Apartments	1929	Eligible	Eligible under Criterion C
*468	Boylston Avenue East	2025	1915	Eligible	Eligible under Criterion C
*472	Boylston Avenue East	2007	1965	Eligible	Eligible under Criterion C
*473	Boylston Avenue East	2003	1925	Eligible	Eligible under Criterion C
*474	East Newton Street	267	1909	Eligible	Eligible under Criterion C
*479	Lakeview Boulevard East	1618	1919	Eligible	Eligible under Criterion C
*481	Lakeview Boulevard East	1606	1916	Eligible	Eligible under Criterion C
*600	I-5 Bridge over Lake Washington Ship Canal	Lake Washington Ship Canal Bridge	1958	Eligible	Eligible under Criteria A and C
*601	Over Lake Washington Ship Canal in Portage Bay	University Bridge	1919	Eligible	Eligible under Criteria A and C

*Historic properties within one parcel of potential construction haul routes.



- Roanoke Park Historic District
- Area of Potential Effects
- Contributing Resource
- Non-Contributing Resource
- Parcel
- Park



Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

Exhibit 5-4. Roanoke Park Historic District

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

According to the 2009 nomination form:

The Roanoke Park Historic District is [significant] under Criterion A for its direct association with events that made a significant contribution to the broad patterns of local and national history. The district is also significant under Criterion C for its collection of early 20th century residential architecture designed by many notable Seattle architects. The period of significance for the Roanoke Park Historic District begins in 1899 (the earliest construction date) and ends in 1939 (the date the neighborhood was built out). (O'Connor et al. 2009:Section 8, p.1)

The nomination describes the defining physical characteristics of the historic district as follows:

The district is tightly unified geographically, with 96 single-family residences and 3 houses now serving as duplexes on relatively small lots usually 50 feet wide and 10 feet deep. The park...is the district's chief amenity apart from its views.... A sense of pleasant confinement and shelter comes from the large elms and horse chestnuts that shield the park and surrounding streets from the arterial at the district's south end. The continuous blocks of East Shelby Street with no perpendicular interruptions ... clearly mark the north boundary of the district... (O'Connor et al. 2009:Section 8, p.12)

The Olmsted Brothers had identified Block 9 of the Denny-Fuhrman Addition as a good place for a park to connect with Interlaken Park and its western viewpoint, now the Bagley[...]Viewpoint. The Parks Department acquired the 2.2 acres of Block 9 in 1908 and established Roanoke Park. (O'Connor et al. 2009:Section 8, p.14)

[A] streetcar finally came directly to the neighborhood and its new park just west and north of the viewpoint on the western edge of Interlaken Park. At the same time, preparations for the Alaska-Yukon-Pacific Exposition of 1909 turned the attention of both locals and visitors to the north, where the new suburb happened to lie on a plateau overlooking the Exposition grounds. (O'Connor et al. 2009:Section 8, p.13)

The greatest number of houses in the district [was] built in 1908, 1909, and 1910." (O'Connor et al. 2009:Section 8, p.16)

The Roanoke Park Historic District is considered historically significant under Criterion A for its contribution to the broad patterns of history. The neighborhood was an early streetcar suburb of Seattle, and "drew some of Seattle's and the country's most authentic characters, powerful influencers, and notable benefactors" (O'Connor et al. 2009:Section 8, p.11). The NRHP nomination notes the Roanoke Park Historic District was home to many influential residents. Louisa Boren Denny, the last surviving adult member of the landing party at Alki Point, spent her last years living in what is now the historic district, and two early Seattle mayors lived in the neighborhood—Ole Hanson and Hugh Caldwell.

Several other women influential in Seattle's early history have also called the Roanoke Park Historic District home. Bernice Stern, the first woman elected to the King County Council, later serving as King County Council chairwoman (Chesley 2006), grew up in the neighborhood and lived there during her early years of marriage. She also served on the Seattle City Council and later, on the Washington State Transportation Commission. Alice Franklin Bryant, another Roanoke Park resident, was known internationally as a peace activist and advocate for justice, and ran unsuccessfully for Congress on multiple occasions. Bryant lectured around the world and received numerous honors, including recognition as a Distinguished Citizen by the Washington State House of Representatives (June 18, 1977), First Citizen of Seattle (November 19, 1976), Honorary Citizen of Hiroshima (1951), and a civilian decoration for materially contributing to the success of the war in the Pacific (1945) (Williams 1977). Jean Ross, who lived in the district from ages 5 to 87 (1926 to 2008), was the first female engineer to work for Boeing (O'Connor et al. 2009).

Another notable resident was Harry W. Kent, one of the founders of the Kenworth Motor Truck Corporation. The company incorporated in Seattle in January 1923 and Kent became president of the company in 1929. Kenworth began producing custom fire trucks in 1932, and in 1933, was the first American truck manufacturer to install diesel engines as standard equipment. Kent remained president of the company until his death in 1937. During World War II, Kenworth was a significant producer of military trucks, especially the famous M-1 wreckers (Kenworth 2009).

Under Criterion C, the Roanoke Park Historic District is considered historically significant as “an oasis of substantial single-family residences, many of which were designed by architects of some renown.... The Roanoke Park Historic District contains a distinctive collection of housing stock representative of a forty-year period from 1899 through 1939” (O’Connor et al. 2009:Section 8, p.11). According to the NRHP nomination, the historic district contains a variety of architectural styles including the Colonial Revival, Neo-classical Revival, Tudor Revival, Mission/Spanish Revival, English Arts and Crafts, Craftsman, American Foursquare, Italian Renaissance, French Norman Revival, and many others.

The NRHP nomination notes designs from the following architects represented in the district:

- Eric Almquist
- Bebb & Gould
- T.F. Bellamy
- Beezer Bros.
- Bertrand & Chamberlin
- Cutter & Malmgren (undocumented)
- Elmer Ellsworth Green
- Julian Franklin Everett
- Virgil Hall
- Charles Haynes
- Hunt & Wheatley
- Huntington & Gould
- Edwin J. Ivey
- Alvin L. Johnson
- Lawton & Moldenhour
- John I. Mattson
- McClelland & Pinneh
- Merritt, Hall & Merritt
- Frederick A. Sexton
- Bertram Dudley Stuart
- Victor W. Voorhees
- Thomas L. West
- Arthur Wheatley
- Andrew Willatsen
- W.R.B. Willcox
- Willcox & Sayward

In addition to its architecture, the Roanoke Park Historic District is notable for its park and landscape, both of which are considered contributing features. The NRHP nomination describes Roanoke Park as “the district’s jewel, a 2.2-acre, green gateway” to the neighborhood. It was originally included as a component in the Olmsted Brothers’ plan for Seattle’s parks and boulevard system as “the Roanoke terminus of Interlaken Park” (O’Connor et al. 2009:Section 7, p.5).

In reference to changes the park has experienced, the NRHP nomination states:

Roanoke Park has undergone an extensive renovation over the past ten years. Working with the Parks Department, the Department of Neighborhoods, and resident University of Washington Professor Emeritus of Landscape Architecture Robert Buchanan, residents and other volunteer groups have planted some 500 trees in the neighborhood and at least 100 trees and thousands of shrubs and perennials in Roanoke Park, which now contains 79 varieties of trees. Parents and other residents worked with the Parks Department to reconfigure, resurface, and re-equip the Buchanan-redesigned playground at the north end of the park, and Buchanan laid out a more pleasing, curving path and bed configuration to encourage strolling along the park’s paths and new beds. The informal basketball court under the evergreens was ‘formalized’ with a concrete pad, and a new hoop at standard height was installed.... Residents have bought new and more park benches to encourage visitors to spend time in the park. (O’Connor et al. 2009:Section 7, p.6)

As noted above, the park and neighborhood are home to a substantial tree collection.

The twenty-five mature elms in Roanoke Park and on the immediately surrounding streets are 100 years old and have been identified by City Arborist Nolan Rundquist as a ‘significant elm cluster.’ ...the Roanoke Neighborhood Elms Fund successfully nominated the handsome elm in the center of the park’s west lawn as a Heritage Elm within the City of Seattle, marked by a small boulder and plaque at the elm’s foot. (O’Connor et al. 2009:Section 7,p.4).

In addition to the elms in the park, there are also elms along East Edgar Street from Tenth Avenue East to Harvard Avenue East, and along the St. Patrick’s Church curb lawns. The historic district also has mature horse chestnut and hedge maple trees.

Another aspect of the Roanoke Park Historic District is the distinctive views from the area. Because it sits on a plateau, the historic district has unique views that contribute to its setting. As noted in the NRHP nomination, “To the east and the west the eye is drawn out to the lakes and even farther to the rugged often snowcapped mountains of the Cascades on the east and the Olympics on the west” (O’Connor et al. 2009:Section 8, p.13). From the historic district’s east side, the view encompasses Portage Bay, the Montlake Cut, the historic Montlake Bridge, the Seattle Yacht Club, and the NOAA Northwest Fisheries Science Center buildings. The Gothic Revival Suzzallo Library and other buildings on the University of Washington campus are likewise visible across the bay to the northeast. From the historic district’s west side, the view includes the downtown Seattle skyline, the Space Needle, Lake Union, the industrial structures of Gas Works Park, and the east side of Queen Anne Hill.

For examples of contributing resources in the Roanoke Park Historic District, see Exhibits 5-5 and 5-6. The Gates-Bass Mansion at 1018 East Roanoke Street (Exhibit 5-5) is one of the more ornate houses in the historic district. It occupies one of the best-sited parcels, on a large corner lot overlooking a prominent bluff with views of Portage Bay. The Betterton-Hillman House at 2601 Broadway Avenue East (Exhibit 5-6) faces Roanoke Park and is a substantial residence with Craftsman style details, typical of properties in the historic district. See the NRHP nomination form in Appendix C, for more information on the historic district’s contributing properties, including detailed property descriptions and photographs.

Exhibit 5-5. 1018 East Roanoke Street, Gates-Bass Mansion, Roanoke Park Historic District



Exhibit 5-6. 2601 Broadway Avenue East, Betterton-Hillman House, Roanoke Park Historic District



Seattle Apartment Buildings 1900–1957—NRHP Multiple Property Nomination

The SHPO accepted an NRHP multiple property nomination for Seattle Apartment Buildings constructed from 1900 to 1957 on November 20, 2008, and the properties initially documented by the nomination were individually listed in the NRHP on January 9, 2009 (Sheridan 2008). None of the initially documented properties are located in the APE. However, the historic resources survey identified 14 additional apartment buildings located in the APE as eligible for listing in the NRHP under the multiple property nomination. Twelve of these properties are located within the I-5/Roanoke segment:

- Shelby Apartments at 2815 Boylston Avenue East,
- L'Amourita Apartments at 2901 Franklin Avenue East,
- Franklin Apartments at 2919 and 2923 Franklin Avenue East,
- Lanai Apartments at 3240 Fuhrman Avenue East,
- Wembley Court at 3100 Franklin Avenue East,
- Coronado Apartments at 2828–2840 Eastlake Avenue East,
- Franklin Arms at 2821 Franklin Avenue East,
- Buena Vista Apartments at 2822 Eastlake Avenue East,
- The Joyce at 2807 Franklin Avenue East,
- Hamlin House at 222 East Hamlin Street,
- Primrose Apartments at 269 East Boston Street, and
- two apartment buildings at 3261 and 3226 Fuhrman Avenue East.

One apartment building, Edgewater Condominiums at 2411 42nd Avenue East, is located in the West Approach segment of the APE.

All 14 identified apartment buildings meet the requirements of the NRHP multiple property listing (Sheridan 2008). They are purpose-built apartment buildings; they were constructed between 1900 and 1957; they have good integrity; they were designed with and retain more than five self-sufficient dwelling units, each with private kitchen and bath; and they are within the Seattle corporate limits. The SHPO concurred on the determination of eligibility of three apartment buildings on August 27, 2009: Shelby Apartments, L'Amourita Apartments, and Franklin Apartments (Exhibit 5-7). The SHPO concurred on the determinations of eligibility of the other 10 apartment buildings on November 10, 2010 (Exhibit 5-8).

Shelby Apartments

2815 Boylston Avenue East

Property ID 14—built in 1928

Individually eligible for listing in the NRHP under the multiple property nomination

The Shelby Apartments at 2815 Boylston Avenue East (Exhibit 5-7) were designed by B. Dudley Stuart (1885–1977) and built in 1928 (Durio 2009a). The apartments feature ornate terra-cotta

details, especially at the entry, and leaded glass windows. The unusually shaped footprint was designed to fit the odd lot shape while still giving each unit as much natural light as possible.

L'Amourita Apartments

2901 Franklin Avenue East

Property ID 16—built in 1909

Individually eligible for listing in the NRHP under the multiple property nomination

The L'Amourita Apartments at 2901 Franklin Avenue East (Exhibit 5-7) were built in 1909 by investor Adolph J. Jarmuth (Durio 2009b). According to the Seattle Times, Mr. Jarmuth “built the L'Amourita whole-piece and lived with his family in its first apartment at the corner of Franklin Avenue and Shelby Street for the first two years only.” In the beginning there were only eight apartments, described in the Seattle Times then as “divided by concrete walls and having from seven to nine rooms.” The building was “the first of its kind in Seattle” (Dorpat 2002). The apartment building is considered unique for its ornate Mission Revival style, uncommon in Seattle, and is a designated Seattle Landmark. It is now used as residential condominiums.

Franklin Apartments

2919 and 2923 Franklin Avenue East

Property IDs 17 and 18, respectively—built in 1927

Individually eligible for listing in the NRHP under the multiple property nomination

The buildings at 2919 and 2923 Franklin Avenue East (Franklin Apartments) are separate but matching six-unit apartment blocks (Exhibit 5-7), both constructed in 1927 (Durio 2009c, 2009d). They both feature unusual green terra-cotta ornamentation (including window sills and keystones) and a dramatic green terra-cotta pedimented door surrounds. The surrounds are composed of pairs of fluted Doric columns with a full entablature, topped by a balustrade with a center panel featuring a row of swags.

3261 Fuhrman Avenue East

3261 Fuhrman Avenue East

Property ID 320—built 1952

Individually eligible for listing in the NRHP under the multiple property nomination

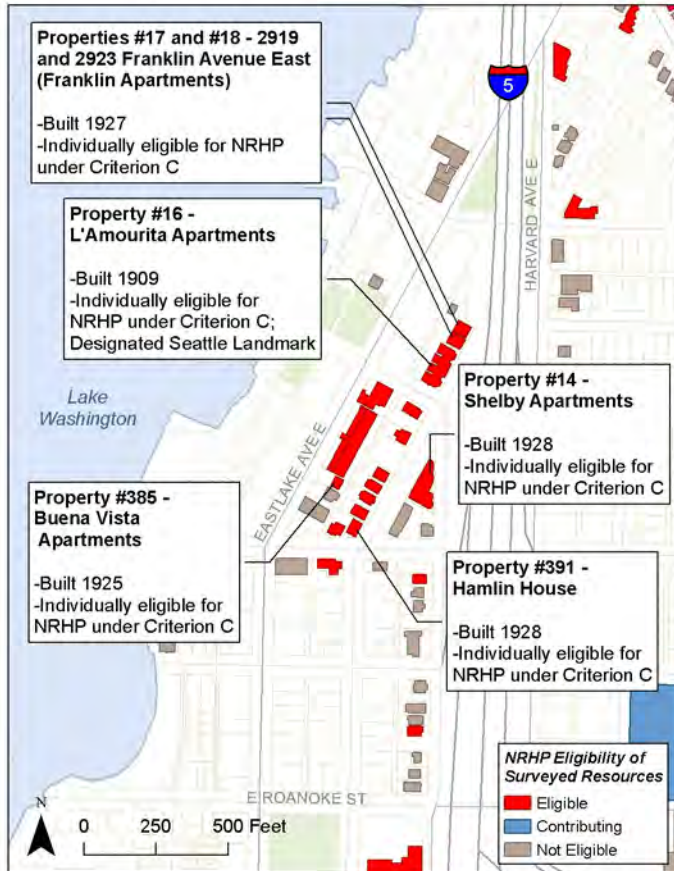
The property contains a three-story apartment building was originally designed in the Modern style with a unique irregularly shaped plan (Orton and Hetzel 2010a). It has a flat roof with overhanging eaves and metal coping. The exterior walls are clad with a brick veneer and vertical wood siding. The building embodies the distinctive characteristics of the Modern style and is an unusual design for a multifamily apartment building.



Franklin Apartments –
2919 and 2923 Franklin Avenue East



The Shelby Apartments –
2815 Boylston Avenue East



L'Amourita Apartments –
2901 Franklin Avenue East



Hamlin House –
222 East Hamlin Street



Buena Vista Apartments –
2822 Eastlake Avenue East



Exhibit 5-7. Seattle Apartment Buildings (1900-1957) – Franklin Apartments, Shelby Apartments, L'Amourita Apartments, Buena Vista Apartments, and Hamlin House

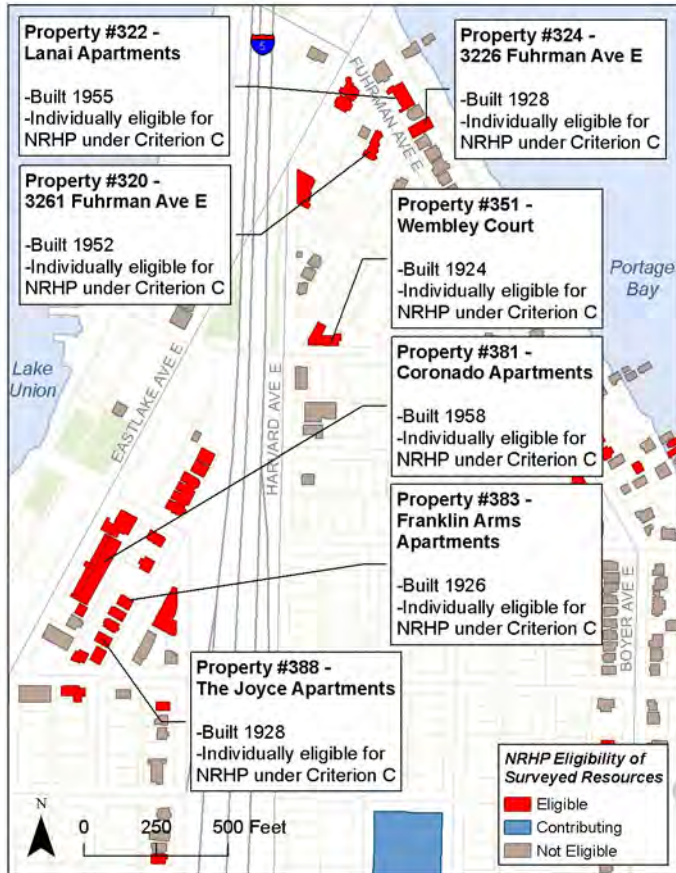
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Wembley Court
3100 Franklin Avenue East



Lanai Apartments
3240 Fuhrman Avenue East



Coronado Apartments
2828-2840 Eastlake Avenue East



Apartments
3226 Fuhrman Avenue East



The Joyce Apartment
2807 Franklin Avenue East



Franklin Arms Apartments
2821 Franklin Avenue East



Apartments
3261 Fuhrman Avenue East



Exhibit 5-8. Seattle Apartment Buildings (1900-1957) – Wembley Court, Lanai Apartments, Coronado Apartments, The Joyce Apartment, Franklin Arms Apartments, 3261 Fuhrman Avenue, and 3226 Fuhrman Avenue

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

Lanai Apartments

3240 Fuhrman Avenue East

Property ID 322—built 1955

Individually eligible for listing in the NRHP under the multiple property nomination

The Lanai Apartments (Exhibit 5-8) is a good example of the open-corridor, multifamily apartment building type that was popular from the 1950s to the 1970s. It was designed in 1955 by Ted La Court for Orville Cohen, and built by the Century Construction Company (Sheridan 2006a). The apartment building embodies the distinctive characteristics of the Modern style and is a notable example of the building type and style. Its modern features include concrete block construction, aluminum windows, and glass-enclosed entry pavilions. It has 28 units, each averaging approximately 500 square feet.

3226 Fuhrman Avenue East

3226 Fuhrman Avenue East

Property ID 324—built 1928

Individually eligible for listing in the NRHP under the multiple property nomination

The property contains a three-story apartment building with a rectangular plan and unreinforced masonry construction (Orton and Hetzel 2010b). The building was originally designed in the Renaissance Revival style with Beaux Arts style elements. It has a flat roof with metal coping, and the exterior walls are clad with a brick veneer. The building has good integrity and embodies the distinctive characteristics of its style and building type.

Wembley Court

3100 Franklin Avenue East

Property ID 351—built 1924

Individually eligible for listing in the NRHP under the multiple property nomination

Wembley Court (Exhibit 5-8) is a one-story, V-shaped apartment court with a central courtyard. It was designed in 1924 by Howard Riley, a local architect who also designed other bungalow courts in the Seattle area, in the Tudor Revival style (Sheridan 2006b). It is considered unusual for its V-shaped footprint, which was designed to fit onto the corner lot. It has six large units, averaging 937 square feet with amenities such as fireplaces and tiled kitchens and baths. Wembley Court is an excellent example of the Tudor Revival style and a good example of the small, multifamily apartment courts that were popular in Seattle and throughout the country in the 1920s.

Coronado Apartments

2828-2840 Eastlake Avenue East

Property ID 381—built 1958

Individually eligible for listing in the NRHP under the multiple property nomination

The Coronado Apartment building (Exhibit 5-8) is eight stories tall with a rectangular plan and steel frame construction (Gray and Hetzel 2010a). Built in 1958, it was designed in the International style. It has a flat roof and exterior hallways. The exterior walls are clad with concrete and a wood siding veneer. The fenestration consists of original metal windows throughout the building. The building has good integrity and embodies the distinctive characteristics of the International style from the mid-twentieth century, and is an uncommon example of the style in Seattle.

Franklin Arms

2821 Franklin Avenue East

Property ID 383—built 1926

Individually eligible for listing in the NRHP under the multiple property nomination

The Franklin Arms (Exhibit 5-8) is a three-story apartment building built in 1926 (Price and Hetzel 2010a). It is a good example of the Renaissance Revival style, but it also has Beaux Arts elements. The building has a flat roof with a stepped parapet and metal coping with a brick exterior. It is a good example of this combination of styles in a Seattle apartment building from the early twentieth century.

Buena Vista Apartments

2822 Eastlake Avenue East

Property ID 385—built 1925

Individually eligible for listing in the NRHP under the multiple property nomination

The property contains a two-story multifamily apartment building with a rectangular plan and wood frame construction (Gray and Hetzel 2010b). It was originally designed in the Spanish Colonial Revival style. The building has a flat roof with a stepped parapet and clay tile coping, and the exterior walls are clad with a smooth stucco finish. The property embodies the distinctive characteristics of the Spanish Colonial Revival style, and is an unusual example of this combination of style and type in Seattle.

The Joyce

2807 Franklin Avenue East

Property ID 388—built 1928

Individually eligible for listing in the NRHP under the multiple property nomination

The Joyce (Exhibit 5-8) is a two-story apartment building erected in 1928 (Price and Hetzel 2010b). It was designed in the Renaissance Revival style with Beaux Arts elements. It has a rectangular plan, is unreinforced masonry construction, and has a flat roof with a parapet and decorative terra-cotta cornice. The exterior walls are clad with brick, and the fenestration throughout the building consists of original wood frame windows with leaded glass panes. The building has good integrity and embodies the distinctive characteristics of the Renaissance Revival style.

Hamlin House

222 East Hamlin Street

Property ID 391—built 1928

Individually eligible for listing in the NRHP under the multiple property nomination

The property contains a three-story apartment building with a rectangular plan and unreinforced masonry construction (Orton and Hetzel 2010d). The building was originally designed in the Renaissance Revival style with Beaux Arts style elements. It has a flat roof with a short parapet and concrete coping. The exterior walls are clad with brick. The building has good integrity and embodies the distinctive characteristics of its style and building type.

Primrose Apartments

269 East Boston Street

Property ID 464—built 1929

Individually eligible for listing in the NRHP under the multiple property nomination

The property (Exhibit 5-9) contains a four-story apartment building with a rectangular plan and unreinforced masonry construction (Orton and Hetzel 2010e). The building was originally designed in the Renaissance Revival style. It has a flat roof with a stepped parapet and metal coping, and the exterior walls are clad with brick. The building has good integrity and embodies the distinctive characteristics of the Renaissance Revival style.

Exhibit 5-9. Seattle Apartment Building (1900–1957)—Primrose Apartments



Individual Historic Properties

The historic resources survey of the APE identified several properties in the I-5/Roanoke segment as individually eligible for listing in the NRHP. The SHPO concurred with the eligibility determinations for these properties on August 27, 2009 and November 10, 2010, unless otherwise indicated.

Denny-Fuhrman (Seward) School

2515 Boylston Avenue East

Property ID 10—built 1893, 1905, and 1917

Individually eligible for listing in the NRHP under Criteria A and C

The Denny-Fuhrman (Seward) School (Exhibit 5-10) consists of a small campus of three historic buildings located in what is now considered the Eastlake neighborhood (Durio 2009e). The small campus illustrates the development of public school architecture in the late nineteenth century and early twentieth century. The school is considered eligible for listing in the NRHP under Criterion A for its association with education in Seattle and the development of the Eastlake community. Under

Criterion C, the property contains buildings that are excellent examples of late nineteenth and early twentieth century public school buildings.

The oldest of the three buildings, known as the Denny-Fuhrman School or the Seward School Lunchroom and Gymnasium, was originally built in 1893 facing east onto Boylston Avenue. In 1899, an addition to the building doubled its size and resulted in the current footprint, roofline, and arched entries. The building was relocated to its present site in 1917. It was renovated in 1997–1998, and reopened in September 1999, along with the rest of the complex. This building is listed in the WHR and is a designated Seattle Landmark. The Seattle Landmark Nomination Form (1980) notes that it is one of only two nineteenth-century frame schoolhouses remaining in Seattle, and states that it is of “unique significance in representing the history of early public education in Seattle.” The nomination form for the WHR (Corley 1973) states that it is “the oldest frame school building in a generally unaltered state in the city of Seattle,” and that it is the only one-room schoolhouse remaining in the city.

The second school building was constructed in 1905 to accommodate increased enrollment. Originally the school served all eight grades in one room, but by 1897, enrollment had risen to 70, and three classrooms were established (Corley 1973). By 1904, the enrollment was 206, and the school board built the school building that is now to the north of the 1893 structure, facing Franklin Avenue East. The buildings were then renamed “Seward School” for Secretary of State William Henry Seward (1801–1872), who had negotiated the purchase of Alaska (Long 2001). The Alaska-Yukon-Pacific Exposition held on the University of Washington campus in 1909 brought new transportation and great exposure to the Eastlake neighborhood. Eastlake Avenue was graded, and the streetcar lines were extended north. By 1914, more than 400 pupils attended Seward School, reflecting the growth and development of the area. In 1932, enrollment was about 580, and Seward became a demonstration school. As a demonstration school, teachers from all over the school district attended half-day sessions at Seward to observe the latest teaching methods and materials. In 1950, Seward School’s boundaries were expanded when the nearby Cascade School was destroyed in an earthquake (Thompson and Marr 2002).

The second school building is a designated Seattle Landmark. The Seattle Landmark Nomination Form (1980) states that in plan and internal arrangement, the building conforms to the standard eight-room school plan developed by architect James Stephen and used throughout the school district between 1904 and 1906. It notes that it is “significant as an essentially unaltered and early example” of this plan.

The third school building was designed by Edgar Blair and built in 1917 and is also a designated Seattle Landmark (Landmark Nomination Form 1980). When built, the school building’s design reflected new approaches in the design of educational facilities, which were particularly concerned with fireproof construction. The building’s masonry construction was a consequence of these influences, which also affected its external form. In particular, the Seattle Landmark Nomination Form (1980) notes the building is “significant architecturally as one of the two most distinguished elementary school designs built for the District...and exhibit(s) unusually refined brick and terra cotta detailing....”

Exhibit 5-10. Denny-Fuhrman (Seward) School, 2515 Boylston Avenue East



Keuss Building

2351 10th Avenue East

Property ID 27—built 1930

Individually eligible for listing in the NRHP under Criterion C

The Keuss Building is a traditional tripartite row of commercial storefronts. Built in 1930, the building exhibits elements of the Art Deco style in corbelled brick detailing on vertical pilasters and distinctive, stylistic, cast stone ornamentation (Durio 2009f). The three storefronts are typical early twentieth century in design, with recessed center entries between large plate-glass windows, topped by a row of transoms. The building retains good integrity and is considered eligible for listing in the NRHP under Criterion C for its distinctive architectural characteristics.

Fire Station #22

901 East Roanoke Street

Property ID 36—built 1965

Individually eligible for listing in the NRHP under Criteria A and C

Fire Station #22 (Exhibit 5-11) was constructed in 1965 on a narrow strip of land between East Roanoke Street and SR 520, across the street from the Roanoke Park Historic District (Wickwire 2002; Durio 2009g). This fire station replaced an older facility at a nearby site after the construction of SR 520 (City of Seattle 2004, 2009). It was designed by architect LaMonte Shorett. The building is considered historically significant for its architectural design and associations with the development of the Seattle Fire Department and the North Capitol Hill neighborhood. The fire station will be eligible for listing in the NRHP under Criterion A for its association with the development of the Seattle Fire Department and under Criterion C for its distinctive Modern architectural style in 2015, once it reaches 50 years old.

Exhibit 5-11. Fire Station #22, 901 East Roanoke Street



Eldridge Buick/University Chevrolet Building

4501 Roosevelt Way NE

Property ID 268—built 1926

Individually eligible for listing in the NRHP under Criteria A and C

The Eldridge Buick/University Chevrolet Building is a large one-story former automobile showroom on a corner lot in the University District of Seattle (Sodt 2001). It was originally designed in the Mediterranean Revival style by Schack, Young and Myers, a well-known Seattle firm of architects and engineers. Architects James Hansen Schack and David John Myers, and engineer Arrigo M. Young, were prolific designers of many Seattle commercial buildings in the 1920s, including several other buildings in the University District. Built as the home of the Eldridge Buick Company, the property was purchased by J. E. Blume in 1935 as the new home of the University Chevrolet Company (University Motors). The building embodies the distinctive characteristics of the Mediterranean Revival style in a commercial retail building, and continues to convey a strong association with the early automobile industry in Seattle during the 1920s.

University Friends Meeting of the Religious Society of Friends

4001 9th Avenue NE

Property ID 310—built 1964

Individually eligible for listing in the NRHP under Criterion C

The property contains two related two-story commercial buildings, each with a rectangular plan and concrete construction (Gray and Hetzel 2010d). They are connected by covered corridors, which create a central courtyard between the two structures. The entire property was originally designed in the Modern style with strong Japanese stylistic influences. It was designed by architect Perry Johanson, and houses the meeting house of the University Friends Meeting of the Religious Society of Friends (Quakers) and the regional offices of the American Friends Service Committee (Religious Society of Friends 2010). The building is an unusual example of the Modern style and has good integrity. The property will be eligible for listing in the NRHP under Criterion C for its distinctive Modern architectural style in 2017, once it reaches 50 years old.

The Martello

3242 Eastlake Avenue East

Property ID 317—built 1916

Individually eligible for listing in the NRHP under Criterion C

The Martello (Exhibit 5-12) is a three-story mixed-use building, consisting of two levels of apartment units over ground-level commercial space, designed in the Tudor Revival style (Orton and Hetzel 2010f). It is characterized by a steeply-pitched, conical, corner tower, a complex cross-gable roof, and stucco clad exterior walls. Built in 1916 as a single-family house, the property was remodeled in the 1920s into a furniture store by Frederick Anhalt, one of Seattle's most prominent apartment developers at the time. Anhalt was renowned for his use of the French Eclectic and Tudor Revival styles, which is evident in The Martello. The store was originally Skewe's

Furniture and later Rapunzel’s tavern. In the 1950s, the apartments were called Lake Union Court Apartments, but are currently known as The Martello. The building was recently renovated and converted to condominiums. The Martello building has good integrity, embodies the distinctive characteristics of the Tudor Revival style, and is a unique building design on a prominent corner lot.

Exhibit 5-12. The Martello, 3242 Eastlake Avenue East



A.W. Larson Building

3206 Harvard Avenue East

Property ID 330—built 1924

Individually eligible for listing in the NRHP under Criteria C

The property contains a two-story commercial building with a triangular plan and unreinforced masonry construction (Price and Hetzel 2010c). The building was originally designed in the Renaissance Revival style with Beaux Arts style elements. It has good integrity and embodies the

distinctive characteristics of its style and type; it is one of a dwindling number of intact 1920s commercial buildings that remain in the Eastlake neighborhood.

Boylston East Apartments

2007 Boylston Avenue East

Property ID 472—built 1965

Individually eligible for listing in the NRHP under Criteria C

The property contains a two-story multifamily residence with a rectangular plan, originally designed in the Modern style (Durio 2010). It has a flat roof with slightly overhanging eaves and features an integrated ground-floor carport. The exterior walls are clad with wood clapboard siding and pebble dash stucco. The building's integrity remains intact and it is a good example of the Modern style in a residential apartment building.

Other Properties along Potential Haul Routes

Many parcels in the I-5/Roanoke segment contain buildings or houses identified as individually eligible for listing in the NRHP under Criterion C because they are considered good examples of a particular architectural style or building type, or are associated with a master architect. Listed in Exhibit 5-13, these properties occur along some of the project's proposed haul routes. The SHPO concurred with these eligibility determinations on November 10, 2010.

Exhibit 5-13. Historic Properties in the I-5/Roanoke Segment Eligible under NRHP Criterion C

Property	Street Address	Date	Architectural Style/Type
ID 4	1980 Harvard Avenue East	1932	Tudor Revival
ID 15	2847 Franklin Avenue East	1907	American Foursquare/Craftsman
ID 20	2852 Broadway Avenue East	1909	Queen Anne
ID 22	904 East Miller Street	1911	Arts and Crafts/Prairie
ID 23	2408 Broadway Avenue East	1910	American Foursquare and Arts and Crafts/Prairie
ID 25	910 East Miller Street	1905	Arts and Crafts/Craftsman
ID 26	914 East Miller Street	1910	Craftsman
ID 39	2422 Federal Avenue East	1907	Craftsman
ID 45	1118 East Roanoke Street	1940	Modern
ID 252	4559 5th Avenue NE	1919	Arts and Crafts/Craftsman
ID 255	4545 5th Avenue NE	1919	Arts and Crafts/Craftsman
ID 273	4311 7th Avenue NE	1918	Arts and Crafts/Craftsman
ID 283	4247 7th Avenue NE	1919	Dutch Colonial Revival
ID 284	4212-4214 Roosevelt Way NE	1924/1967	Commercial/Modern
ID 292	4206 7th Avenue NE	1925	Dutch Colonial Revival
ID 303	4030 7th Avenue NE	1925	Queen Anne
ID 355	3116 Fuhrman Avenue East	1928	Tudor Revival
ID 357	3106 Fuhrman Avenue East	1928	Tudor Revival
ID 358	1000 East Allison Street	1927	Tudor Revival

Property	Street Address	Date	Architectural Style/Type
ID 367	886 East Gwinn Place	1922	Arts and Crafts/Craftsman
ID 370	2946 Fuhrman Avenue East	1937	Colonial Revival
ID 371	2932 Fuhrman Avenue East	1923	Colonial Revival
ID 384	2819 Franklin Avenue East	1901	Queen Anne
ID 386	2811 Franklin Avenue East	1924	Colonial Revival
ID 390	220 East Hamlin Street	1949	Ranch
ID 412	2733 Franklin Avenue East	1950	Ranch
ID 414	2727 Boylston Avenue East	1909	Arts and Crafts/Craftsman
ID 421	2623 Boylston Avenue East	1911	Arts and Crafts/Craftsman
ID 425	2717 Boyer Avenue East	1919	Colonial Revival
ID 432	2637 Boyer Avenue East	1923	Arts and Crafts/Craftsman
ID 433	2633 Boyer Avenue East	1923	Arts and Crafts/Craftsman
ID 434	2629 Boyer Avenue East	1923	Arts and Crafts/Craftsman
ID 437	2617 Boyer Avenue East	1924	Arts and Crafts/Craftsman
ID 441	2411 Boylston Avenue East	1914	Arts and Crafts/Craftsman
ID 442	2407 Boylston Avenue East	1914	Arts and Crafts/Craftsman
ID 444	2401 Boylston Avenue East	1926	Colonial Revival
ID 445	2359 Boylston Avenue East	1908	American Foursquare/Craftsman
ID 454	2315 Boylston Avenue East	1909	Arts and Crafts/Craftsman
ID 456	625 East Lynn Street	1904	Colonial Revival
ID 457	2239 Boylston Avenue East	1900	Colonial Revival
ID 458	2235 Boylston Avenue East	1909	American Foursquare/Prairie
ID 459	2231 Boylston Avenue East	1909	Arts and Crafts/Craftsman
ID 460	2227 Boylston Avenue East	1915	American Foursquare/Prairie
ID 463	2203 Boylston Avenue East	1925	Spanish Colonial Revival
ID 468	2025 Boylston Avenue East	1915	American Foursquare/Prairie
ID 473	2003 Boylston Avenue East	1925	Georgian Revival
ID 474	267 East Newton Street	1909	Arts and Crafts/Craftsman
ID 479	1618 Lakeview Boulevard East	1919	Arts and Crafts/Craftsman
ID 481	1606 Lakeview Boulevard East	1916	Dutch Colonial Revival

Portage Bay Segment

The historic resources survey of the Portage Bay segment identified 135 properties in the Portage Bay segment constructed prior to 1972. No previously recorded historic properties were identified in the segment. The 135 identified properties were evaluated to determine their eligibility for listing in the NRHP. Based on NRHP evaluation criteria (36 CFR 60.4), 33 of the properties were determined to be individually eligible for listing in the NRHP. These properties are listed in Exhibit 5-14, and their locations and NRHP eligibility presented in Exhibits 5-2a and 5-2b. No other identified properties in the Portage Bay segment are considered eligible for listing in the NRHP individually or as contributors to a potential historic district.

Appendix A provides a complete list of the resources surveyed in the Portage Bay segment; Appendix D includes the HPI forms for those resources not previously recorded.

Exhibit 5-14. Surveyed NRHP-Eligible Properties Identified in the Portage Bay Segment

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*48	Boyer Avenue East	2545 Alden Mason House	1949	Eligible	Eligible under Criteria B and C Potentially eligible Seattle Landmark
*52	Boyer Avenue East	2518 Kelley House	1909	Eligible	Eligible under Criterion C
*355	Fuhrman Avenue East	3116	1928	Eligible	Eligible under Criterion C
*357	Fuhrman Avenue East	3106	1928	Eligible	Eligible under Criterion C
*358	East Allison Street	1000	1927	Eligible	Eligible under Criterion C
*367	East Gwinn Place	886	1922	Eligible	Eligible under Criterion C
*370	Fuhrman Avenue East	2946	1937	Eligible	Eligible under Criterion C
*371	Fuhrman Avenue East	2932	1923	Eligible	Eligible under Criterion C
*373	Fuhrman Avenue East	2917 Canal Market	1922	Eligible	Eligible under Criterion C
*374	Fuhrman Avenue East	2926	1920	Eligible	Eligible under Criterion C
*421	Boylston Avenue East	2623	1911	Eligible	Eligible under Criterion C
*425	Boyer Avenue East	2717	1919	Eligible	Eligible under Criterion C
*432	Boyer Avenue East	2637	1923	Eligible	Eligible under Criterion C
*433	Boyer Avenue East	2633	1923	Eligible	Eligible under Criterion C
*434	Boyer Avenue East	2629	1923	Eligible	Eligible under Criterion C
*437	Boyer Avenue East	2617	1924	Eligible	Eligible under Criterion C
*486	Delmar Drive East	2448	1919	Eligible	Eligible under Criterion C
*491	Delmar Drive East	2432	1910	Eligible	Eligible under Criterion C
*501	Boyer Avenue East	2430	1925	Eligible	Eligible under Criterion C
*502	Boyer Avenue	2428	1926	Eligible	Eligible under

Property ID	Street Name/Location	Street Address/Property Name	Date of Construction	NRHP Status	Comments
	East				Criterion C
*503	Boyer Avenue East	2424	1926	Eligible	Eligible under Criterion C
*504	Boyer Avenue East	2415	1912	Eligible	Eligible under Criterion C
*508	Delmar Drive East	2340	1928	Eligible	Eligible under Criterion C
*515	Delmar Drive East	2301	1937	Eligible	Eligible under Criterion C
*516	Delmar Drive East	2328	1936	Eligible	Eligible under Criterion C
*522	Boyer Avenue East	2400	1956	Eligible	Eligible under Criterion C
*523	Boyer Avenue East	2366	1906	Eligible	Eligible under Criterion C
*528	14th Avenue East	2330	1929	Eligible	Eligible under Criterion C
*531	East Lynn Street	1418	1953	Eligible	Eligible under Criterion C
*532	East Lynn Street	1404	1963	Eligible	Eligible under Criterion C
594	Northeast Boat Street	1139-1299	1935	Eligible	Eligible under Criteria A and C

*Historic properties within one parcel of potential construction haul routes.

Historic Properties in the Portage Bay Segment

This section summarizes the historical significance of all the historic properties identified in the Portage Bay segment. The SHPO concurred with the eligibility determinations for these properties on August 27, 2009, November 10, 2010, and February 25, 2011.

Individual Historic Properties

Alden Mason House

2545 Boyer Avenue East

Property ID 48—built 1949

Individually eligible for listing in the NRHP under Criteria B and C

The Alden Mason House (Exhibit 5-2a) was built in 1949 for artist Alden Mason by Victor Steinbrueck, a prominent Seattle architect and one of the designers of the Space Needle (Durio 2009h). The house is visually striking, situated on the hill overlooking Portage Bay, and is considered an excellent example of the Modern style. The Mason house was published in

Architectural Record "Houses of the Northwest" (April 1953:159–163). The house is considered eligible for listing in the NRHP under Criteria B and C. It is significant under Criterion B for its association with Alden Mason, noted Seattle artist and influential long-time faculty member at the University of Washington, and under Criterion C for its architecture and as the work of a master architect.

Kelley House

2518 Boyer Avenue East

Property ID 52—built 1909

Individually eligible for listing in the NRHP under Criterion C

The Kelley House (Exhibit 5-2a) is an Arts and Crafts/Swiss Chalet-style residence from 1909, sited on a bluff on the shore of Portage Bay (Durio 2009i). The house features elaborate "half timbering" in the gable ends and is a particularly intact example of this picturesque style. As the rear of the building is on the water, the Portage Bay Bridge is visible from the back of the house. The property is eligible for listing in the NRHP under Criterion C for its distinctive architectural characteristics.

Canal Market

2917 Fuhrman Avenue East

Property ID 373—built 1922

Individually eligible for listing in the NRHP under Criterion C

The Canal Market (Exhibit 5-15) is a one-story commercial building with a polygon plan and wood-frame construction (Price and Hetzel 2010d). Built in 1922, it was designed in the Spanish Colonial Revival style with a flat roof and cornice with a pitched clay tile roof along the front elevation. The exterior walls are clad with stucco and the original windows remain throughout. The building has good integrity and embodies the distinctive characteristics of the Spanish Colonial Revival style in a commercial building. It is also an unusual building type and style in the area.

Exhibit 5-15. Canal Market, 2917 Fuhrman Avenue East**Bryant's Marina**

1139-1299 NE Boat Street

Property ID 594—built 1935

Individually eligible for the NRHP under Criteria A and C

Bryant's Marina (Exhibit 5-2a) is a waterfront complex of structures containing warehouse areas, commercial office space, and docks (Venno 2010a). Originally constructed in 1935, it had subsequent building phases through 1950. Seattle Boat Marina, Inc.—which distributed a variety of maritime goods, including boats, motors, marine supplies, and hardware—originally occupied the property (Crimmin 1978). In the mid-1940s it was the largest Chris-Craft Boat distributorship (by volume) in the world and had the Chris-Craft distributor's franchise for western Washington and Alaska.

The Chris-Craft Boat Company opened in the late nineteenth century and gained prominence for its mahogany-hulled powerboats in the 1920s (Chris-Craft 2010). It was the first company to standardize boat designs, eventually branching out to market boats to the middle class, and became one of the first companies to mass-produce civilian pleasure boats. The company continued to produce boats through the Great Depression, provided small patrol boats for the Navy during World War II, and produced 10,000 landing craft for the war. Post-World War II, the company offered more

than 150 models of pleasure boats, and their powerboats became cultural icons, representing the leisurely lifestyle newly available to the American middle class (Chris-Craft 2010).

The building at 1139-1299 NE Boat Street is eligible for listing in the NRHP under Criterion A for its association the development of the Seattle waterfront and the commercial and maritime history of the region. It is also significant for its association with the Chris-Craft Boat Company. This nationally recognized company played an integral role in the maritime history of the United States, and essentially created the pleasure power-boating culture in the United States. Under Criterion C it is eligible for listing in the NRHP as an intact example of a mid-twentieth century boat building, warehouse, and showroom. Few intact examples of this once-common architectural type remain intact. The SHPO concurred with this eligibility determination on September 22, 2010.

The Bryant's Marina property has been identified as a potential replacement property to comply with Section 6(f) of the LWCF Act. For additional information about the Preferred Alternative's Section 6(f) compliance, please see the *Environmental Evaluation of Section 6(f) Replacement Sites. Final Environmental Impact Statement and Section 4(f) Evaluation* (WSDOT 2010a).

Other Properties along Potential Haul Routes

Many parcels in the Portage Bay segment contain buildings or houses identified as individually eligible for listing in the NRHP under Criterion C because they are considered good examples of a particular architectural style or building type, or are associated with a master architect. Listed in Exhibit 5-16, these properties occur along some of the project's proposed haul routes.

Montlake Segment

The historic resources survey of the Montlake segment, which includes properties on the University of Washington (UW) campus, identified 230 properties constructed prior to 1972. This total includes properties in the APE that are considered contributing elements to the Montlake Historic District.

Six previously recorded properties were identified in the segment (Exhibit 4-3). These properties include the Montlake Cut along the Lake Washington Ship Canal, the Montlake Bridge at Montlake Boulevard NE over the Lake Washington Ship Canal, the Seattle Yacht Club-Main Station at 1807 East Hamlin Street, the Montlake Community Center at 1618 East Calhoun Street, the Canoe House (former Naval Military Hangar/University Shell House), and Nuclear Reactor Building (More Hall Annex) on the University of Washington campus. All of these properties are listed in the NRHP and the WHR, except for the Montlake Community Center. All are designated City of Seattle Landmarks, except for the Canoe House and Nuclear Reactor Building.

Exhibit 5-16. Historic Properties in the Portage Bay Segment Eligible under NRHP Criterion C

Property	Street Address	Date	Architectural Style/Type
ID 355	3116 Fuhrman Avenue East	1928	Tudor Revival
ID 357	3106 Fuhrman Avenue East	1928	Tudor Revival
ID 358	1000 East Allison Street	1927	Tudor Revival
ID 367	886 East Gwinn Place	1922	Arts and Crafts/Craftsman
ID 370	2946 Fuhrman Avenue East	1937	Colonial Revival
ID 371	2932 Fuhrman Avenue East	1923	Colonial Revival
ID 421	2623 Boylston Avenue East	1911	Arts and Crafts/Craftsman
ID 425	2717 Boyer Avenue East	1919	Colonial Revival
ID 432	2637 Boyer Avenue East	1923	Arts and Crafts/Craftsman
ID 433	2633 Boyer Avenue East	1923	Arts and Crafts/Craftsman
ID 434	2629 Boyer Avenue East	1923	Arts and Crafts/Craftsman
ID 437	2617 Boyer Avenue East	1924	Arts and Crafts/Craftsman
ID 374	2926 Fuhrman Avenue East	1920	Tudor Revival
ID 486	2448 Delmar Drive East	1919	Dutch Colonial Revival
ID 491	2432 Delmar Drive East	1910	Arts and Crafts/Craftsman
ID 501	2430 Boyer Avenue East	1925	Tudor Revival
ID 502	2428 Boyer Avenue East	1926	Tudor Revival
ID 503	2424 Boyer Avenue East	1926	Arts and Crafts/Swiss Chalet
ID 504	2415 Boyer Avenue East	1912	Spanish Colonial Revival
ID 508	2340 Delmar Drive East	1928	Tudor Revival
ID 515	2301 Delmar Drive East	1937	Colonial Revival
ID 516	2328 Delmar Drive East	1936	Modern
ID 522	2400 Boyer Avenue East	1956	Modern
ID 523	2366 Boyer Avenue East	1906	Arts and Crafts/Craftsman
ID 528	2330 14th Avenue East	1929	Tudor Revival
ID 531	1418 East Lynn Street	1953	Ranch
ID 532	1404 East Lynn Street	1963	Modern

The 230 identified properties were evaluated to determine their eligibility for listing in the NRHP. Based on NRHP evaluation criteria (36 CFR 60.4), 174 of the properties were determined to be listed or eligible for listing in the NRHP. Of these 174 properties, five (5) are listed in the NRHP and 169 are NRHP eligible. Fifty-two are considered individually eligible for listing in the NRHP, 154 were identified as contributing elements to the Montlake Historic District, 35 of which are NRHP-eligible, both individually and as historic district contributors. All of these properties are listed in Exhibit 5-17, and their locations and NRHP eligibility are presented in Exhibits 5-2b, 5-2d, and 5-2e. No other identified properties in the Montlake segment are considered eligible for listing in the NRHP individually or as contributors to a potential historic district.

Appendix A provides a complete list of the properties surveyed in the Montlake segment. Appendix C contains copies of the nomination forms for the previously recorded resources. Appendix D includes the HPI forms for those resources not previously recorded.

Exhibit 5-17. NRHP-Eligible Properties Identified in the Montlake Segment

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*53	Lake Washington Ship Canal	Montlake Cut	1916	Listed	Listed under Criterion A & C Designated Seattle Landmark
*54	Montlake Boulevard Northeast over Lake Washington Ship Canal	Montlake Bridge	1924	Listed	Listed under Criterion C
55	East Hamlin Street	1807 Seattle Yacht Club	1919	Contributing Listed	Contributing to Montlake Historic District Listed under Criterion A WHR listed Designated Seattle Landmark
*56	Montlake Boulevard Northeast	2723 NOAA Northwest Fisheries Science Center	1931; 1939; 1940; 1965; 1966		Five buildings – 1931, 1939, 1940, 1965, 1966
			1931; 1965; 1966	Eligible	1931, 1965, 1966 buildings – Individually eligible for NRHP under Criteria A & C; Potentially eligible as a Seattle Landmark
			1931	Contributing	1931 building only – Contributing to Montlake Historic District
*58	East Hamlin Street	1893	1932	Contributing Eligible	Contributing to Montlake Historic District - Individually eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
5	East Hamlin Street	1885	1941	Contributing	Contributing to Montlake Historic District
*61	East Hamlin Street	1896	1925	Contributing Eligible	Contributing to Montlake Historic District - Individually eligible under Criterion C
*62	Montlake Boulevard Northeast	2809	1922	Contributing	Contributing to Montlake Historic District
*63	Montlake Boulevard Northeast	2815	1914	Contributing Eligible	Contributing to Montlake Historic District - Individually eligible under Criterion C
*64	East Shelby Street	1897	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
65	East Shelby Street	1887	1922	Contributing	Contributing to Montlake Historic District
*66	East Shelby Street	1894	1937	Contributing	Contributing to Montlake Historic District
*68	Montlake Boulevard Northeast	2908	1921	Contributing	Contributing to Montlake Historic District
*69	Montlake Boulevard Northeast	2904	1921	Contributing	Contributing to Montlake Historic District
70	East Shelby Street	2112	1921	Contributing	Contributing to Montlake Historic District
72	East Shelby Street	2122	1934	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
75	East Shelby Street	2136	1931	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
76	East Shelby Street	2142	1925	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
77	East Shelby Street	2146	1921	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
78	East Shelby Street	2152	1915	Contributing	Contributing to Montlake Historic District
79	East Shelby Street	2158	1925	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
80	East Shelby Street	2159 Mary Houlahan House	1914	Contributing Eligible	Contributing to Montlake Historic District; Individually eligible under Criterion C
81	East Park Drive East	2817	1914; 1940	Contributing	(2 buildings – 1940, 1914) Contributing to Montlake Historic District
83	East Shelby Street	2147	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
84	East Shelby Street	2143	1923	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
85	East Shelby Street	2137	1923	Contributing	Contributing to Montlake Historic District
86	East Shelby Street	2133	1920	Contributing	Contributing to Montlake Historic District
87	East Shelby Street	2127	1920	Contributing	Contributing to Montlake Historic District
88	East Shelby Street	2121	1925	Contributing	Contributing to Montlake Historic District
89	East Shelby Street	2117	1926	Contributing	Contributing to Montlake Historic District
90	East Shelby Street	2111	1925	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*91	Montlake Boulevard Northeast	2818	1920	Contributing	Contributing to Montlake Historic District
*92	Montlake Boulevard Northeast	2812	1922	Contributing	Contributing to Montlake Historic District
*93	Montlake Boulevard Northeast	2810	1915	Contributing	Contributing to Montlake Historic District
94	East Hamlin Street	2110	1924	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
95	East Hamlin Street	2112	1915	Contributing	Contributing to Montlake Historic District
96	East Hamlin Street	2122	1926	Contributing	Contributing to Montlake Historic District
97	East Hamlin Street	2128	1922	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
98	East Hamlin Street	2130	1922	Contributing	Contributing to Montlake Historic District
99	East Hamlin Street	2136	1926	Contributing	Contributing to Montlake Historic District
100	East Hamlin Street	2142	1949	Contributing	Contributing to Montlake Historic District
101	East Hamlin Street	2146	1920	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
102	East Hamlin Street	2150	1930	Contributing	Contributing to Montlake Historic District
103	East Hamlin Street	2160	1920	Contributing	Contributing to Montlake Historic District
105	East Hamlin Street	2151	1923	Contributing	Contributing to Montlake Historic District
106	East Hamlin Street	2147	1924	Contributing	Contributing to Montlake Historic District
107	East Hamlin Street	2141	1923	Contributing	Contributing to Montlake Historic District
108	East Hamlin Street	2137	1925	Contributing	Contributing to Montlake Historic District
109	East Hamlin Street	2133	1919	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
110	East Hamlin Street	2127	1924	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
111	East Hamlin Street	2121	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
112	East Hamlin Street	2117	1914	Contributing	Contributing to Montlake Historic District
113	East Hamlin Street	2111	1925	Contributing	Contributing to Montlake Historic District
*115	Montlake Boulevard Northeast	2734	1919	Contributing	Contributing to Montlake Historic District
*118	West Montlake Place East	2575	1951	Contributing	Contributing to Montlake Historic District
*119	West Montlake Place East	2571	1938	Contributing	Contributing to Montlake Historic District
*121	West Montlake Place East	2553	1936	Contributing	Contributing to Montlake Historic District
*122	West Montlake Place East	2521	1937	Contributing	Contributing to Montlake Historic District
*123	West Montlake Place East	2511	1931	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*124	West Montlake Place East	2507	1929	Contributing	Contributing to Montlake Historic District
*125	West Montlake Place East	2501	1931	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
126	East Calhoun Street	1618 Montlake Community Center	1935	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criteria A and C
*127	20th Avenue East	2552	1937	Contributing	Contributing to Montlake Historic District
*128	West Montlake Place East	2564	1947	Contributing	Contributing to Montlake Historic District
*129	East Roanoke Street	2009	1950	Contributing	Contributing to Montlake Historic District
135	East Roanoke Street	2209	1921	Contributing	Contributing to Montlake Historic District
138	East Louisa Street	2220	1930	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
139	East Louisa Street	2226	1926	Contributing	Contributing to Montlake Historic District
140	24th Avenue East	2515	1933	Contributing	Contributing to Montlake Historic District
142	East Miller Street	2233	1934	Contributing	Contributing to Montlake Historic District
143	24th Avenue East	2459	1934	Contributing	Contributing to Montlake Historic District
144	24th Avenue East	2455	1939	Contributing	Contributing to Montlake Historic District
146	24th Avenue East	2402	1920	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
149	East Calhoun Street	2406	1939	Contributing	Contributing to Montlake Historic District
150	24th Avenue East	2456	1922	Contributing	Contributing to Montlake Historic District
151	24th Avenue East	2466	1920	Contributing	Contributing to Montlake Historic District
152	24th Avenue East	2502	1921	Contributing	Contributing to Montlake Historic District
153	24th Avenue East	2506	1920	Contributing	Contributing to Montlake Historic District
155	24th Avenue East	2516	1925	Contributing	Contributing to Montlake Historic District
*160	East Montlake Place East	2600	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*161	East Montlake Place East	2604	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*162	East Montlake Place East	2610	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*163	East Montlake Place East	2616	1938	Contributing	Contributing to Montlake Historic District
*164	Lake Washington Boulevard East	2209	1925	Contributing	Contributing to Montlake Historic District
*165	Lake Washington Boulevard East	2215	1937	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*166	Lake Washington Boulevard East	2219	1929	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*167	Lake Washington Boulevard East	2223	1928	Contributing	Contributing to Montlake Historic District
*168	Lake Washington Boulevard East	2227	1925	Contributing	Contributing to Montlake Historic District
*169	Lake Washington Boulevard East	2231	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*171	Lake Washington Boulevard East	2401	1930	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*172	Lake Washington Boulevard East	2409	1920	Contributing	Contributing to Montlake Historic District
*173	Lake Washington Boulevard East	2415	1922	Contributing	Contributing to Montlake Historic District
*175	Lake Washington Boulevard East	2425	1931	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*176	Lake Washington Boulevard East	2429	1931	Contributing	Contributing to Montlake Historic District
*177	Lake Washington Boulevard East	2433	1930	Contributing	Contributing to Montlake Historic District
*178	Lake Washington Boulevard East	2437	1930	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/Property Name	Date of Construction	NRHP Status	Comments
*179	Lake Washington Boulevard East	2441	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*180	Lake Washington Boulevard East	2445	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*181	Lake Washington Boulevard East	2449	1928	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*182	Lake Washington Boulevard East	2455	1926	Contributing	Contributing to Montlake Historic District
*183	Lake Washington Boulevard East	2459	1927	Contributing	Contributing to Montlake Historic District
*184	Lake Washington Boulevard East	2465	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*185	Lake Washington Boulevard East	2615	1946	Contributing	Contributing to Montlake Historic District
*186	Lake Washington Boulevard East	2607	1926	Contributing	Contributing to Montlake Historic District
*187	East Roanoke Street	2603	1930	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
*188	East Roanoke Street	2559	1928	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*189	Lake Washington Boulevard East	2537	1928	Contributing	Contributing to Montlake Historic District
*196	26th Avenue East	2467	1926	Contributing	Contributing to Montlake Historic District
*197	26th Avenue East	2463	1925	Contributing	Contributing to Montlake Historic District
*198	26th Avenue East	2457	1932	Contributing	Contributing to Montlake Historic District
*199	26th Avenue East	2451	1930	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
203	University of Washington Campus	Naval Military Hangar (University Shell House/Canoe House)	1918	Listed	Listed under Criterion C
205	University of Washington Campus	Bloedel Hall	1971	Eligible	Eligible under Criterion C
206	University of Washington Campus	Winkenwerder Forest Lab	1963	Eligible	Eligible under Criterion C
212	University of Washington Campus	Wilson Ceramics Lab	1946	Eligible	Eligible under Criterion C
213	University of Washington Campus	Wilcox Hall	1963	Eligible	Eligible under Criterion C
214	University of Washington Campus	More Hall	1946 to 48	Eligible	Eligible under Criterion C
215	University of Washington Campus	More Hall Annex	1961	Listed	Listed under Criterion A and C WHR listed
216	University of Washington Campus	Pavilion Pedestrian Bridge	1938	Eligible	Eligible under Criterion C

Property ID	Street Name/Location	Street Address/Property Name	Date of Construction	NRHP Status	Comments
217	Montlake Boulevard Northeast University of Washington Campus	Graves Hall	1963	Eligible	Eligible under Criterion C
220	University of Washington Campus	University of Washington Club	1960	Eligible	Eligible under Criterion C
221	Montlake Boulevard Northeast University of Washington Campus	Montlake Boulevard Pedestrian Overpass South	1958	Eligible	Eligible under Criterion C
222	Montlake Boulevard Northeast University of Washington Campus	Montlake Boulevard Pedestrian Overpass North	1958	Eligible	Eligible under Criterion C
223	University of Washington Campus	McMahon Hall	1965	Eligible	Eligible under Criterion C
224	University of Washington Campus	CENPA Instrument Shop	1948	Eligible	Eligible under Criterion C
225	University of Washington Campus	North Physics Laboratory	1949	Eligible	Eligible under Criterion C
238	Roughly bounded by Washington Park Arboretum, Portage Bay, the Montlake Cut, and Interlaken Park	Montlake Historic District	1905 to 1952	Eligible	Historic district eligible under Criterion C (Only properties within the APE were surveyed for this project.)
*239	From East Madison Street to NE Pacific Street	Lake Washington Boulevard	1904 to 1909	Contributing Eligible	Contributing to the Montlake Historic District Eligible under Criteria A and C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*240	South of East Hamlin Street and East of Montlake Boulevard	Canal Reserve Land	Planted ca. 1910	Contributing	Contributing to Montlake Historic District
*534	East McGraw Street	1500	1938	Contributing	Contributing to Montlake Historic District
*538	Boyer Avenue East	2315	1920	Contributing	Contributing to Montlake Historic District
*539	Boyer Avenue East	2309	1930	Contributing	Contributing to Montlake Historic District
*540	Boyer Avenue East	2324	1928	Contributing	Contributing to Montlake Historic District
*541	Boyer Avenue East	2316	1928	Contributing	Contributing to Montlake Historic District
*542	Boyer Avenue East	2308	1928	Contributing	Contributing to Montlake Historic District
*543	Boyer Avenue East	2302	1929	Contributing	Contributing to Montlake Historic District
*544	East Lynn Street	1602	1925	Contributing	Contributing to Montlake Historic District
*546	East Lynn Street	1608	1929	Contributing	Contributing to Montlake Historic District
*547	East Lynn Street	1612	1929	Contributing	Contributing to Montlake Historic District
*549	East Lynn Street	1614	1928	Contributing	Contributing to Montlake Historic District
*550	East Lynn Street	1618	1928	Contributing	Contributing to Montlake Historic District
*551	East Lynn Street	1622	1928	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*552	East Lynn Street	1619	1947	Contributing	Contributing to Montlake Historic District
*553	East Lynn Street	1626	1928	Contributing	Contributing to Montlake Historic District
*554	East Lynn Street	1630	1928	Contributing	Contributing to Montlake Historic District
*555	East Lynn Street	1627	1947	Contributing	Contributing to Montlake Historic District
*556	East Lynn Street	1633	1947	Contributing	Contributing to Montlake Historic District
*557	East Lynn Street	1802	1930	Contributing	Contributing to Montlake Historic District
*558	East Lynn Street	1805	1947	Contributing	Contributing to Montlake Historic District
*559	East Lynn Street	1806	1930	Contributing	Contributing to Montlake Historic District
*560	East Lynn Street	1811	1950	Contributing	Contributing to Montlake Historic District
*561	East Lynn Street	1810	1929	Contributing	Contributing to Montlake Historic District
*562	East Lynn Street	1814	1930	Contributing	Contributing to Montlake Historic District
*563	East Lynn Street	1819	1951	Contributing	Contributing to Montlake Historic District
*564	East Lynn Street	1820	1938	Contributing	Contributing to Montlake Historic District
*567	19th Avenue East	2303	1915	Contributing	Contributing to Montlake Historic District
*568	19th Avenue East	2307	1915	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
*569	19th Avenue East	2315	1928	Contributing	Contributing to Montlake Historic District
571	Boyer Avenue East	2100	1962	Eligible	Eligible under Criterion C
*573	19th Avenue East	2401	1965	Eligible	Eligible under Criterion C
*575	19th Avenue East	2415	1924	Contributing	Contributing to Montlake Historic District
*577	East Lynn Street	1902	1924	Contributing	Contributing to Montlake Historic District
*578	19th Avenue East	2312	1930	Contributing	Contributing to Montlake Historic District
*579	19th Avenue East	2318	1922	Contributing	Contributing to Montlake Historic District
*580	East McGraw Street	1902	1921	Contributing	Contributing to Montlake Historic District
*581	East Calhoun Street	1903	1924	Contributing	Contributing to Montlake Historic District
*582	19th Avenue East	2454	1926	Contributing	Contributing to Montlake Historic District
*583	19th Avenue East	2456	1927	Contributing	Contributing to Montlake Historic District
584	West Montlake Place East	2462	1925	Contributing	Contributing to Montlake Historic District
*585	East Miller Street	1907	1925	Contributing	Contributing to Montlake Historic District
*586	East Miller Street	1918	1928	Contributing	Contributing to Montlake Historic District
*587	West Montlake Place East	2510	1930	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/Property Name	Date of Construction	NRHP Status	Comments
*588	West Montlake Place East	2520	1930	Contributing	Contributing to Montlake Historic District
*590	20th Avenue East	2519	1930	Contributing	Contributing to Montlake Historic District

*Historic properties within one parcel of potential construction haul routes.

Historic Properties in the Montlake Segment

This section summarizes the historical significance of all the historic properties identified in the Montlake Segment of the APE.

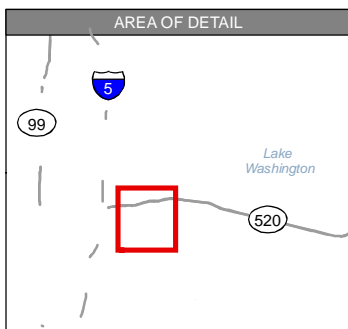
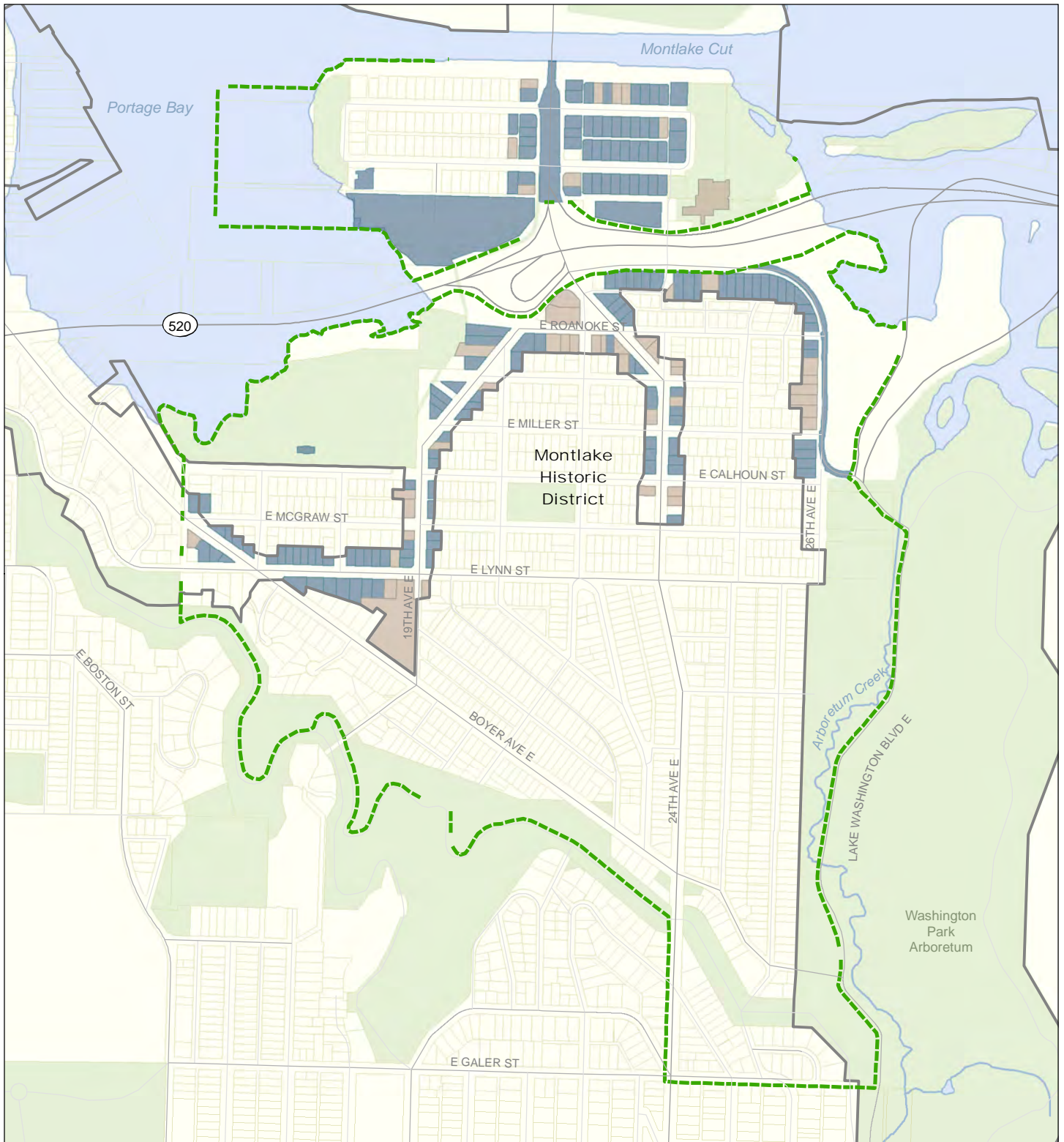
Montlake Historic District

Property ID 238—Period of Significance 1905 to 1952

Eligible for listing in the NRHP under Criterion C

The Montlake area is generally considered to be from the Arboretum on the east to Portage Bay on the west, with the northern boundary at the Montlake Cut and the southern boundary often listed as Interlaken Park or Interlaken Boulevard. The name “Montlake” frequently appears on maps as the label for this entire neighborhood. The Montlake Historic District, which encompasses the majority of this neighborhood, meets the criteria for an NRHP eligible historic district under Criterion C. Boundaries of the Montlake Historic District, as proposed by the Montlake Community Club, are illustrated in Exhibit 5-18. The SHPO concurred with the NRHP eligibility determination of the Montlake Historic District on August 27, 2009 and the NRHP eligibility determinations of the majority of contributing elements to the historic district. After the APE was expanded to include potential haul routes, the newly identified historic properties were concurred with by the SHPO on November 10, 2010. HPI forms for these properties are provided in Appendix D.

There are 154 contributing properties to the Montlake Historic District within the APE. Thirty-five of these properties are also individually eligible for listing in the NRHP, apart from their district-contributing status. The individually eligible properties include the Seattle Yacht Club (which is listed in the NRHP), the NOAA Northwest Fisheries Science Center buildings, and Lake Washington Boulevard. Two of the eligible buildings at NOAA were constructed outside of the historic district’s period of significance, so are not considered contributing elements.



- - - Montlake NRHP - Eligible
- Historic District
- Area of Potential Effects
- Contributing Resource
- Non-Contributing Resource
- Parcel
- Park

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 5-18. Montlake Historic District

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

The Montlake Historic District is considered historically significant as a cohesive collection of intact architecture, which represents the development of early twentieth century Seattle and the distinct design styles that typified this period. The historic district contains a combination of distinctive builders' houses, high-style architect-designed residences, and impressive nonresidential structures, with a very low level of intrusions. The period of significance is 1905 to 1952, from the platting of the neighborhood to the construction of MOHAI. Notable properties in the Montlake Historic District include the following:

- an architecturally cohesive residential neighborhood, largely developed from 1909 until approximately 1945;
- the Seattle Yacht Club (individually listed in the NRHP), established in 1892, which moved to its current Montlake location on Portage Bay in 1920;
- MOHAI (Exhibit 5-19), a local museum focusing on Seattle-area history and development, designed in 1950 by noted Seattle architect Paul Thiry and completed in 1952, but later altered by additions and again altered for the construction of SR 520;
- a portion of historic Lake Washington Boulevard, part of the 1903 Olmsted Park and Boulevard Plan; and
- the NOAA Northwest Fisheries Science Center property (Exhibit 5-20), including the first federal fisheries building constructed on the West Coast, designed by John Graham, Sr. and built in 1931.

The Montlake neighborhood's initial period of development began in 1909. Most of the existing properties were constructed in the 1910s through the 1940s. The side streets appear to have been paved in 1926 (Gould 2000).

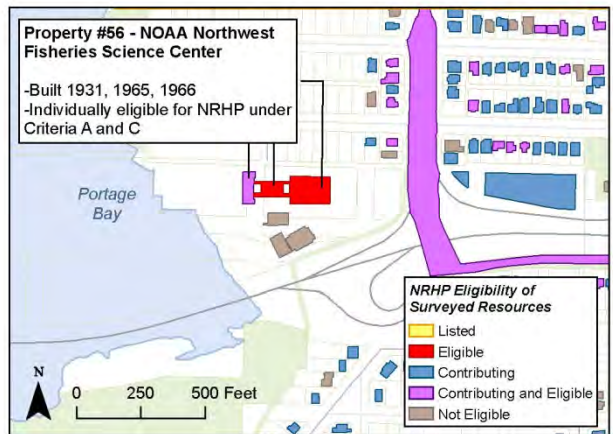
The area of the Montlake neighborhood south of SR 520, originally known as "Interlaken," was developed separately from, though basically concurrently with, the northern part of the neighborhood (Smith 2010). John Boyer of the Interlaken Land Company filed his plat in December 1905. Bordered on the west by Interlaken Park and on the east by Washington Park, the plat featured 20 irregularly shaped blocks located on either side of 24th Avenue East to the north of East Galer Street. Boyer imposed restrictive covenants requiring that homes constructed east of 24th Avenue could cost not less than \$3,000 and that west of 24th not less than \$5,000, ensuring above-average construction values.

The area now north of SR 520 was originally known as Union City, so named by Harvey Pike in 1861 (Bagley 1916). It was incorporated into the City of Seattle in 1891. With the Alaska-Yukon-Pacific Exposition in 1909 at the University of Washington campus, the area received extensive exposure and benefited from increased public transit to the area. Two brothers, Calvin and William Hagan, with partner James Corner (Smith 2010), originated the name "Montlake" as they developed "Montlake Park, An Addition to the City of Seattle" in July of 1909. This development occupied the area between the present-day Montlake Cut and SR 520, and encompassed the eight blocks originally platted as H. L. Pike's First Addition to Union City in 1870 (Bagley 1916).

Exhibit 5-19. MOHAI, 2161 East Hamlin Street/ 2720 Lake Washington Boulevard East, Montlake Historic District



Exhibit 5-20. NOAA Northwest Fisheries Science Center, Montlake Historic District



Although the Montlake neighborhood was compromised by the construction of SR 520 in the early 1960s, most of it remains intact (Smith 2010). Although many of the individual buildings have experienced minor alterations, such as window replacements and rear additions, most of these do not detract significantly from the integrity of the properties. Only a small number of the buildings have been so altered as to make them noncontributing, and the percentage of these in the historic district is low.

The residential styles in the Montlake Historic District primarily consist of the Craftsman, Tudor, and Colonial Revival styles, and many are considered “individually distinctive” (Gould 2000). Exhibits 5-21 and 5-22 demonstrate some of the diversity of architectural styles found in the neighborhood. The large Tudor-style house at 2158 East Shelby Street has picturesque details from 1925 (Exhibit 5-21). Across the street, noted Seattle architecture firm Bebb and Gould designed the Mary Houlahan House at 2159 East Shelby Street. Erected in 1914, the house exhibits a Colonial Revival style that mimics the Georgian period (Exhibit 5-22). Both of these houses are considered individually eligible for listing in the NRHP under Criterion C, in addition to being contributing elements of the historic district.

Exhibit 5-21. 2158 East Shelby Street, Montlake Historic District



Exhibit 5-22. 2159 East Shelby Street, Mary Houlahan House, Montlake Historic District



Exhibits 5-23 and 5-24 show other representative examples of contributing elements to the Montlake Historic District. The residence at 1902 East McGraw Street is a good example of a Craftsman bungalow, which is a common building type and style found in the historic district. Another style typical of this area is the timbered Tudor, as seen in the photo of the house at 2302 Boyer Avenue East.

Exhibit 5-23. 2302 Boyer Avenue East, Montlake Historic District



Exhibit 5-24. 1902 East McGraw Street, Montlake Historic District



There are also several noteworthy nonresidential properties located within the boundaries of the Montlake Historic District. These properties include the south end of the Montlake Bridge; the Seattle Yacht Club; the NOAA Northwest Fisheries Science Center buildings; and a portion of Lake Washington Boulevard. The Seattle Yacht Club and the NOAA Northwest Fisheries Science Center West Wing Building contribute to the physical and cultural fabric of the historic district. The Seattle Yacht Club is a recreational and cultural institution that supports and enhances the residential quality of the neighborhood. The NOAA Northwest Fisheries Science Center occupies part of the former Canal Reserve Land, which is intimately tied to the history of the Montlake Cut and the original log canal. Both are important elements in the history of the Montlake area.

The segment of Lake Washington Boulevard that contributes to the historic district was part of the original 1903 Olmsted Park and Boulevard Plan. It begins at the Arboretum (a portion of which is named 26th Avenue East) and then curves at SR 520 before continuing west to Montlake Boulevard. At the intersection with Montlake Boulevard, the segment assumes the name Montlake Boulevard and turns north, heading toward the University of Washington campus and crossing the Montlake Cut. The segment of Lake Washington Boulevard that connected the Arboretum and the University of Washington campus was specifically laid out in March 1907, in preparation for the Alaska-Yukon-Pacific Exposition, and completed in 1909. According to BOLA and Kiest (2003:30), "Outside the campus, the exposition's legacy was the extension of Lake Washington Boulevard, under the design direction of Olmsted Brothers."

The MOHAI building was designed by architect Paul Thiry and built between 1950 and 1952 (Durio 2004). Located at 2161 East Hamlin Street/2720 Lake Washington Boulevard East, the MOHAI building was an excellent example of a Modernist-style public building (Exhibit 5-19) (Woodbridge and Montgomery 1980). However, additions by other architects are numerous, and the museum has undergone architecturally incompatible alterations, most notably changes to the original entrance and a reorientation of the building (Durio 2004). The multiple additions and alterations to the building have greatly affected its integrity. Through consultation with the SHPO, WSDOT determined that the MOHAI building no longer retains sufficient integrity to warrant listing in the NRHP, either individually or as a contributing element to the Montlake Historic District.

The Montlake Community Club, an organization of neighborhood residents, has expressed interest in having the Montlake neighborhood considered for nomination for listing in the NRHP (Montlake Community Club 2010). In pursuit of this goal, the Montlake Community Club has undertaken volunteer efforts to map out the historic district boundaries (noted earlier in Exhibit 5-18), begun to survey each property in the historic district, and gathered history on the neighborhood to prepare a historic context. So far, the volunteers have gathered information on approximately 1,000 properties in the historic district, and their efforts are ongoing to date. The Montlake Community Club remains committed to exploring the potential of a historic district listed in the NRHP that encompasses their entire Montlake neighborhood and its many historic properties.

Individual Historic Properties

NOAA Northwest Fisheries Science Center

2723 Montlake Boulevard NE

Property ID 56—built 1931; 1939; 1940; 1965; 1966

West Wing building (1931) and North Campus buildings (1965 and 1966)
Individually eligible for listing in the NRHP under Criteria A and C

Located in the Montlake Historic District, the NOAA Northwest Fisheries Science Center contains multiple buildings. Five buildings on the site predate 1972 (Durio 2009j). The original building on the property is from 1931, and is located at the western end of the complex. Immediately to the east of this building is a three-story building constructed in 1965. To the east of this building is another larger building constructed in 1966. These three buildings are connected by covered exterior walkways. A hatchery, constructed in 1940, is located to the south of these buildings. To the southeast of the hatchery is a small metal “Butler” building, also from 1940.

Of these five buildings, only the original building on the site, constructed in 1931 (Exhibit 5-20), is a contributing element to the Montlake Historic District. The 1931 building was the first federal fisheries building constructed on the West Coast (Peacock pers. comm. with L. Durio) and was designed by distinguished architect John Graham Sr. in the Art Deco style (Ochsner 1998). Graham is best known for his downtown Seattle commissions, including the Dexter Horton, Bon Marche, and Exchange buildings. Graham also designed the Ford Motor Assembly Plant on Valley Street, several buildings on the University of Washington campus, and the Seattle Yacht Club (Docomomo WEWA 2011). Graham is noted as being “particularly adept in the Art Deco style,” and he designed several other “finely detailed, terra-cotta clad commercial structures” (Ochsner 1998). The 1931 building was ornamented with terra-cotta details (such as seashells, coral, sea horses, and waves with fish) that reflect the marine association of the facility. These details extend to the interior as well. The building contains a number of science labs and is also the main chemistry building at the facility.

The 1931 building is considered individually eligible for listing in the NRHP under Criteria A and C for its association with important research that is significant locally, regionally, and nationally; distinctive architectural characteristics; and association with a master architect. In addition, the 1965 and 1966 buildings connected to it are also eligible for listing in the NRHP under Criteria A and C. However, they do not contribute to the Montlake Historic District because they were built after the historic district’s period of significance. The 1965 and 1966 buildings were constructed to house offices and meeting space to accommodate the expanded staff of NOAA at this site (Herkelwrath pers. comm.). The 1965 building also contains a large library and a 150-seat auditorium.

The 1940 hatchery building is the second oldest building remaining on the campus, and has been the site of important marine research (Durio 2009j). However, numerous additions and alterations have resulted in a loss of integrity of design, materials, workmanship, and feeling. In addition, the construction of many newer buildings adjacent to the structure, as well as the construction of SR 520 immediately to its south, has affected its setting. Because of this loss of integrity, the 1940 hatchery building lacks sufficient integrity to be eligible for listing in the NRHP.

The 1940 Butler building is a prefabricated metal building used to store chemicals (Durio 2009j). It is not architecturally significant and is utilitarian in design. It does not meet the criteria for listing in the NRHP.

The SHPO concurred on the NRHP eligibility of the NOAA Northwest Fisheries Science Center buildings on August 27, 2009.

Montlake Community Center

1618 East Calhoun Street

Property ID 126—built 1935

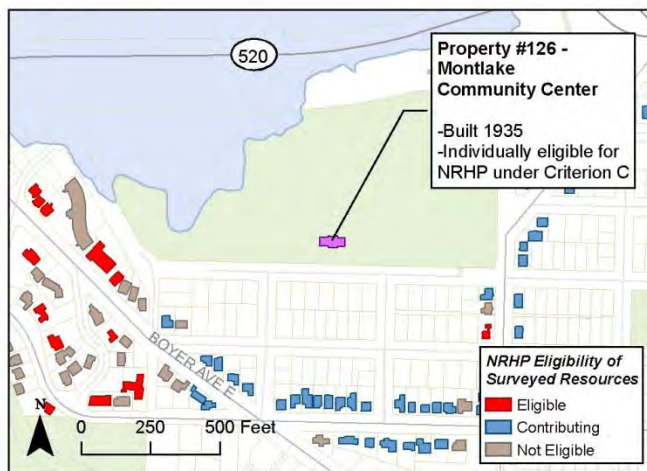
Individually eligible for listing for NRHP under Criteria A and C

Contributing element to the Montlake Historic District

The Montlake Community Center (Exhibit 5-25) is a Tudor Revival style building constructed in 1935 as part of the Montlake Playfield, which is located in the boundaries of the Montlake Historic District (Durio 2009k). It was designated a Seattle Landmark on January 19, 2005; the designation included the 1935 building and a 10-foot perimeter around the structure (Landmarks Preservation Board 2005). The building is considered historically significant for its Tudor Revival architectural design and its associations with the Civil Works Administration (CWA), the Washington Emergency Relief Administration (WERA), and the development of Montlake Playfield.

The Montlake Playfield was established in 1932 at the request of the Montlake Community Club (City of Seattle 2000). The community club advocated for a neighborhood playfield and field house to provide a recreational area for neighborhood children, and to supplement the facilities of the nearby local Montlake Elementary School. The City of Seattle experienced financial difficulties in 1932, which caused construction of the playfield and field house to be postponed until January of 1934, when the CWA stepped in to assist the city with various public works projects. The Montlake Playfield was one of these projects. Construction of the playfield and field house continued until spring 1934, when the CWA was dissolved. The project was completed under WERA, which in 1935 was superseded by the WPA. The WPA completed much of the work to develop the playfield. The Tudor Revival-style field house was dedicated on October 23, 1935.

Although the original architect is unknown, the Montlake Community Center is a good example of the Tudor Revival style and is representative of its period of construction, when Seattle park structures were meant to be “pleasing in design and permanent in nature” (Landmarks Preservation Board 2005). This building has good integrity, although its setting has been somewhat compromised by the large gymnasium constructed to the north. It is individually eligible for listing in the NRHP under Criterion A for its association with development of the Montlake neighborhood and the City of Seattle parks system, as well as its association with the CWA and WERA. It is also eligible under Criterion C for its distinctive characteristics as an early field house and recreation center, and as a good example of Tudor Revival style architecture. In addition, the building is eligible for listing in the NRHP as a contributing element of the Montlake Historic District and is a representative example of the early twentieth century architecture that makes up the historic district.

Exhibit 5-25. Montlake Community Center, 1618 East Calhoun Street**University of Washington Buildings**

The following 12 buildings and three structures on the University of Washington campus were identified as eligible for listing in the NRHP:

- Naval Military Hangar (University Shell House/Canoe House)
- Bloedel Hall,
- Winkenwerder Forest Sciences Laboratory,
- Hewitt Wilson Ceramics Laboratory,
- Wilcox Hall,
- More Hall,
- More Hall Annex
- Graves Hall,
- University of Washington Club,
- McMahon Hall,
- Center for Experimental Nuclear Physics and Astrophysics (CENPA) Instrument Shop,

- North Physics Laboratory (CENPA),
- Pavilion Pedestrian Bridge,
- Montlake Boulevard Pedestrian Overpass South, and
- Montlake Boulevard Pedestrian Overpass North.

Exhibit 5-26 shows Winkenwerder Forest Sciences Laboratory, Bloedel Hall, Hewitt Wilson Ceramics Laboratory, and Wilcox Hall.

Bloedel Hall

Property ID 205—built 1971

Individually eligible for listing in the NRHP under Criterion C

Bloedel Hall (Exhibit 5-26) was designed by Grant, Copeland, Chervenak & Associates (Legacy for City of Seattle 1979). It is a classroom and office building in the College of Forestry complex of buildings, next to the Winkenwerder Forest Sciences Laboratory, which was designed by the same architects and is similar in style. Like Winkenwerder, it “demonstrates the potential that wood offers for finish and structural applications” (Johnston 2001:67), as appropriate for a forestry education facility. Bloedel Hall will be 50 years old in 2021. At that time, it will become eligible for listing in the NRHP under Criterion C for its distinctive design in a unique Northwest Regional vocabulary. The SHPO concurred with the eligibility determination of Bloedel Hall on August 27, 2009.

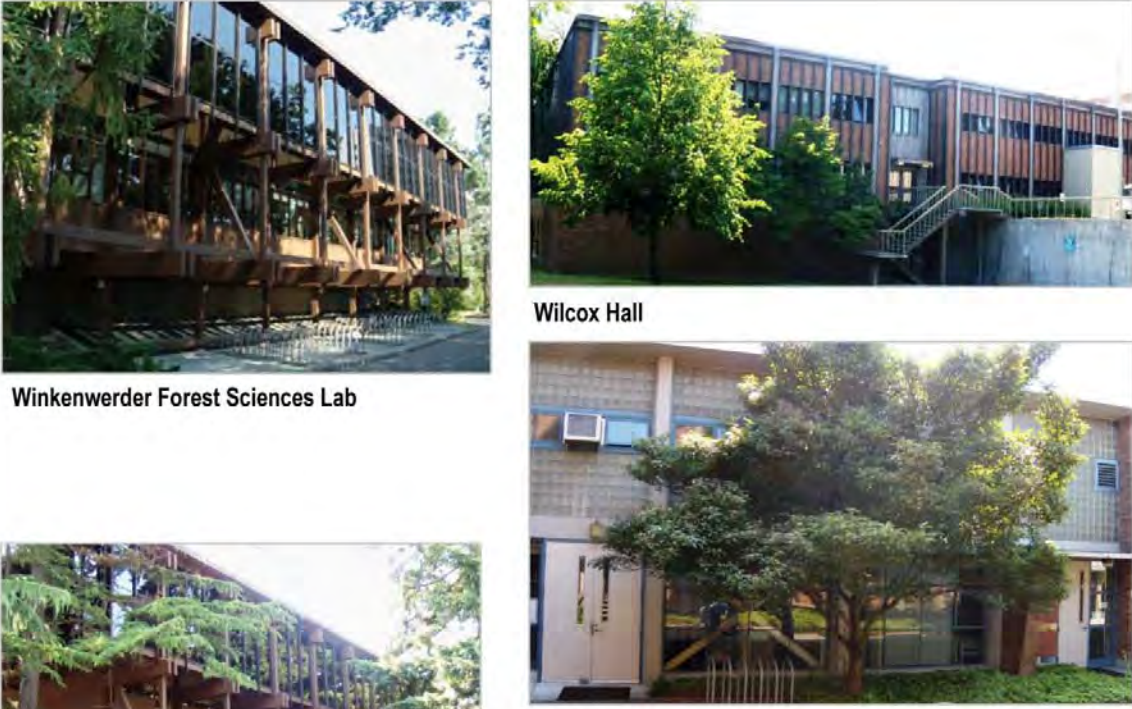
Winkenwerder Forest Sciences Laboratory

Property ID 206—built 1962

Individually eligible for listing in the NRHP under Criterion C

Winkenwerder Forest Sciences Laboratory (Exhibit 5-26) was called the Forest Products Science Building when it was built in 1962, and renamed the Winkenwerder Forest Sciences Laboratory in 1972 (Durio 2009). It was designed by architects Grant, Copeland, Chervenak & Associates. Noted Northwest artist Dudley C. Carter carved the ornate door panels at the main entrance. The building was specifically designed to serve as a forestry science lab. “In the design...a conscious effort was made to demonstrate the structural versatility and visual elegance of timber. A system of columns and beams creates the skeleton for glass-enclosed laboratories” (Johnston and McCormick 2001). The building will be 50 years old in 2012. At that time, will be eligible for listing in the NRHP under Criterion C for its distinctive Modern architectural design rendered in wood and glass, giving it a Northwest regional feel in a visually arresting manner. The SHPO concurred with the eligibility determination of Winkenwerder Forest Sciences Laboratory on August 27, 2009.

Exhibit 5-26. University of Washington—Winkenwerder Forest Sciences Laboratory, Bloedel Hall, Hewitt Wilson Ceramics Laboratory, and Wilcox Hall

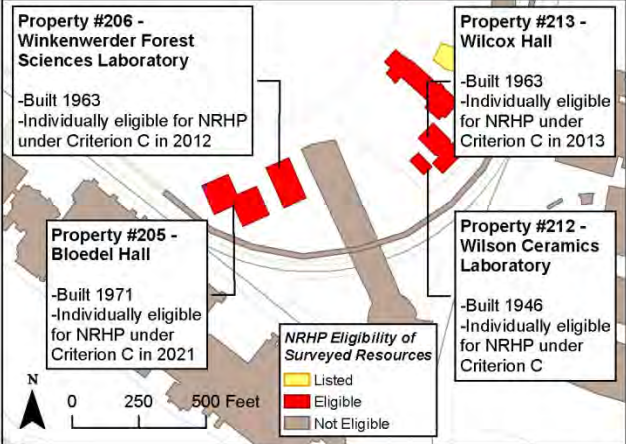


Winkenwerder Forest Sciences Lab

Wilcox Hall

Bloedel Hall

Wilson Ceramics Lab



Property #206 - Winkenwerder Forest Sciences Laboratory
-Built 1963
-Individually eligible for NRHP under Criterion C in 2012

Property #213 - Wilcox Hall
-Built 1963
-Individually eligible for NRHP under Criterion C in 2013

Property #205 - Bloedel Hall
-Built 1971
-Individually eligible for NRHP under Criterion C in 2021

Property #212 - Wilson Ceramics Laboratory
-Built 1946
-Individually eligible for NRHP under Criterion C

NRHP Eligibility of Surveyed Resources
Listed
Eligible
Not Eligible

Hewitt Wilson Ceramics Laboratory

Property ID 212—built 1946

Individually eligible for listing in the NRHP under Criterion C

Hewitt Wilson Ceramics Laboratory (Exhibit 5-26) was designed by noted architect Paul Thiry (1904–1993) (Durio 2009m). Thiry is credited with introducing European Modern architecture to the Northwest region and is well known internationally for his modern designs (Ochsner 1998). He was the principal architect for the Seattle World’s Fair in 1962 and is credited with the design of many well-known Seattle buildings, including Key Arena, MOHAI, and St. Demetrios Greek Orthodox Church. The Hewitt Wilson Ceramics Laboratory is a modest example of Thiry’s work, built for engineering students pursuing mining studies. The facility, originally called the Kiln Building, housed three kilns built by the U.S. Bureau of Mines. Students used the kilns to perform standard tests of high refractory materials prepared from northwest-mined sources. The building was named to honor Dr. Hewitt T. Wilson in 1955 (Woodbridge and Montgomery 1980). It is eligible for listing in the NRHP under Criterion C for its Modern architectural design, representing the work of a master architect. The SHPO concurred with the eligibility determination of Hewitt Wilson Ceramics Laboratory on August 27, 2009.

Wilcox Hall

Property ID 213—built 1963

Individually eligible for listing in the NRHP under Criterion C

Wilcox Hall (Exhibit 5-26) was built to supplement operations at Roberts Hall in 1963 and initially called Roberts Hall Addition and Computer Center (Durio 2009n). In 1981, the Board of Regents renamed it Wilcox Hall, reinforcing its identity as a separate building. The building was designed by architects McClure and Adkison of Spokane (Ells 1998). Until 1976, Wilcox Hall housed the Computer Center, but it currently provides space for many different engineering departments. It is associated with Paul Allen and Bill Gates of Microsoft, who worked on projects in this building (Bishop et al. 2010). Wilcox Hall will be 50 years old in 2013. At that time, the building will become eligible for listing in the NRHP under Criterion C for its Modern architectural design, representing the work of noted architects. The SHPO concurred with the eligibility determination Wilcox Hall on August 27, 2009.

More Hall

Property ID 214—built 1946–1948

Individually eligible for listing in the NRHP under Criterion C

More Hall (Exhibit 5-27) was designed by architects Bebb and Jones, in association with Leonard Bindon, and constructed to house the University of Washington’s Civil Engineering Department (Durio 2009o). Charles Bebb, a leading Seattle architect, was important in the development of the architectural terra-cotta industry in Washington State, and John Paul Jones became the consulting architect for the University of Washington after World War II (Ochsner 1998).

The building, as originally constructed, “expressed the modern architectural philosophy of function over form and incorporated lighting from large windows to convey the feeling of spaciousness”

(University of Washington 2009a). The east end of the building was added in 1948 as the Structural Testing Laboratory, designed by John Paul Jones.

The lab was located adjacent to the Northern Pacific Railroad so a spur track could carry materials directly into the room. One of the first items delivered by rail was a 2.5 million pound compression testing machine. Its testing capacities outperformed any other in the Pacific Northwest and was used by Washington manufacturers of aircraft, steel, lumber and light metals in the post WWII years to test their products. In addition, the machine could replicate earthquake-like shock waves that enabled students to study how to incorporate seismic factors into their civil engineering design” (University of Washington 2009a).

Kolb and Stansfield remodeled More Hall in 1972–1975, and the structural and geotechnical research laboratories were remodeled in 1993–1996.

More Hall is considered eligible for listing in the NRHP under Criterion C for its Modern architectural design and as the work of master architects. The SHPO concurred with the eligibility determination of More Hall on August 27, 2009.

Graves Hall

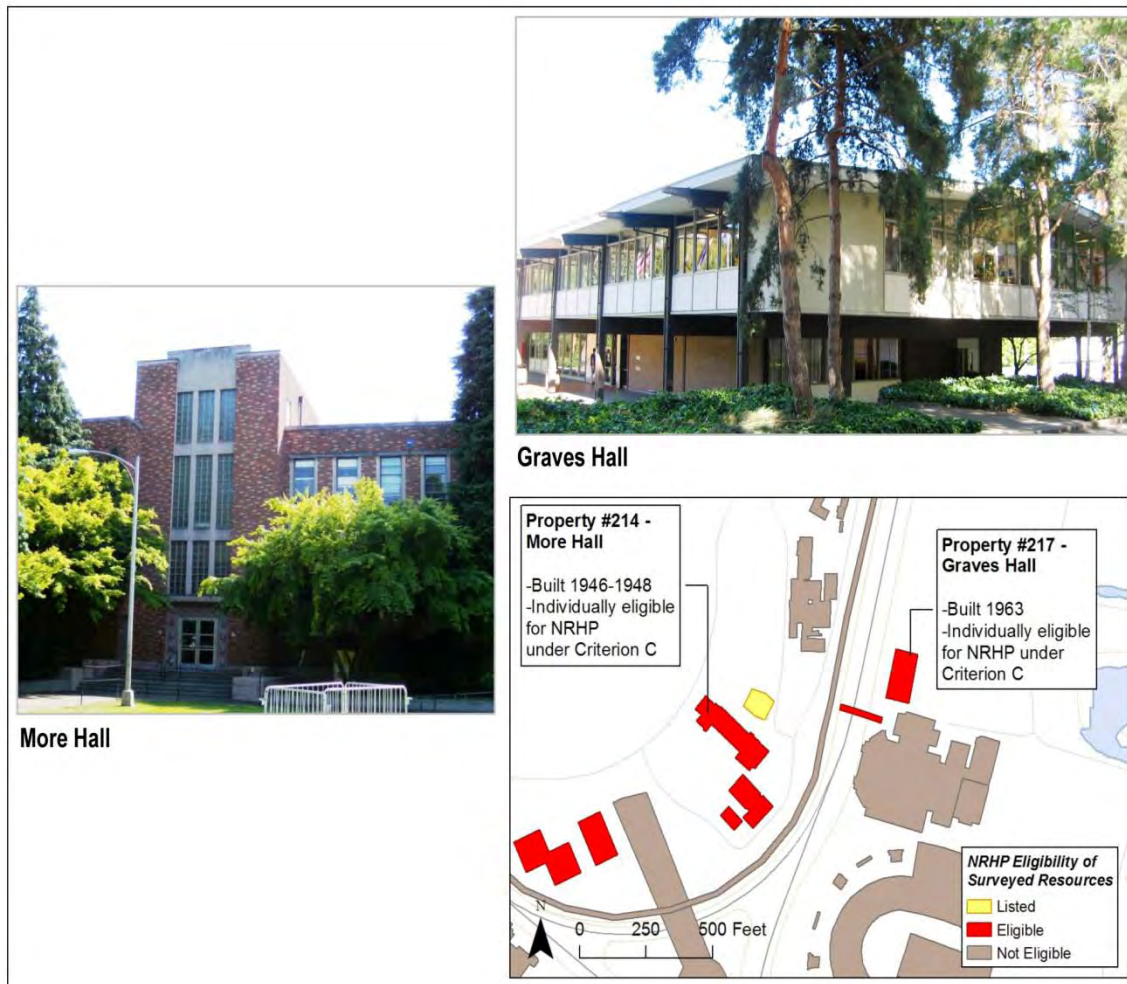
Property ID 217—built 1963

Individually eligible for listing in the NRHP under Criterion C

Graves Hall (Exhibit 6-30) was designed by architect Robert Billsborough Price (1915–1981) (Durio 2009p). It houses the central administrative offices for University of Washington Intercollegiate Athletics, as well as coaches’ and staff offices, training and meeting rooms, the sports ticket office, and the Husky Marching Band offices (Ells 1998). As an architect, Price specialized in educational projects and designed a number of schools in the Puget Sound area from the late 1950s through the 1970s, including Graves Hall (Docomomo WEWA 2011). Other Price-designed buildings in Seattle include the Seattle World’s Fair Hall of Industry (1961) and the University of Washington Golf Driving Range Building.

Graves Hall’s Modern style is representative of Price’s educational design projects and retains good integrity. Graves Hall will be 50 years old in 2013. At that time, the building will become eligible for listing in the NRHP under Criterion C for its Modern architectural design, representing the work of a noted architect. The SHPO concurred with the eligibility determination of Graves Hall on October 26, 2009.

Exhibit 5-27. University of Washington—More Hall and Graves Hall



University of Washington Club

Property ID 220—built 1958-1960

Individually eligible for listing in the NRHP under Criterion C

The University of Washington Club (Exhibit 5-28) was designed by architect Victor Steinbreuck, in association with Paul Hayden Kirk Associates (Durio 2009q). University of Washington architecture faculty collaborated with them on the design, including Daniel Streissguth. Thomas E. Sparling and Associates were the electrical engineers, and Eckbo, Dean and Williams were the landscape architects.

The University of Washington Club, originally called the Faculty Club, was incorporated in 1909 (Ells 1998). During the Alaska-Yukon-Pacific Exposition, this site was the Hoo Hoo Club, a part of the Forestry exhibit, designed by Ellsworth Storey. At the conclusion of the exposition, the building was left for a Faculty Club. In 1958, the original building was torn down and the current building was constructed. Articles about the University of Washington Club were published in *Progressive*

Architecture in 1961 and in *Architectural Forum* in 1962. The building won the AIA Seattle Honor Award in 1960 (Woodbridge and Montgomery 1980).

The University of Washington Club is an important example of regional modernism. It is eligible for listing in the NRHP under Criterion C as an important example of Modernism and the work of a significant local architect. Although some renovation work has occurred over the years, including the enclosure of part of the south balcony area and renovations in 2005 to the bar area, the building retains very good integrity and easily communicates its original design. The SHPO concurred with the eligibility determination of the University of Washington Club on August 27, 2009.

McMahon Hall

Property ID 223—designed in 1965

Individually eligible for listing in the NRHP under Criterion C

McMahon Hall (Exhibit 5-28) is a residence hall designed by architect Paul Hayden Kirk of Kirk, Wallace, McKinley & Associates (Ells 1998). It received an American Institute of Architects (AIA) Seattle Honor Award in 1966 (AIA Seattle 2010). The residence hall is considered significant for its modern Brutalist design, softened by the rough concrete forms and puzzle piece-like plan, sited on a steep hill that affords breathtaking views of Lake Washington and the Cascades (Woodbridge and Montgomery 1980). The building will be 50 years old in 2015. At that time, it will be eligible for listing in the NRHP under Criterion C for its distinctive architectural design and as the work of a master architect. The SHPO concurred with the eligibility determination of McMahon Hall on August 27, 2009.

CENPA Instrument Shop

Property ID 224—built in 1948

Individually eligible for listing in the NRHP under Criteria A and C

The CENPA Instrument Shop (Exhibit 5-28) was built in 1948 as the Cyclotron Shop to support the construction of the cyclotron building next door (Durio 2009r). The building was designed by noted architect John Graham, Jr. The cyclotron was dismantled in the 1980s, and the property is now known as the CENPA Instrument Shop. Founded in 1998, CENPA is one of the University of Washington's nuclear physics labs (Ells 1998). The U.S. Department of Energy (DOE) funds the labs, which pursues research in nuclear physics, astrophysics, and related fields (Woodbridge and Montgomery 1980). It has been designated a Center for Excellence by the DOE, and has been the recipient of numerous awards and recognitions (University of Washington 2009b). The program includes neutrino research, participation in the KATRIN tritium beta decay experiment, and work in developing experiments to search for neutrinoless double beta decay. CENPA also performs user-mode research at large accelerator and reactor facilities around the world. An instrument shop has always been an integral part of the physics lab operation.

The CENPA Instrument Shop is eligible for listing in the NRHP under Criterion A, for its association with the development of nuclear physics, and under Criterion C, for its distinctive architectural design and as the work of a recognized master, John Graham Jr. The SHPO concurred with the eligibility determination of the CENPA Instrument Shop on August 27, 2009.

Exhibit 5-28. University of Washington—University of Washington Club, McMahon Hall, CENPA Instrument Shop, and North Physics Laboratory (CENPA)

North Physics Laboratory (CENPA)

CENPA Instrument (Cyclotron) Shop

University of Washington Club

McMahon Hall

Property #224 - CENPA Instrument Shop
-Built 1948
-Individually eligible for NRHP under Criterion C

Property #225 - North Physics Lab (CENPA)
-Built 1949
-Individually eligible for NRHP under Criterion C

Property #223 - McMahon Hall
-Built 1965
-Individually eligible for NRHP under Criterion C in 2015

Property #220 - University of Washington Club
-Built 1960
-Individually eligible for NRHP under Criterion C in 2010

NRHP Eligibility of Surveyed Resources
■ Eligible
■ Not Eligible

North Physics Laboratory

Property ID 225—built in 1949

Individually eligible for listing in the NRHP under Criteria A and C

The North Physics Laboratory (Exhibit 5-28), originally known as Nuclear Physics Laboratory/Cyclotron, houses the CENPA, discussed above (Durio 2009s). It originally held the cyclotron, dismantled in the 1980s.

The Cyclotron was a cylindrical vacuum chamber wherein particles were accelerated using a high power high frequency oscillator to alternate voltages between two half-cylinder electrodes called 'Dees,' ...Particles injected into the cyclotron were accelerated each time they crossed the intervening layer between the Dees. The particles took on more and more energy as they accelerated, and eventually were directed out of the chamber toward a target. At a fundamental level, particle accelerators smash atoms into one another, producing nuclear reactions. (Smoliak 2007).

Additions were made to the building in 1951 and 1958, and one of these additions was to house the Van de Graff particle accelerator, which remains in use (Smoliak 2007).

The building was designed by noted Seattle architect John Graham Jr. (1908–1991). Graham designed the Northgate Shopping Center, the first large-scale regional shopping center of its kind in the country, which established Graham as a leader in the field. He went on to build an international reputation and design projects all over the world (Ochsner 1998). His best-known project is probably the Space Needle for the Seattle World's Fair in 1960–1962, designed with Victor Steinbrueck.

The North Physics Laboratory (CENPA) is eligible for listing in the NRHP under Criterion A for its association with the development of nuclear physics, and under Criterion C for its distinctive architectural design and as the work of a recognized master architect. The SHPO concurred with the eligibility determination of the North Physics Laboratory on August 27, 2009.

Montlake Boulevard Pedestrian Overpasses South and North

Property IDs 221 and 222, respectively—built 1958

Individually eligible for listing in the NRHP under Criterion C

The Montlake Boulevard Pedestrian Overpasses (South and North) are identical concrete bridges that cross Montlake Boulevard NE, connecting the University of Washington campus and the Burke-Gilman Trail to parking lots on the east side of Montlake Boulevard (Exhibit 5-29) (Durio 2009t, 2009u). An early example of post-tensioned, pre-stressed concrete, the overpasses were built in 1958 and designed by noted structural engineer Jack Christiansen (Woodbridge and Montgomery 1980). The overpasses served as models for other pedestrian bridges throughout the state. These bridges are eligible for listing in the NRHP under Criterion C for their distinctive design and important engineering qualities. The SHPO concurred with the eligibility determination of the Montlake Boulevard North and South Pedestrian Overpasses on October 26, 2009.

Pavilion Pedestrian Bridge

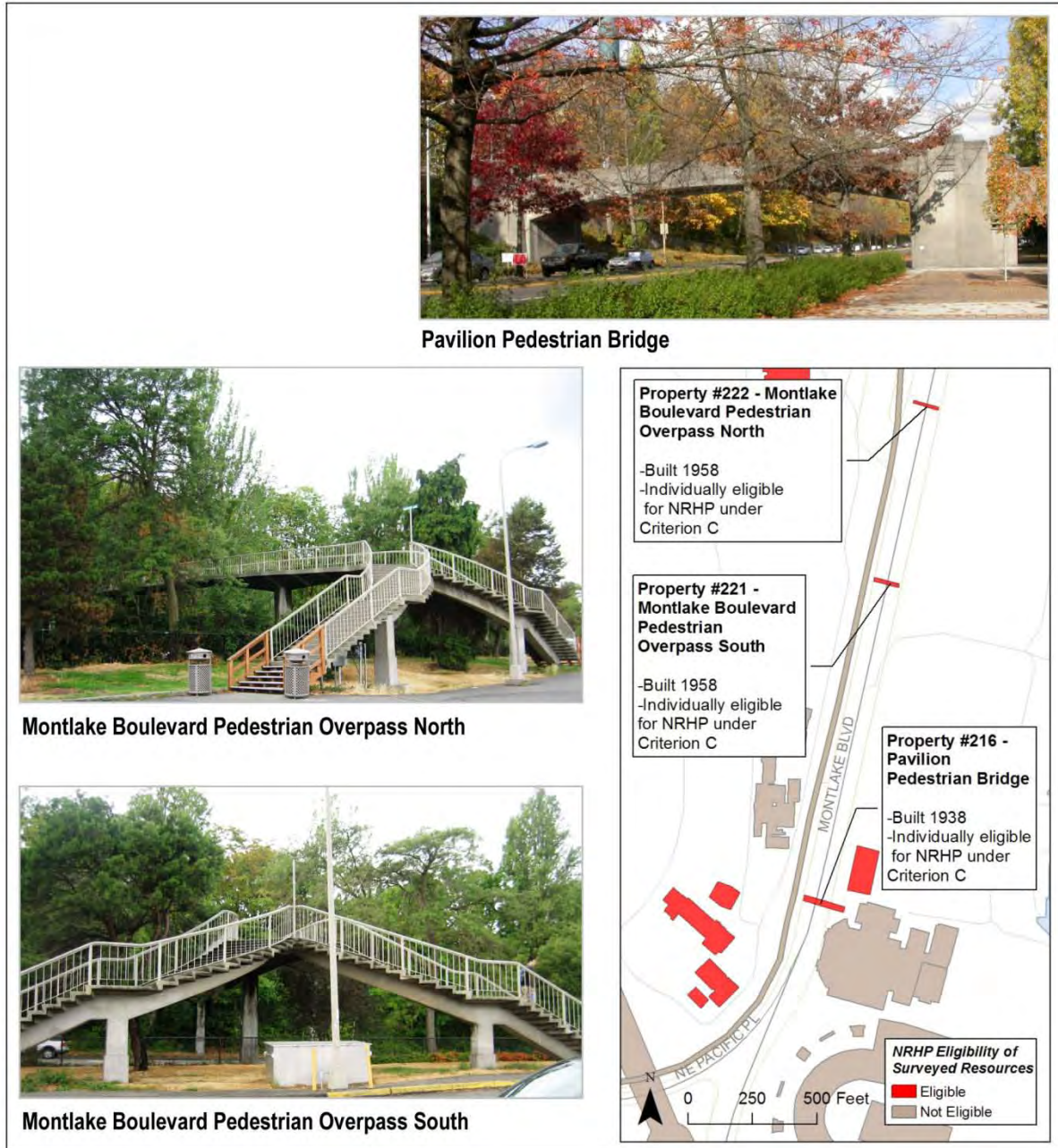
Property ID 216—built 1938

Individually eligible for listing in the NRHP under Criterion C

The Pavilion Pedestrian Bridge (Exhibit 5-29) crosses over Montlake Boulevard NE, connecting the Hec Edmundson Pavilion with the Burke-Gilman Trail and the main University of Washington campus (Durio 2009v). At the request of the University of Washington, the City of Seattle built this pedestrian bridge in 1938 for use by students (Ells 1998). It is designed in poured concrete, with restrained Art Moderne lines and minimal detailing, typical of modernist designs of the 1930s

(Woodbridge and Montgomery 1980). It is eligible for listing in the NRHP under Criterion C for its distinctive Art Moderne style design. The SHPO concurred with the eligibility determination of the Pavilion Pedestrian Bridge on August 27, 2009.

Exhibit 5-29. Pedestrian Bridges—Montlake Boulevard Pedestrian Overpasses North and South and Pavilion Pedestrian Bridge



Segment of Lake Washington Boulevard

From East Madison Street to NE Pacific Street

Property ID 239—built 1904-07, designed by the Olmsted Brothers

Individually eligible for listing in the NRHP under Criteria A and C

Contributing element to the Montlake Historic District

Contributing element to the Washington Park Arboretum

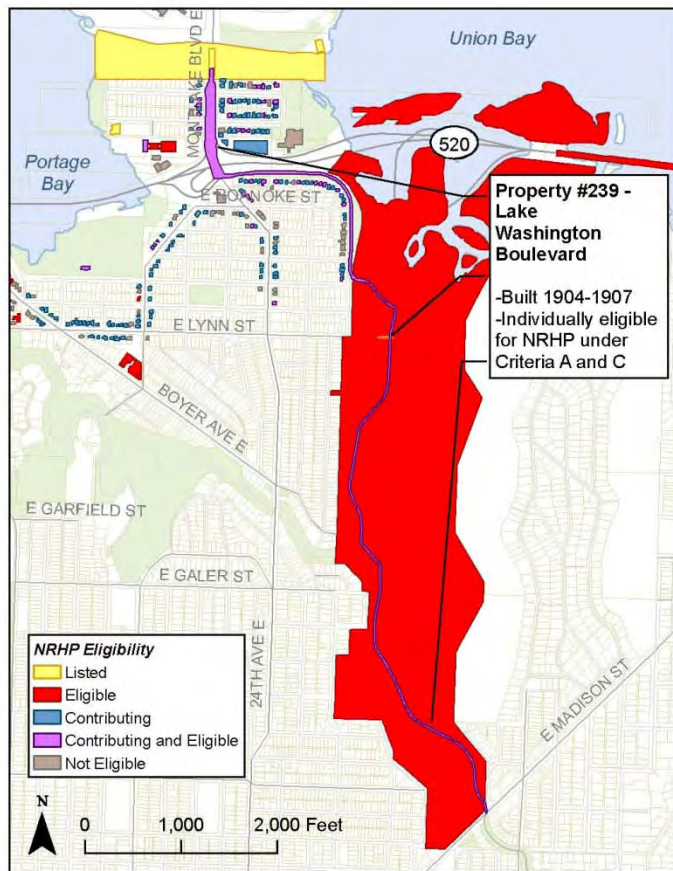
Lake Washington Boulevard is a winding park boulevard that passes through the Arboretum and the Montlake Historic District and continues north to the University of Washington (Exhibit 5-30) (Orton 2010a). The part of Lake Washington Boulevard within the APE is a 2-mile segment from East Madison Street to the Y intersection of Montlake Boulevard NE and NE Pacific Street, which was the entrance to the 1909 Alaska-Yukon-Pacific Exposition. It occurs in both the Montlake and West Approach segments of the APE.

The first section of the 2-mile segment begins at the intersection with East Madison Street in the Arboretum and ends where it exits the park at 26th Avenue East. Today it is referred to as Lake Washington Boulevard East. The second section begins at the intersection with 26th Avenue East and continues to the intersection with Montlake Boulevard East. This section is now called 26th Avenue East until the intersection with East Roanoke Street, where the name changes to East Lake Washington Boulevard and continues to the east. The third section starts at the southern end of Montlake Boulevard East and proceeds north to the southern edge of the Montlake Cut. The current name of this section is Montlake Boulevard East. The fourth section begins at the southern edge of the Montlake Cut and goes north to the intersection with NE Pacific Street. This northernmost section is now called Montlake Boulevard NE. Maps showing the four segments are included with the HPI form in Appendix D.

Lake Washington Boulevard was first devised as a component of a citywide park and boulevard system for the City of Seattle in 1903 (Takami and Keith 2003). John Charles Olmsted and Frederick Law Olmsted, Jr., of the Olmsted Brothers landscape architecture firm, were hired by the City of Seattle to prepare this plan. The system was envisioned as a chain of parks and parkways linking existing parks, such as Washington Park, creating new parks, and stitching them together with park boulevards.

The Olmsted Brothers' plan was formally adopted in October 1903 by the Seattle City Council. The Olmsted plan created a greenbelt of 37 parks and boulevards stretching from Woodland Park, through what is now the university campus and along Lake Washington Boulevard, south to Seward Park (BOLA and Kiest 2003; HistoryLink 2010; Takami and Keith 2003). The Olmsted philosophy focused not only on the physical beauty of the landscape, natural resources, and the vistas, but also on the vital relationship between parks and people. Most of the parks and connecting boulevards designed by the Olmsted Brothers in Seattle were built by 1908. The Seattle system is one of the most fully realized and best preserved Olmsted park and boulevard systems in the United States.

The entirety of Lake Washington Boulevard passes through or by 14 parks and is the main link in Seattle's Olmsted legacy of citywide park boulevards (Friends of Olmstead Parks 2009). The boulevard was planned to reach from Washington Park in the north continuously to Seward Park in the south. It was the first of the park boulevards to be built following the Olmsted Plan and originally went from the Mount Baker neighborhood north through Washington Park (now the Arboretum).

Exhibit 5-30. Lake Washington Boulevard

In 1909, the Seattle Parks and Recreation Department extended Lake Washington Boulevard from Washington Park to the south entrance of the Alaska-Yukon-Pacific Exposition (Ott 2010). This extension was called University Boulevard, in hopes of extending the boulevard system to the north, which never came to fruition. The extension was later folded into Lake Washington Boulevard, but what was University Boulevard is now Montlake Boulevard.

Lake Washington Boulevard through Washington Park, originally called Washington Park Boulevard, was the first road built from the Olmsted Brothers' plan (BOLA and Kiest 2003; Orton 2010a). The road was completed within a year of the Olmsted Report to the Board of Park Commissioners. It wound through the length of the Arboretum, serving as the primary access to the park. The first 2,120 feet of the road, starting at East Madison Street, was completed in 1904. The rest of the roadway through the park was completed by 1906. The landscape design for the boulevard developed through 1907.

According to the Park Commissioners report from 1906-1907 on Washington Park Boulevard, "Planting plans for the border of the driveway have been secured from the Olmsted Brothers, and during the planting season this fall these will be carried to completion. It is intended to make this stretch of road an object lesson as to what the system will be" (BOLA and Kiest 2003:27) At the crossing with Madison Street, the plan called for oak, sycamore, madrone, big leaf maple, mountain hemlock, and beech (BOLA and Kiest 2003). Traveling north, the plan illustrated an open stretch dotted with a few street trees and small shrubs as the valley broadened along a creek. When the

valley began to narrow to the north, the plan showed evergreen magnolias, oak, blue spruce, and willow together with beech, sycamore, and big leaf maple.

Currently, the section of Lake Washington Boulevard at the entrance to the park at Madison Street is the most consistent with the original landscape plan (BOLA and Kiest 2003). This first stretch within the Arboretum still shows a mix of oak and sycamore trees (Exhibit 5-31). The more open, valley section follows the original plan with fewer trees along the edges of the boulevard and shorter trees and shrubs. A group of willows, not part of the original plan, have been added at the intersection with Interlaken Boulevard. The northern section in the Arboretum has intermittent sycamore trees, but it is not clear if the shrubs shown in the plan were ever planted.

Exhibit 5-31. Lake Washington Boulevard at East Madison Street



The first section of Lake Washington Boulevard within the boundaries of the Arboretum maintains integrity of design, association, setting, feeling, and location. The boulevard winds through the park along the same alignment as when it was built from 1904–1906; it has taller, more dense plantings at the southern end, then fewer trees to enable the view over the valley in the central section, and then the more sparsely planted, taller trees in the north, as was called for in the Olmsted Brothers' 1906–1907 planting plan. The pavement, curbs, and gutters of Lake Washington Boulevard have had periodic changes, upgrades, and maintenance, and the light standards along the roadway have been replaced. In the 1960s, entrance and exit ramps to and from SR 520 were added to the northern section of the park. These ramps intersect Lake Washington Boulevard just south of the intersection with 26th Avenue East. The ramp intersections are a small portion of the 1.2 miles of the roadway and do not diminish the overall integrity of this section. This first section of the 2-mile segment retains sufficient integrity to convey the significance of Lake Washington Boulevard.

The second section of the boulevard between the northwest boundary of the Arboretum and East Montlake Boulevard has retained integrity of location, association, and design (Exhibit 5-32). It is in the same alignment as when it was designed and built, and retains the function as originally envisioned. The integrity of setting and feeling have been diminished on the north side by SR 520, which introduced visual elements and the sound of a wide, well-traveled highway and disrupted the viewshed from this portion of the boulevard. The south side of the boulevard maintains the neighborhood setting and shaded green space. This section has also had changes in paving, curbing, and gutters since its construction. Although there have been alterations to the setting on the north

side of the boulevard, this section as a whole maintains sufficient integrity to support the eligibility of Lake Washington Boulevard.

Exhibit 5-32. Lake Washington Boulevard at 24th Avenue East



The third section, going north as East Montlake Boulevard to the Montlake Cut, has lost integrity of materials, design, and feeling as a result of growth on both sides of the boulevard, widening of the roadway, and the SR 520 interchange. The roadway here is now four to six lanes wide, but has a planted median down the center, which makes it feel like a smaller, narrower roadway (Exhibit 5-33). This section maintains integrity of setting, location, and association. Although the areas on either side of the road were not built out in 1909 when the road was constructed, it was already platted for residential development. The boulevard in this section is wider than as originally built, but it is along the 1909 alignment, it serves the same transportation function, the surroundings are still vegetated, and the road bisects residential parcels as the plan intended. The southernmost portion of this section has lost considerable integrity due to the SR 520 interchange, resulting in an overcrossing above an excavated roadway below this alignment, but the rest of this section maintains the essence of the original roadway plan, surrounded by greenery. Overall, despite the SR 520 overcrossing and interchange, this third section retains enough integrity to convey the significance of the boulevard.

The northernmost section of the boulevard includes the Montlake Cut, which was excavated in 1917, and the Montlake Bridge, built in 1925, both occurring after the Alaska-Yukon-Pacific Exposition and after the extension of Lake Washington Boulevard to the Exposition in 1909 (BOLA and Kiest 2003; Orton 2010a) The change from a surface road to a bridge over a body of water significantly affects the integrity of design, setting, and feeling of the roadway. Both the Montlake Cut and Montlake Bridge are listed in the NRHP for their own merits, and the bridge is also a designated Seattle Landmark. However, the original boulevard was replaced, and the Montlake Cut and the bridge detract significantly from the integrity of the roadway.

Exhibit 5-33. East Montlake Boulevard

North of the Montlake Cut on the other side of the bridge, the former boulevard has been affected by the growth and development of the university, widening the road, and the loss of greenery surrounding the roadway (Exhibit 5-34). There is a major, signalized intersection at the junction of Montlake Boulevard Northeast and Northeast Pacific Street with multiple lanes converging in a Y north of the bridge. The effects on the integrity of this section diminish its ability to convey the significance of the boulevard. This section does not contribute to the eligibility of Lake Washington Boulevard.

The 2-mile segment of Lake Washington Boulevard located in the APE is eligible for listing in the NRHP under Criterion A for its association with the citywide Olmsted Brothers parks and parkways plan. It is significant as the first boulevard constructed as a part of the plan and was the standard by which the other boulevards were designed. The boulevard also is eligible for listing in the NRHP under Criterion C as a noted work of the master landscape architects John Charles Olmsted and Frederick Law Olmsted, Jr. The period of significance for this segment of the linear resource is 1904, when construction began based on the Olmsted Brothers design, through 1909 when the final section of what was then University Boulevard was completed. Lake Washington Boulevard was an integral part of the Olmsted Brothers plan for the development of linked outdoor spaces throughout Seattle. The segment of Lake Washington Boulevard is also a contributing element of the Montlake Historic District and the Arboretum. In both cases, it maintains a level of integrity that allows it to reflect the significance of each historic property. The SHPO concurred on the eligibility determination of this segment of Lake Washington Boulevard on July 29, 2010.

Exhibit 5-34. Montlake Boulevard Northeast at Northeast Pacific Street**Canal Reserve Land**

South of East Hamlin Street and east of Montlake Boulevard

Property ID 240—planted ca. 1910

Contributing element to the Montlake Historic District

Not individually eligible for listing in the NRHP

The Canal Reserve Land north of SR 520, behind the alley of the houses facing East Hamlin Street, is what remains undeveloped of the former Old Government Canal, the location of the original log canal between Lake Union and Lake Washington (Exhibit 5-35) (Orton 2010b). This piece of land was not included in the Olmsted Brothers' plans for Washington Park, but was one of the first areas formally planted with specimen plantings as early as 1909 (BOLA and Kiest 2003). Frederick W. Leissler, Jr., the assistant director of the Arboretum, directed WPA crews in planting Yoshino cherry trees and incense cedars on the Canal Reserve Land during the winter of 1935–1936, adding to existing trees in this area.

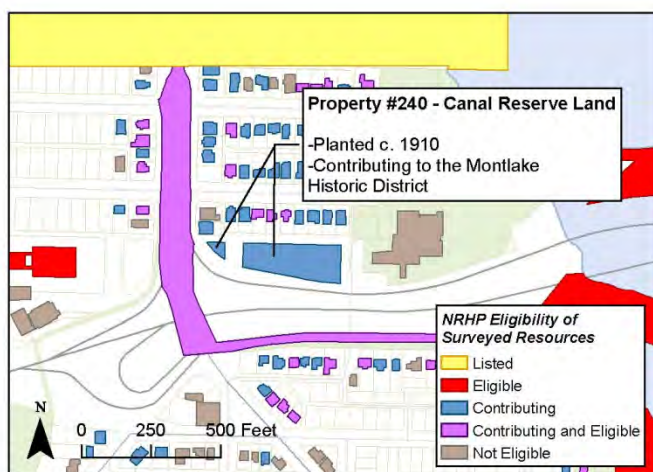
In 1961, the State Department of Highways acquired approximately 47 acres of Arboretum property to construct and operate SR 520, including the Arboretum's share of the Old Government Canal land (BOLA and Kiest 2003). Many of the cherry trees were relocated to the liberal arts quad of the University of Washington, but five cherry trees remain today on the Canal Reserve Land. Most of the surrounding land and plantings have been removed, and the introduction of SR 520 severely compromised the integrity of this early landscape.

The Canal Reserve Land is located within the boundaries of the Montlake Historic District. The area today mostly is used by neighbors as exterior space and is accessible to the public along the northern boundary of the parcel. The parcel is significant for the original specimen plantings that have survived at this location. There are 59 specimen plantings on this land, of which 24 are from the historic period of the district (1905–1952) (BOLA and Kiest 2003). Fifteen of the specimens

were planted prior to 1945: seven Sequoias from 1931, three incense cedars from 1909, and five cherries—one from 1910 and four from 1944 (University of Washington 2009c).

The Canal Reserve Land has lost integrity of setting, feeling, and association resulting from the introduction of SR 520, which cut it off from the Arboretum in the 1960s, severing the connection, physically and visually, between this parcel and the neighboring park property. It maintains some integrity of design and materials because the remaining original trees retain their original locations, but it has lost significant acreage to transportation uses and is accessible on only one side. Because of these losses of integrity, the Canal Reserve Land is not individually eligible for listing in the NRHP under any criteria. However, the Canal Reserve Land is a contributing element to the Montlake Historic District, as it is from the period of significance of the district and maintains 24 original specimen plantings from the historic period. This parcel is not a contributing element to the Arboretum as it is not within the boundaries of the park, is separated from it by SR 520, and was not originally a part of the park. SHPO concurred with the eligibility determination on July 29, 2010.

Exhibit 5-35. Canal Reserve Land



St. Demetrios Greek Orthodox Church

2100 Boyer Avenue

Property ID 571—built 1962

Individually eligible for listing in the NRHP under Criterion C

St. Demetrios Greek Orthodox Church (Exhibit 5-36) was constructed in 1962 in the Modern style (Hetzel 2010a). It was designed by architect Paul Thiry, one of the principal architects of the Century 21 Exposition, Seattle's 1962 World's Fair, and designer of MOHAI (Ochsner 1998). The landscape architect was Richard Haag, who later designed Gas Works Park. The building is a two-story facility that includes the church and an attached school. The school building has a flat roof and bands of windows divided by thick metal mullions (Hetzel 2010a). The church is multi-sided with an arched concrete roof and is clad in brick and mosaic tile. The most dominant feature of the church building is its multi-colored glass cupola. The building has good architectural integrity and embodies the distinctive characteristics of the Modern style in an eastern orthodox church. It is a singular example of this style and type of architecture in Seattle, possesses high artistic value, and was designed by a master architect.

The St. Demetrios Greek Orthodox Church will be 50 years old in 2012. At that time, it will be eligible for listing in the NRHP under Criterion C for its distinctive architectural design and as the work of a master architect. Although it is within the boundaries of the Montlake Historic District, the church was built after the end of the historic district's period of significance, so it is not a contributing element to the historic district. SHPO concurred with the eligibility determination on November 10, 2010.

Exhibit 5-36. St. Demetrios Greek Orthodox Church, 2100 Boyer Avenue East



Other Properties along Potential Haul Routes

Many parcels in the Montlake segment contain buildings or houses identified as individually eligible for listing in the NRHP under Criterion C because they are considered good examples of a particular architectural style or building type, or are associated with a master architect. Listed in Exhibit 5-37, these properties occur along some of the project's proposed haul routes. The SHPO concurred with these eligibility determinations on November 10, 2010.

Exhibit 5-37. Other Historic Properties in the Montlake Segment Eligible under NRHP Criterion C

Property	Street Address	Date	Architectural Style/Type
ID 573	2401 19th Avenue East	1965	Modern
ID 61	1896 East Hamlin Street	1925	Colonial Revival
ID 63	2815 Montlake Boulevard NE	1914	Arts and Crafts/Craftsman
ID 64	1897 E Shelby Street	1926	Tudor Revival
ID 75	2136 E Shelby Street	1931	Colonial Revival
ID 76	2142 E Shelby Street	1925	Colonial Revival
ID 77	2146 E Shelby Street	1921	Arts and Crafts/Craftsman
ID 79	2158 E Shelby Street	1925	Tudor Revival
ID 80	2159 E Shelby Street	1914	Colonial Revival
ID 83	2147 E Shelby Street	1926	Tudor Revival
ID 90	2111 E Shelby Street	1925	Colonial Revival
ID 94	2110 E Hamlin Street	1924	Arts and Crafts/Craftsman
ID 101	2146 E Hamlin Street	1920	Dutch Colonial Revival
ID 109	2133 E Hamlin Street	1919	Dutch Colonial Revival
ID 110	2127 E Hamlin Street	1924	Colonial Revival
ID 111	2121 E Hamlin Street	1927	Colonial Revival
ID 123	2511 W Montlake Place East	1931	Tudor Revival
ID 125	2501 W Montlake Place East	1931	Tudor Revival
ID 127	2552 20th Avenue East	1937	Colonial Revival/Art Deco
ID 138	2220 E Louisa Street	1930	Tudor Revival
ID 146	2402 24th Avenue East	1920	Arts and Crafts/Craftsman
ID 160	2600 E Montlake Place East	1926	Tudor Revival
ID 161	2604 E Montlake Place East	1926	Tudor Revival
ID 162	2610 E Montlake Place East	1926	Tudor Revival
ID 166	2219 Lake Washington Blvd East	1929	Tudor Revival
ID 169	2231 Lake Washington Blvd East	1927	Tudor Revival
ID 171	2401 Lake Washington Blvd E	1930	Colonial Revival
ID 175	2425 Lake Washington Blvd East	1931	Tudor Revival
ID 589	2519 20th Avenue East	1937	Colonial Revival
ID 179	2441 Lake Washington Blvd East	1927	French/Tudor Revival
ID 180	2445 Lake Washington Blvd East	1927	Tudor Revival
ID 181	2449 Lake Washington Blvd East	1928	Tudor Revival
ID 199	2451 26th Avenue East	1930	Tudor Revival
ID 184	2465 Lake Washington Blvd East	1927	Tudor Revival
ID 187	2603 E Roanoke Street	1930	Tudor Revival

West Approach Segment

The historic resources survey of the West Approach segment identified only three properties constructed prior to 1972. These properties include a segment of Lake Washington Boulevard (described in the previous section), the Edgewood Condominiums at 2411 42nd Avenue East, and the Arboretum. Located within the Arboretum, the Seattle Japanese Garden at 1075 Lake Washington Boulevard East and the Arboretum Aqueduct (Arboretum Sewer Trestle) are both designated Seattle Landmarks. The Arboretum Aqueduct is also listed in the NRHP and the WHR (Exhibit 4-4).

All of the identified properties were evaluated to determine their eligibility for listing in the NRHP. Based on NRHP evaluation criteria (36 CFR 60.4), all three of the properties were determined to be individually eligible for listing in the NRHP. The properties' locations and NRHP eligibility are presented in Exhibits 5-2b, 5-2c, 5-2d, and 5-2f. No other identified properties in the West Approach segment are considered eligible for listing in the NRHP either individually or as contributors to a potential historic district.

Appendix A provides a complete list of the properties surveyed in this segment. Appendix C contains copies of the nomination forms for the previously recorded resources. Appendix D includes the HPI forms for those resources not previously recorded.

Historic Properties in the West Approach Segment

This section summarizes the historical significance of all the historic properties identified in the West Approach segment of the APE.

Washington Park Arboretum

2300 Arboretum Drive East

Property ID 200—designed in 1903, built 1904–07

Individually eligible for listing in the NRHP under Criteria A and C

The Arboretum is a public facility that was developed as part of the Olmsted Plan for Seattle Parks, Boulevards, and Playgrounds (Exhibit 5-38) (Durio 2009w). Stretching across approximately 230 acres, the Arboretum is cooperatively managed by City of Seattle Parks and Recreation and the University of Washington. It contains one NRHP-listed property, the Arboretum Aqueduct (as part of the Historic Bridges/Tunnels in Washington State), which is also a designated Seattle Landmark, and the Seattle Japanese Garden, another designated Seattle Landmark.

Foster Island, located at the northern end of the Arboretum, contains marshes and natural shorelines that provide valuable wildlife habitat. In 1963, SR 520 constructed a bridge across the center of the island. In 1968, the Waterfront Trail was constructed, which links Foster, Marsh, and Bamboo islands to a terminus just east of MOHAI. The Arboretum Waterfront Trail passes under SR 520 on Foster Island.

The Arboretum was first known as Washington Park and was one of Seattle's first parks. In 1903, the Olmsted brothers came to Seattle and prepared a plan for the city's park system, including Washington Park. By 1916, the park totaled 165.22 acres (BOLA and Kiest 2003). The City largely

completed its acquisition of land for Washington Park by 1921. In March 1924, Washington Park was officially set aside as a botanical garden and Arboretum. The Olmsted brothers drew up the first formal plan for the Arboretum in March 1936. J. Frederick Dawson, the chief designer, worked closely with the Seattle Parks and Recreation Department's staff landscape architect, Frederick Leissler.

In the early 1960s, the construction of SR 520 and the Evergreen Point Bridge severely compromised the integrity of the northern area of the Arboretum (BOLA and Kiest 2003). In 1963, the State Department of Highways condemned approximately 47 acres of Arboretum property for SR 520, including most of the Canal Reserve Land. The "Old Government Canal" land, the location of the original log canal between Lake Union and Lake Washington and one of the first areas formally planted in the Arboretum, was mostly taken for the path of SR 520. The undeveloped property north of SR 520 behind the houses facing East Hamlin Street is what remains. After SR520 was constructed through the Foster Island area, landscape architect Hideo Sasaki was hired in 1964 to salvage what was left of the northern section of the Arboretum. However, few elements of his plan were implemented except for the Waterfront Trail.

After the Olmsted plan of 1936, the next Master Plan adopted for the park was in 1978 (BOLA and Kiest 2003). In May 2001, the Seattle City Council approved a new long-range master plan for the Arboretum, *Renewing the Washington Park Arboretum*, Seattle Parks and Recreation, the University of Washington, and the Arboretum Foundation developed the plan to ensure that the Arboretum could effectively fulfill three primary purposes, which together form the mission of the Arboretum: conservation, recreation, and education.

As a public park, teaching and research institution and outdoor recreation area, the Arboretum has changed and evolved to meet changing demands, to accommodate differing financial climates, and to adapt to new challenges and desires from varied stakeholders. The extensive plantings and landscape improvements have matured. The plan has been altered to fit SR 520 and the Evergreen Point Bridge west approach. Portions of the Arboretum have also adapted and changed over time, with renewed plantings, new signage and lighting, and new paving. Nevertheless, the Arboretum retains its basic design and feeling, and continues to fulfill its mission (BOLA and Kiest 2003). As a historic designed landscape meant to educate and provide public beautification, it is considered an icon of the Seattle Parks and Recreation system.

Although the northern section of the Arboretum was heavily affected by the construction of SR 520 and has suffered a loss of integrity, the rest of the Arboretum remains intact. Taken as a whole, the Arboretum retains good integrity in all seven aspects. It is eligible for listing in the NRHP under Criterion A for its association with events that have made a significant contribution to the broad patterns of our history, including the Alaska-Yukon-Pacific Exposition, the development of the University of Washington, and the development of the parks system in Seattle; and under Criterion C as the work of a master for its design by the noted Olmsted Brothers firm, as well as the many talented designers and architects who contributed to its designed features. The SHPO concurred with the eligibility determination of the Arboretum on August 27, 2009. Revisions to the historic boundary of the Arboretum were submitted to DAHP in July 2010. DAHP concurred with the revised historic boundary in September 2010 (Exhibit 5-38).

The northern section of the park near SR 520 is a WSDOT right-of-way, but also is used as open space and has trails passing through it. Research was conducted on this piece of land in June 2010 to determine its historical affiliation with the Arboretum and to evaluate its NRHP eligibility within the

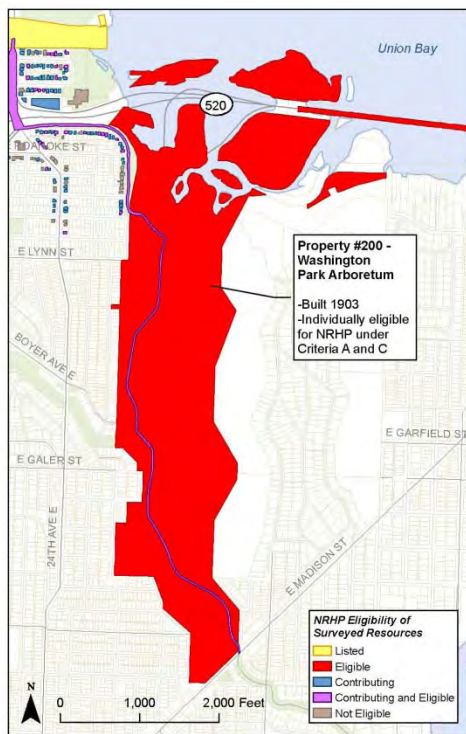
larger historic property. Research indicated that this northern area of the park near SR 520 was used as parkland between 1939, when the landfill on the site was covered with dredge and graded, and 1961, when it was acquired from the City of Seattle for construction and operation of SR 520 (Blukis Onat 2007). Before construction of SR 520, the right-of-way area was never fully developed as an integral part of the Arboretum, but it was within the boundaries of the park. This land is currently owned by WSDOT and has been a transportation facility for the last 49 years.

Although the WSDOT-owned area was historically a part of the Arboretum, it has lost considerable integrity resulting from the conversion to transportation right-of-way and the physical impacts from the bridge, such as the dredging and filling during construction and the columns that support the existing bridge, associated ramps, and the approach. The WSDOT right-of-way area is now surrounded by major roadways, including the SR 520 main line to the north, entrance and exit ramps on the east and west, and Lake Washington Boulevard on the south. It is accessible to pedestrians via several trails under the elevated roadways. A parking lot has been added east of Lake Washington Boulevard and is the trailhead for the loop trail onto the WSDOT-owned area.

The WSDOT-owned property is no longer within the park boundaries, is owned by the State of Washington, and is a transportation right-of-way. This area between the various roadway features has lost integrity of design, feeling, association, and setting. The integrity has been compromised by the introduction of the bridge structure and associated ramps, the change in land use, and the loss of land and changes to the landscape caused by dredging. As a result of these integrity losses, this parcel of land is not a contributing element of the Arboretum.

Exhibit 5-38 shows the revised historic boundaries of the Arboretum (in red), and the WSDOT right-of-way area (cross hatched).

Exhibit 5-38. Washington Park Arboretum



Edgewater Condominiums

2411 42nd Avenue East

Property ID 226—built in 1938–1940

Eligible for listing in the NRHP under the Seattle Apartment Buildings 1900–1957 multiple property nomination

The Edgewater Condominiums (Exhibit 5-39) were built between 1938 and 1940 as the Edgewater Park Apartments. Designed by noted architect John Graham, Jr. and built by local businessmen organized as the Madison Park Corporation, this building is the earliest known local example of a privately owned apartment complex (Sheridan 2008; Durio 2009x). Apartment complexes

“consisted of a grouping of multi-unit, multi-story buildings arranged in a landscaped setting. They extended the bungalow court’s concept of a setting apart from the street, but they were larger in scale, with higher densities and larger buildings....” (Sheridan 2008:3). The property is eligible for listing in the NRHP under Criterion C as part of the Seattle Apartment Buildings 1900-1957 multiple property nomination. It is considered historically significant because of its architectural design and association with a master architect. The SHPO concurred with the eligibility determination on November 10, 2010.

Exhibit 5-39. Seattle Apartment Buildings (1900–1957)—Edgewater Condominiums



Lake Washington Segment

The historic resources survey of the Lake Washington segment identified four properties in this part of the APE constructed prior to 1972: The Governor Albert D. Rosellini Bridge (Evergreen Point Bridge) and three properties along Rainier Avenue South, which were at one point considered as potential 6(f) replacement properties. No other properties in the Lake Washington segment are considered eligible for listing in the NRHP individually or as contributors to a potential historic district.

Governor Albert D. Rosellini Bridge (Evergreen Point Bridge)

Built in 1968, the Evergreen Point Bridge (Exhibit 5-40) was previously determined eligible for listing in the NRHP on December 22, 2008. The SHPO concurred with this eligibility determination

on January 26, 2009. The bridge's location is noted in Exhibits 5-2f, 5-2g, and 5-2j. For more detailed information on this historic property, see the previous HPI form prepared for the property provided in Appendix D.

Exhibit 5-40. Governor Albert D. Rosellini Bridge (Evergreen Point Bridge), Seattle



Rainier Avenue Properties

Three properties located at 10034, 10036, and 10038 Rainier Avenue South were included in the APE because they were once identified as potential replacement properties to comply with Section 6(f) of the LWCF Act. These properties are no longer under consideration as replacement properties, but remain within the APE. Constructed in 1955, 1952, and 1953, respectively, each property contains a one-story single family residence situated on the shoreline of south Lake Washington. All three residences were designed in the Modern style and are eligible for listing in the NRHP under Criterion C. The SHPO concurred with the eligibility determinations for these properties on September 22, 2010.

For additional information about the Preferred Alternative's Section 6(f) compliance, please see the *Environmental Evaluation of Section 6(f) Replacement Sites. Final Environmental Impact Statement and Section 4(f) Evaluation* (WSDOT 2010a).

Eastside Transition Segment

The historic resources survey of the Eastside Transition segment identified 10 properties in this part of the APE constructed prior to 1972. Two of these properties were previously recorded (Exhibit 4-5). The Arntson House at 2851 Evergreen Point Road was previously determined individually eligible for listing in the NRHP under Criterion C for its architectural design. The Helen Pierce House at 2857 Evergreen Point Road was previously determined eligible for listing in the WHR, but not eligible for listing in the NRHP. Both of these properties are located in Medina and were surveyed as part of the SR 520 Eastside Transit and HOV Project. SHPO concurred with these eligibility determinations on April 15, 2009. Exhibit 5-2j shows the locations of these properties and indicates their eligibility status. For more detailed information, see the previous documentation completed for the properties provided in Appendix C.

All of the identified properties were evaluated to determine their eligibility for listing in the NRHP. Based on NRHP evaluation criteria (36 CFR 60.4), only one newly identified property was determined to be individually eligible for listing in the NRHP—the Dixon House at 3267 Evergreen

Point Road. The locations of the properties identified in the Eastside Segment and their NRHP eligibility determinations are presented in Exhibit 5-2g. No other identified properties in the Eastside Transition segment are considered eligible for listing in the NRHP individually or as contributors to a potential historic district.

Appendix A provides a complete list of the properties surveyed in this segment. Appendix C contains copies of the nomination forms for the previously recorded resources. Appendix D includes the HPI forms for those resources not previously recorded.

The Dixon House

3267 Evergreen Point Road

Property ID 227—Built 1952

Individually Eligible for listing in the NRHP under Criterion C

The Dixon House (Exhibit 5-41) is a Ranch-style residence with good integrity. It is eligible for listing in the NRHP under Criterion C for its distinctive characteristics of the Ranch style. The SHPO concurred on the NRHP eligibility of the Dixon House on August 27, 2009.

Exhibit 5-41. Dixon House, 3267 Evergreen Point Road



Pontoon Production and Transport Areas

The historic resources survey identified 14 properties in the vicinity of the potential pontoon production project sites at the Port of Tacoma and the Port of Olympia constructed prior to 1972. Twelve of these properties are located at the Port of Tacoma and two are located at the Port of Olympia.

Six of the properties at the Port of Tacoma were previously recorded (Exhibit 4-6). These properties include Fire Station #15 at 3510 East 11th Street, which was individually listed in the NRHP in 1985, and four properties at the CTC facility, which were determined eligible for listing in the NRHP under Criteria A and C, and as a historic district as part of the SR 520 Pontoon Construction Project. The Hylebos Bridge was determined not eligible for listing in the NRHP.

Two identified properties at the Port of Olympia were previously recorded. In 2009, a WSDOT survey identified the main office building for the Port of Olympia, located at 915 Washington Street Northeast, as eligible for listing in the NRHP. An adjacent railroad spur was likewise determined ineligible for listing in the NRHP.

The six newly identified properties at the Port of Tacoma and Port of Olympia sites were evaluated to determine their eligibility for listing in the NRHP. Based on NRHP evaluation criteria (36 CFR 60.4), none of the newly identified properties were determined to be eligible for listing in the NRHP individually or as contributors to a potential historic district. The HPI forms for the previously recorded properties are provided in Appendix D.

Haul Routes

In response to comments and concerns raised by Section 106 consulting parties, including the SHPO, WSDOT expanded the APE to include potential haul routes that are anticipated to be used during construction of the Preferred Alternative. Exhibit 5-42 provides a complete list of all historic properties along the haul routes, regardless of segment. Exhibit 5-43 shows the potential haul routes for the Preferred Alternative. Refer to Exhibits 5-2a through 5-2j for the locations of the individual historic properties.

The methods for identifying historic properties along haul routes were identical to those used throughout the rest of the APE, and the survey results are presented above with the other results in this chapter. The reconnaissance-level historic resources survey along haul routes identified 200 properties as eligible for listing in the NRHP individually or as contributors to the Montlake Historic District. DAHP concurred with these eligibility determinations on November 10, 2010.

Exhibit 5-42. NRHP-Eligible Properties Identified along Potential Haul Routes

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
I-5/Roanoke Segment					
4	Harvard Avenue East	1980 Chung House	1932	Eligible	Eligible under Criterion C
10	Boylston Avenue East	2515 Denny-Fuhrman (Seward) School	1893; 1899; 1905; 1917	Eligible	Three buildings - Eligible under Criteria A and C Designated Seattle Landmark 1893/99 building is also listed on the WHR

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
14	Boylston Avenue East	2815 Shelby Apartments	1928	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957
15	Franklin Avenue East	2847 Gilmore House	1907	Eligible	Eligible under Criterion C
16	Franklin Avenue East	2901 L' Amourita Apartments	1909	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957 Designated Seattle Landmark
17	Franklin Avenue East	2919 Franklin Apartments	1927	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957
18	Franklin Avenue East	2923 Franklin Apartments	1927	Eligible	Eligible under Criterion C - Multiple Property Nomination for Seattle Apartment Buildings, 1900-1957
22	East Miller Street	904 East Miller Condominium	1911	Eligible	Eligible under Criterion C
23	Broadway Avenue East	2408 Sugamura House	1910	Eligible	Eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
36	East Roanoke Street	901 Fire Station #22	1965	Eligible	Eligible under Criterion C
38	Harvard Avenue East	2706 William Parsons House	1903	Contributing Listed	Contributing to the Roanoke Park Historic District Listed under Criteria A and C WHR Listed Designated Seattle Landmark
39	Federal Avenue East	2422 Boyd House	1907	Eligible	Eligible under Criterion C
252	5th Avenue Northeast	4559	1919	Eligible	Eligible under Criterion C
255	5th Avenue Northeast	4545	1919	Eligible	Eligible under Criterion C
256	5th Avenue Northeast	4541	1919	Eligible	Eligible under Criterion C
268	Roosevelt Way Northeast	4501 Performance Bicycles	1926	Eligible	Eligible under Criteria A and C
273	7th Avenue Northeast	4311	1918	Eligible	Eligible under Criterion C
283	7th Avenue NE	4247	1919	Eligible	Eligible under Criterion C
284	Roosevelt Way Northeast	4212-4214 Hardwick's Swap Shop	1924; 1967	Eligible	Eligible under Criterion C
292	7th Avenue Northeast	4206	1925	Eligible	Eligible under Criterion C
303	7th Avenue Northeast	4030	1925	Eligible	Eligible under Criterion C
310	9th Ave Northeast	4001	1964	Eligible	Eligible under Criterion C
317	Eastlake Avenue East	3242 The Martello	1916	Eligible	Eligible under Criterion C Designated Seattle Landmark
318	Eastlake Avenue East	3240	1909	Eligible	Eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
320	Fuhrman Avenue East	3261	1952	Eligible	Eligible under Criterion C
322	Fuhrman Avenue East	3240 Lanai Apartments	1955	Eligible	Eligible under Criterion C
324	Fuhrman Avenue East	3226	1928	Eligible	Eligible under Criterion C
330	Harvard Avenue East	3206	1924	Eligible	Eligible under Criterion C Designated Seattle Landmark
351	Franklin Avenue East	3100 Wembley Court	1924	Eligible	Eligible under Criterion C Designated Seattle Landmark
382	Franklin Avenue East	2837	1942	Eligible	Eligible under Criterion C
414	Boylston Avenue East	2727	1909	Eligible	Eligible under Criterion C
441	Boylston Avenue East	2411	1914	Eligible	Eligible under Criterion C
442	Boylston Avenue East	2407	1914	Eligible	Eligible under Criterion C
444	Boylston Avenue East	2401	1926	Eligible	Eligible under Criterion C
445	Boylston Avenue East	2359	1908	Eligible	Eligible under Criterion C
454	Boylston Avenue East	2315	1909	Eligible	Eligible under Criterion C
456	East Lynn Street	625	1904	Eligible	Eligible under Criterion C
457	Boylston Avenue East	2239	1900	Eligible	Eligible under Criterion C
458	Boylston Avenue East	2235	1909	Eligible	Eligible under Criterion C
459	Boylston Avenue East	2231	1909	Eligible	Eligible under Criterion C
460	Boylston Avenue East	2227	1915	Eligible	Eligible under Criterion C
463	Boylston Avenue East	2203	1925	Eligible	Eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
464	East Boston Street	269 Primrose Apartments	1929	Eligible	Eligible under Criterion C
468	Boylston Avenue East	2025	1915	Eligible	Eligible under Criterion C
472	Boylston Avenue East	2007	1965	Eligible	Eligible under Criterion C
473	Boylston Avenue East	2003	1925	Eligible	Eligible under Criterion C
474	East Newton Street	267	1909	Eligible	Eligible under Criterion C
479	Lakeview Boulevard East	1618	1919	Eligible	Eligible under Criterion C
481	Lakeview Boulevard East	1606	1916	Eligible	Eligible under Criterion C
600	I-5 Bridge over Lake Washington Ship Canal	Lake Washington Ship Canal Bridge	1958	Eligible	Eligible under Criteria A and C
601	Over Lake Washington Ship Canal in Portage Bay	University Bridge	1919	Eligible	Eligible under Criteria A and C
	Broadway Avenue East	2601 Betterton-Hillman House	1912	Contributing	Contributing to the Roanoke Park Historic District
	East Hamlin Street	804	1913	Contributing	Contributing to the Roanoke Park Historic District
	Harvard Avenue East	2612	1909	Contributing	Contributing to the Roanoke Park Historic District
	Harvard Avenue East	2616	1909	Contributing	Contributing to the Roanoke Park Historic District
	Harvard Avenue East	2722	1906	Contributing	Contributing to the Roanoke Park Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
	Harvard Avenue East	2728	1909	Contributing	Contributing to the Roanoke Park Historic District
	Harvard Avenue East	2832	1908	Contributing	Contributing to the Roanoke Park Historic District
	Harvard Avenue East	2836	1907	Contributing	Contributing to the Roanoke Park Historic District
	East Roanoke Street, between Broadway East and 10th Avenue East	950 Roanoke Park	1908	Contributing	Contributing to the Roanoke Park Historic District
	East Roanoke Street	1004	1907	Contributing	Contributing to the Roanoke Park Historic District
	East Roanoke Street	1018	1909	Contributing	Contributing to the Roanoke Park Historic District
	East Shelby Street	808	1900	Contributing	Contributing to the Roanoke Park Historic District
Portage Bay Segment					
48	Boyer Avenue East	2545 Alden Mason House	1949	Eligible	Eligible under Criterion C Potentially eligible Seattle Landmark
52	Boyer Avenue East	2518 Kelley House	1909	Eligible	Eligible under Criterion C
355	Fuhrman Avenue East	3116	1928	Eligible	Eligible under Criterion C
357	Fuhrman Avenue East	3106	1928	Eligible	Eligible under Criterion C
358	East Allison Street	1000	1927	Eligible	Eligible under Criterion C
367	East Gwinn Place	886	1922	Eligible	Eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
370	Fuhrman Avenue East	2946	1937	Eligible	Eligible under Criterion C
371	Fuhrman Avenue East	2932	1923	Eligible	Eligible under Criterion C
373	Fuhrman Avenue East	2917 Canal Market	1922	Eligible	Eligible under Criterion C
374	Fuhrman Avenue East	2926	1920	Eligible	Eligible under Criterion C
421	Boylston Avenue East	2623	1911	Eligible	Eligible under Criterion C
425	Boyer Avenue East	2717	1919	Eligible	Eligible under Criterion C
432	Boyer Avenue East	2637	1923	Eligible	Eligible under Criterion C
433	Boyer Avenue East	2633	1923	Eligible	Eligible under Criterion C
434	Boyer Avenue East	2629	1923	Eligible	Eligible under Criterion C
437	Boyer Avenue East	2617	1924	Eligible	Eligible under Criterion C
486	Delmar Drive East	2448	1919	Eligible	Eligible under Criterion C
491	Delmar Drive East	2432	1910	Eligible	Eligible under Criterion C
501	Boyer Avenue East	2430	1925	Eligible	Eligible under Criterion C
502	Boyer Avenue East	2428	1926	Eligible	Eligible under Criterion C
503	Boyer Avenue East	2424	1926	Eligible	Eligible under Criterion C
504	Boyer Avenue East	2415	1912	Eligible	Eligible under Criterion C
507	Delmar Drive East	2344	1928	Eligible	Eligible under Criterion C
508	Delmar Drive East	2340	1928	Eligible	Eligible under Criterion C
515	Delmar Drive East	2301	1937	Eligible	Eligible under Criterion C
516	Delmar Drive East	2328	1936	Eligible	Eligible under Criterion C
517	Delmar Drive East	2320	1955	Eligible	Eligible under Criterion C
522	Boyer Avenue	2400	1956	Eligible	Eligible under

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
	East				Criterion C
523	Boyer Avenue East	2366	1906	Eligible	Eligible under Criterion C
528	14th Avenue East	2330	1929	Eligible	Eligible under Criterion C
531	East Lynn Street	1418	1953	Eligible	Eligible under Criterion C
532	East Lynn Street	1404	1963	Eligible	Eligible under Criterion C
Montlake Segment					
53	Lake Washington Ship Canal	Montlake Cut	1916	Listed	Listed under Criterion A & C Designated Seattle Landmark
54	Montlake Boulevard NE over Lake Washington Ship Canal	Montlake Bridge	1924	Listed	Listed under Criterion C
56	Montlake Boulevard Northeast	2723 NOAA Northwest Fisheries Science Center	1931; 1939; 1940; 1965; 1966		Five buildings – 1931, 1939, 1940, 1965, 1966
			1931; 1965; 1966	Eligible	1931, 1965, 1966 buildings – Individually eligible for NRHP under Criteria A and C Potentially eligible as a Seattle Landmark
			1931	Contributing	1931 building only – Contributing to Montlake Historic District
58	East Hamlin Street	1893	1932	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
61	East Hamlin Street	1896	1925	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
62	Montlake Boulevard Northeast	2809	1922	Contributing	Contributing to Montlake Historic District
63	Montlake Boulevard Northeast	2815	1914	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
64	East Shelby Street	1897	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
66	East Shelby Street	1894	1937	Contributing	Contributing to Montlake Historic District
68	Montlake Boulevard Northeast	2908	1921	Contributing	Contributing to Montlake Historic District
69	Montlake Boulevard Northeast	2904	1921	Contributing	Contributing to Montlake Historic District
91	Montlake Boulevard Northeast	2818	1920	Contributing	Contributing to Montlake Historic District
92	Montlake Boulevard Northeast	2812	1922	Contributing	Contributing to Montlake Historic District
93	Montlake Boulevard Northeast	2810	1915	Contributing	Contributing to Montlake Historic District
115	Montlake Boulevard Northeast	2734	1919	Contributing	Contributing to Montlake Historic District
118	West Montlake Place East	2575	1951	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
119	West Montlake Place East	2571	1938	Contributing	Contributing to Montlake Historic District
121	West Montlake Place East	2553	1936	Contributing	Contributing to Montlake Historic District
122	West Montlake Place East	2521	1937	Contributing	Contributing to Montlake Historic District
123	West Montlake Place East	2511	1931	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
124	West Montlake Place East	2507	1929	Contributing	Contributing to Montlake Historic District
125	West Montlake Place East	2501	1931	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
127	20th Avenue East	2552	1937	Contributing	Contributing to Montlake Historic District
128	West Montlake Place East	2564	1947	Contributing	Contributing to Montlake Historic District
129	East Roanoke Street	2009	1950	Contributing	Contributing to Montlake Historic District
160	East Montlake Place East	2600	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
161	East Montlake Place East	2604	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
162	East Montlake Place East	2610	1926	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
163	East Montlake Place East	2616	1938	Contributing	Contributing to Montlake Historic District
164	Lake Washington Boulevard East	2209	1925	Contributing	Contributing to Montlake Historic District
165	Lake Washington Boulevard East	2215	1937	Contributing	Contributing to Montlake Historic District
166	Lake Washington Boulevard East	2219	1929	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
167	Lake Washington Boulevard East	2223	1928	Contributing	Contributing to Montlake Historic District
168	Lake Washington Boulevard East	2227	1925	Contributing	Contributing to Montlake Historic District
169	Lake Washington Boulevard East	2231	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
171	Lake Washington Boulevard East	2401	1930	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
172	Lake Washington Boulevard East	2409	1920	Contributing	Contributing to Montlake Historic District
173	Lake Washington Boulevard East	2415	1922	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/Property Name	Date of Construction	NRHP Status	Comments
175	Lake Washington Boulevard East	2425	1931	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
176	Lake Washington Boulevard East	2429	1931	Contributing	Contributing to Montlake Historic District
177	Lake Washington Boulevard East	2433	1930	Contributing	Contributing to Montlake Historic District
178	Lake Washington Boulevard East	2437	1930	Contributing	Contributing to Montlake Historic District
179	Lake Washington Boulevard East	2441	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
180	Lake Washington Boulevard East	2445	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
181	Lake Washington Boulevard East	2449	1928	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
182	Lake Washington Boulevard East	2455	1926	Contributing	Contributing to Montlake Historic District
183	Lake Washington Boulevard East	2459	1927	Contributing	Contributing to Montlake Historic District
184	Lake Washington Boulevard East	2465	1927	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C

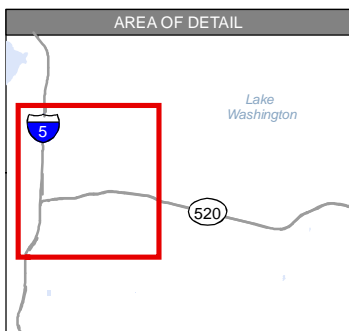
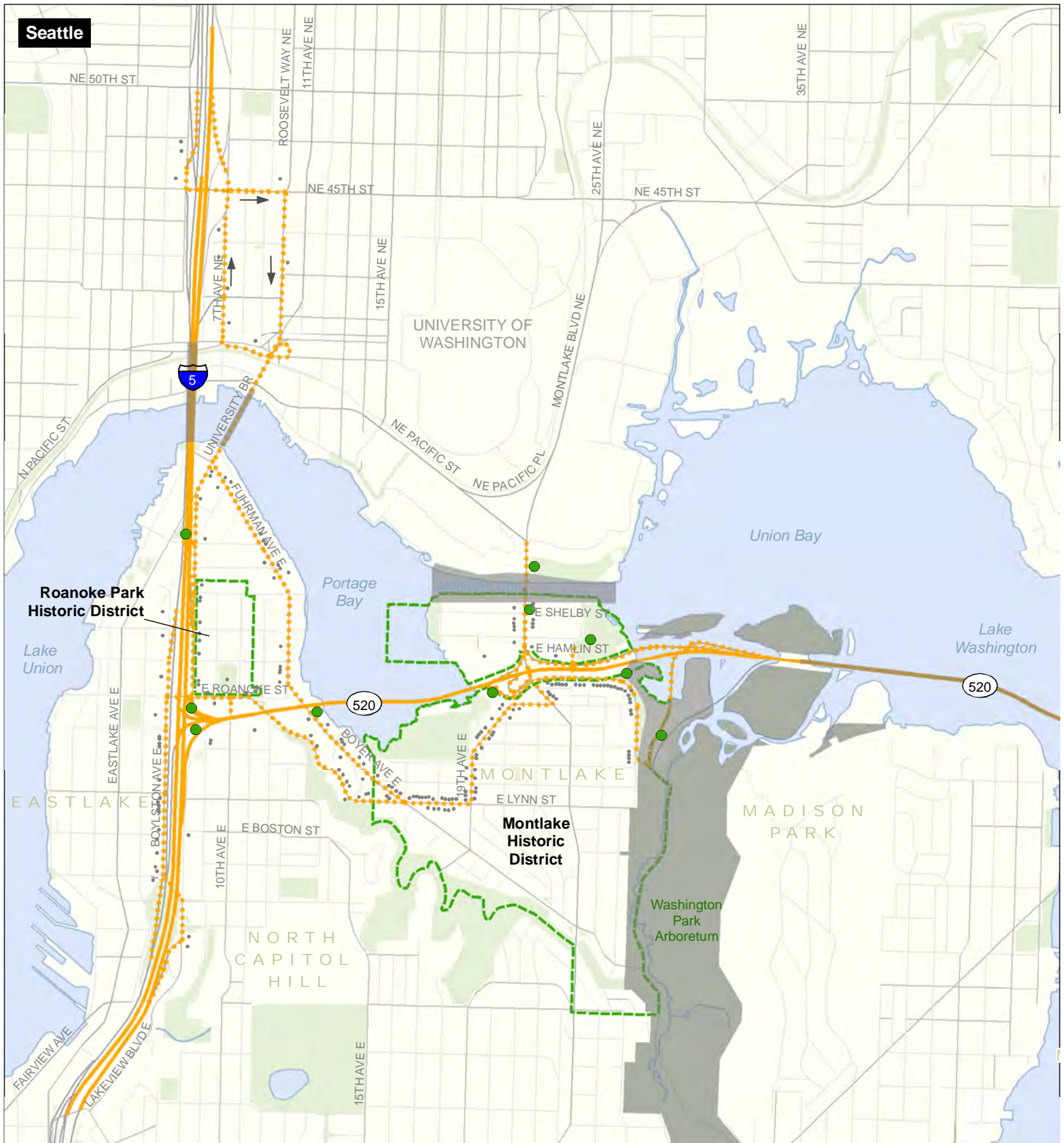
Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
185	Lake Washington Boulevard East	2615	1946	Contributing	Contributing to Montlake Historic District
186	Lake Washington Boulevard East	2607	1926	Contributing	Contributing to Montlake Historic District
187	East Roanoke Street	2603	1930	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
188	East Roanoke Street	2559	1928	Contributing	Contributing to Montlake Historic District
189	Lake Washington Boulevard East	2537	1928	Contributing	Contributing to Montlake Historic District
196	26th Avenue East	2467	1926	Contributing	Contributing to Montlake Historic District
197	26th Avenue East	2463	1925	Contributing	Contributing to Montlake Historic District
198	26th Avenue East	2457	1932	Contributing	Contributing to Montlake Historic District
199	26th Avenue East	2451	1930	Contributing Eligible	Contributing to Montlake Historic District Individually eligible under Criterion C
239	From East Madison Street to Northeast Pacific Street	Lake Washington Boulevard	1904 - 1909	Contributing Eligible	Contributing to the Montlake Historic District Eligible under Criteria A and C
240	South of East Hamlin Street and East of Montlake Boulevard	Canal Reserve Land	Planted ca. 1910	Contributing	Contributing to Montlake Historic District
534	East McGraw Street	1500	1938	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
538	Boyer Avenue East	2315	1920	Contributing	Contributing to Montlake Historic District
539	Boyer Avenue East	2309	1930	Contributing	Contributing to Montlake Historic District
540	Boyer Avenue East	2324	1928	Contributing	Contributing to Montlake Historic District
541	Boyer Avenue East	2316	1928	Contributing	Contributing to Montlake Historic District
542	Boyer Avenue East	2308	1928	Contributing	Contributing to Montlake Historic District
543	Boyer Avenue East	2302	1929	Contributing	Contributing to Montlake Historic District
544	East Lynn Street	1602	1925	Contributing	Contributing to Montlake Historic District
546	East Lynn Street	1608	1929	Contributing	Contributing to Montlake Historic District
547	East Lynn Street	1612	1929	Contributing	Contributing to Montlake Historic District
549	East Lynn Street	1614	1928	Contributing	Contributing to Montlake Historic District
550	East Lynn Street	1618	1928	Contributing	Contributing to Montlake Historic District
551	East Lynn Street	1622	1928	Contributing	Contributing to Montlake Historic District
552	East Lynn Street	1619	1947	Contributing	Contributing to Montlake Historic District
553	East Lynn Street	1626	1928	Contributing	Contributing to Montlake Historic District
554	East Lynn Street	1630	1928	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
555	East Lynn Street	1627	1947	Contributing	Contributing to Montlake Historic District
556	East Lynn Street	1633	1947	Contributing	Contributing to Montlake Historic District
557	East Lynn Street	1802	1930	Contributing	Contributing to Montlake Historic District
558	East Lynn Street	1805	1947	Contributing	Contributing to Montlake Historic District
559	East Lynn Street	1806	1930	Contributing	Contributing to Montlake Historic District
560	East Lynn Street	1811	1950	Contributing	Contributing to Montlake Historic District
561	East Lynn Street	1810	1929	Contributing	Contributing to Montlake Historic District
562	East Lynn Street	1814	1930	Contributing	Contributing to Montlake Historic District
563	East Lynn Street	1819	1951	Contributing	Contributing to Montlake Historic District
564	East Lynn Street	1820	1938	Contributing	Contributing to Montlake Historic District
567	19th Avenue East	2303	1915	Contributing	Contributing to Montlake Historic District
568	19th Avenue East	2307	1915	Contributing	Contributing to Montlake Historic District
569	19th Avenue East	2315	1928	Contributing	Contributing to Montlake Historic District
573	19th Avenue East	2401	1965	Eligible	Eligible under Criterion C
575	19th Avenue East	2415	1924	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/Property Name	Date of Construction	NRHP Status	Comments
577	East Lynn Street	1902	1924	Contributing	Contributing to Montlake Historic District
578	19th Avenue East	2312	1930	Contributing	Contributing to Montlake Historic District
579	19th Avenue East	2318	1922	Contributing	Contributing to Montlake Historic District
580	East McGraw Street	1902	1921	Contributing	Contributing to Montlake Historic District
581	East Calhoun Street	1903	1924	Contributing	Contributing to Montlake Historic District
582	19th Avenue East	2454	1926	Contributing	Contributing to Montlake Historic District
583	19th Avenue East	2456	1927	Contributing	Contributing to Montlake Historic District
585	East Miller Street	1907	1925	Contributing	Contributing to Montlake Historic District
586	East Miller Street	1918	1928	Contributing	Contributing to Montlake Historic District
587	West Montlake Place East	2510	1930	Contributing	Contributing to Montlake Historic District
588	West Montlake Place East	2520	1930	Contributing	Contributing to Montlake Historic District
590	20th Avenue East	2519	1930	Contributing	Contributing to Montlake Historic District

Property ID	Street Name/Location	Street Address/ Property Name	Date of Construction	NRHP Status	Comments
West Approach Segment					
200	Arboretum Drive East	2300 Washington Park Arboretum	1903	Eligible	Eligible under Criteria B and C Listed in the WHR Designated Seattle Landmark Includes Seattle Japanese Garden (1960) - Designated Seattle Landmark
Lake Washington Segment					
202	Over Lake Washington	Evergreen Point Bridge	1968	Eligible	Eligible under Criteria A and C
Eastside Transition Segment					
234	Evergreen Point Road	2851 James Arntson House	1953	Eligible	Eligible under Criterion C



- Potential Staging Area
- Primary Haul Route
- Potential Secondary Haul Route
- NRHP-Listed, NRHP-Eligible and Contributing Historic Properties Located Adjacent to Haul Routes
- - - Historic District Boundary

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

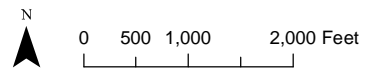


Exhibit 5-43. Historic Properties Located Adjacent to Potential Haul Routes

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

This chapter provides a detailed analysis of how the Preferred Alternative would affect historic properties within the APE. Together, these effects constitute an Adverse Effect on Historic Properties, which will be described in Chapter 7. This chapter applies the criteria of adverse effect to analyze how different aspects of the Preferred Alternative would permanently or temporarily, and directly or indirectly, alter or diminish the integrity of historic properties.

Application of Criteria of Adverse Effect

Section 106 of the NHPA and the implementing regulations require federal agencies to take into account the effects that a proposed undertaking may have on historic properties in the APE. This analysis includes the application of criteria of effect as outlined in 36 CFR 800.5.

In accordance with 36 CFR 800.5(a)(1), an adverse effect is found when an undertaking alters, directly or indirectly, any of the characteristics of a historic property that qualify the property for listing in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Direct effects are generally defined as the physical destruction or modification of all or part of a resource. Indirect effects vary, but are typically characterized as the introduction of audible, visual, and atmospheric elements that alter the qualities that make a property eligible for listing in the NRHP. Indirect effects, in the context of historic properties, are primarily defined as effects that are not caused by a physical impact on the property. When analyzing effects on historic properties, the combined impact of all effects, both direct physical and indirect effects, are considered.

Adverse effects may also include reasonably foreseeable effects caused by the undertaking that may occur later in time or be farther removed in distance (defined as "indirect" under NEPA), or may be cumulative. These effects are discussed in greater detail in the *Indirect and Cumulative Effects Discipline Report* (CH2M Hill 2009h). Potential adverse effects on cultural resources include, but are not limited to the following (36 CFR 800.5):

- Physical destruction of or damage to all or part of the property,
- Alteration of a property (including restoration, rehabilitation, or repair that is not consistent with the Secretary of the Interior's standards for the treatment of historic properties),
- Removal of the property from its historic location,
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance, and
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

The Preferred Alternative was reviewed to determine if aspects of the project would affect historic properties through construction or operation of the project.

WSDOT, on behalf of FHWA, has evaluated each historic property within the APE, and assessed the Preferred Alternative's effects on each property's seven aspects of integrity. The assessment resulted in one of four potential findings:

- **Does Not Alter Integrity:** Either no historic properties are present, or there is no effect of any kind, neither harmful nor beneficial, on historic properties.
- **Alters Integrity:** The undertaking affects historic properties, but does not diminish the characteristics that qualify the property for listing in the NRHP.
- **Diminishes Integrity:** There is an effect from the undertaking which alters the characteristics that qualify the property for listing in the NRHP in a way that diminishes the integrity of the historic property. This includes diminishing the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.
- **Temporarily Diminishes Integrity:** There is an effect from the undertaking, and that effect temporarily (during construction of the project) alters the characteristics that qualify the property for listing in the NRHP in a way that diminishes the integrity of the historic property. This includes diminishing the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.

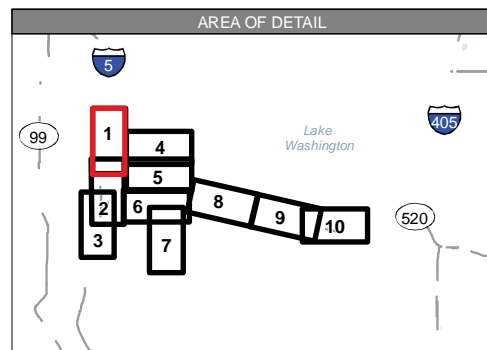
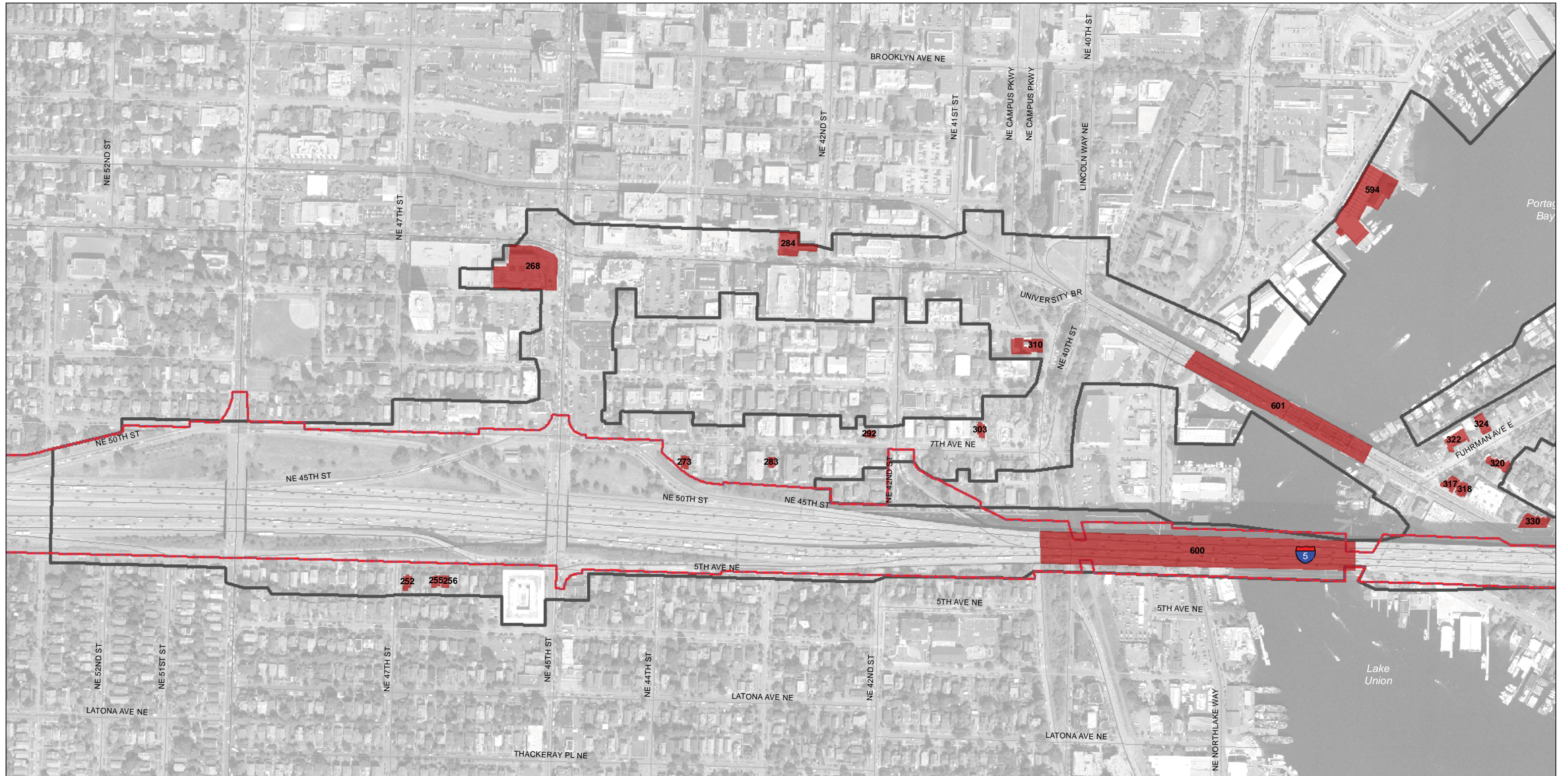
The Preferred Alternative would affect historic properties located in the APE. This chapter identifies the potential effects of the Preferred Alternative on historic properties in accordance with Section 106 of the NHPA.

Exhibit 5-1 lists all of the historic properties in the APE; Exhibits 6-1a through 6-1j show the properties' locations in relation to project elements to illustrate the potential for effects.

To assess the range of effects on historic properties as a result of implementing the Preferred Alternative, this chapter is organized as follows:

- Permanent Effects on Built Environment/Historic Properties (both direct and indirect), and
- Temporary Effects on Built Environment/Historic Properties (both direct and indirect).

Some properties would experience more than one type of effect and these are noted in all applicable categories, as appropriate. Exhibit 6-2 summarizes historic properties whose integrity would be diminished—temporarily, permanently, or both—by the Preferred Alternative. As described in Chapter 7, these effects would be resolved through the development of a PA, among DAHP, ACHP, and other consulting parties.



- NRHP Eligibility**
- NRHP Listed
 - NRHP Eligible
 - Contributing
 - Contributing and Eligible
 - Historic District Boundary
 - Area of Potential Effects
 - Proposed Right-of-way
 - Existing Right-of-way
 - Limits of Construction
 - General-Purpose Lane
 - HOV, Direct Access, and/or Transit-Only Lane
 - Lid
 - Proposed Bicycle/Pedestrian Path

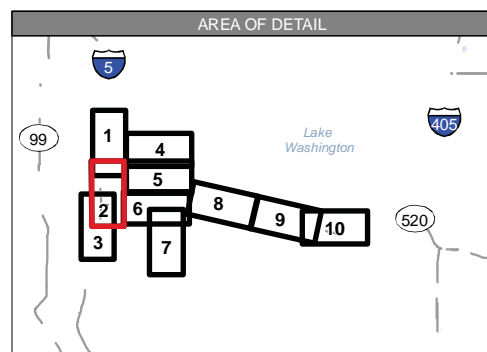
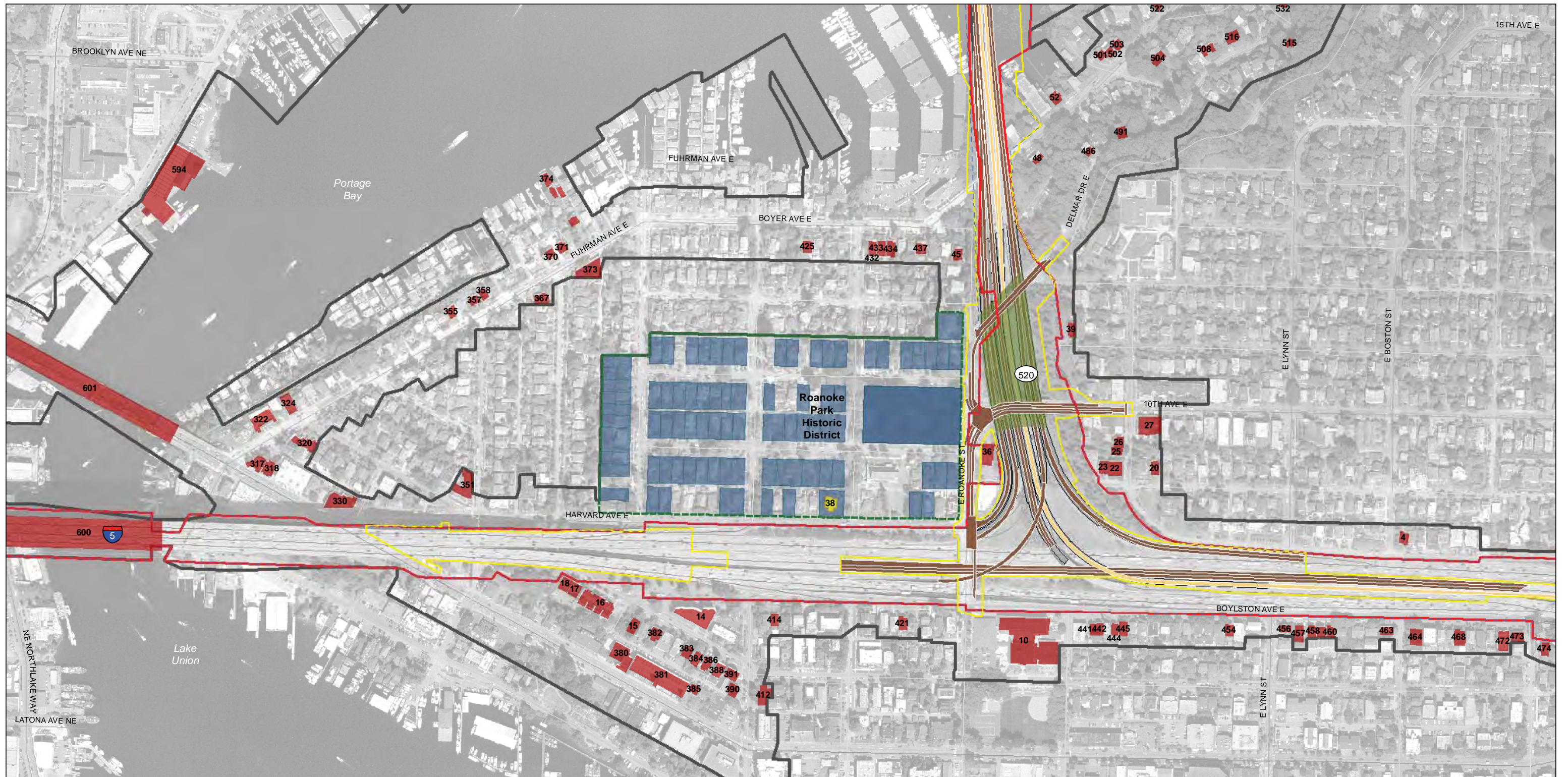
NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 6-1a. Project Elements of the Preferred Alternative and Historic Properties, Sheet 1

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | |
|---------------------------|----------------------------|--|
| NRHP Eligibility | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane |
| NRHP Eligible | Proposed Right-of-way | Lid |
| Contributing | Existing Right-of-way | Proposed Bicycle/Pedestrian Path |
| Contributing and Eligible | Limits of Construction | |

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

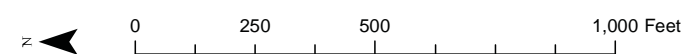
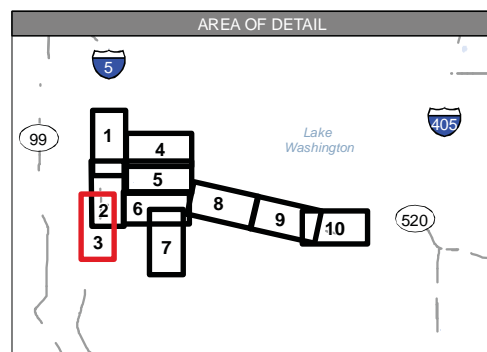
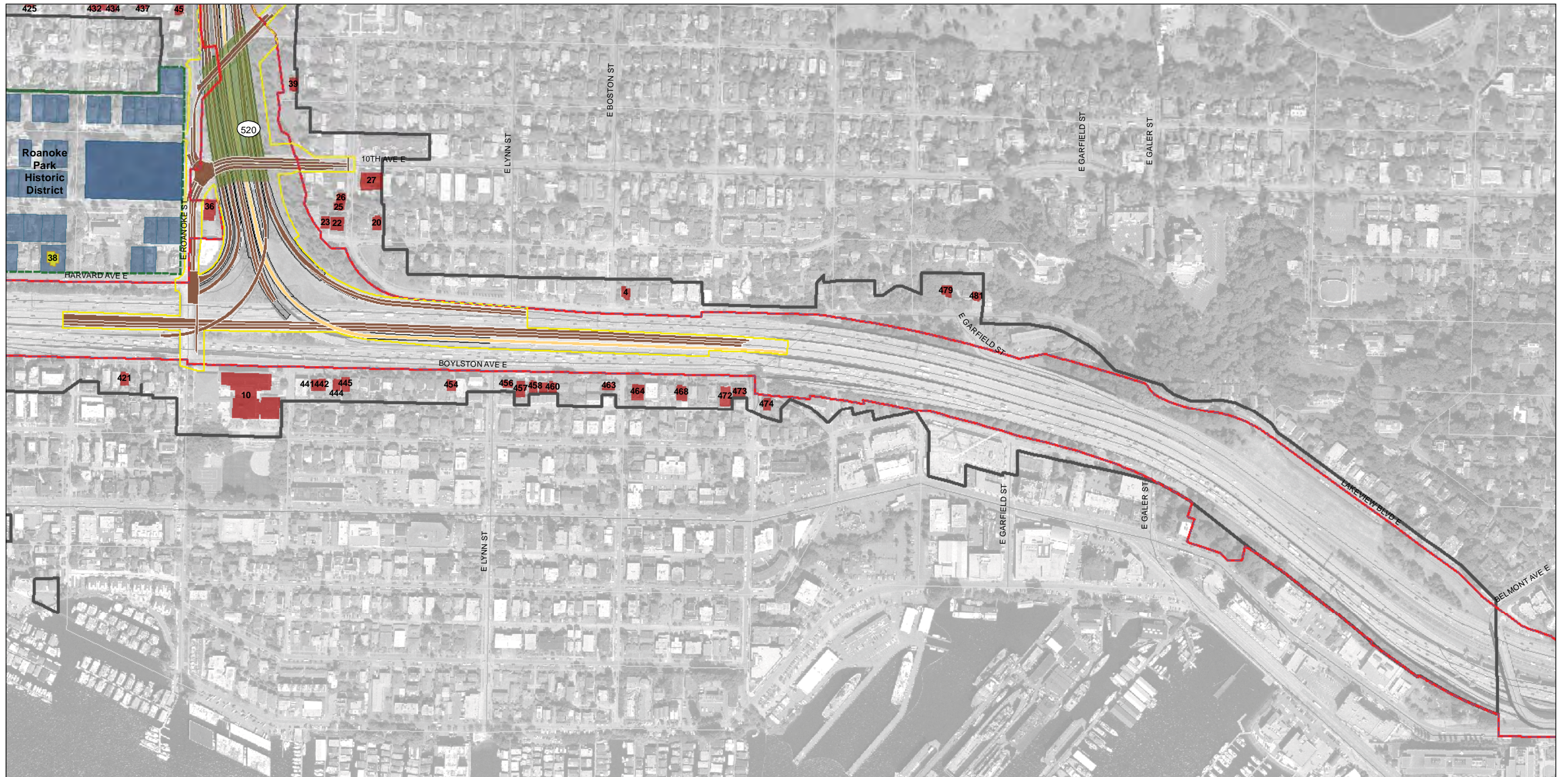


Exhibit 6-1b. Project Elements of the Preferred Alternative and Historic Properties, Sheet 2

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- NRHP Eligibility**
- NRHP Listed
 - NRHP Eligible
 - Contributing
 - Contributing and Eligible
 - Historic District Boundary
 - Area of Potential Effects
 - Proposed Right-of-way
 - Existing Right-of-way
 - Limits of Construction
 - General-Purpose Lane
 - HOV, Direct Access, and/or Transit-Only Lane
 - Lid
 - Proposed Bicycle/Pedestrian Path

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

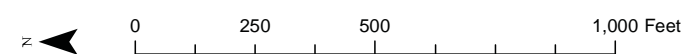
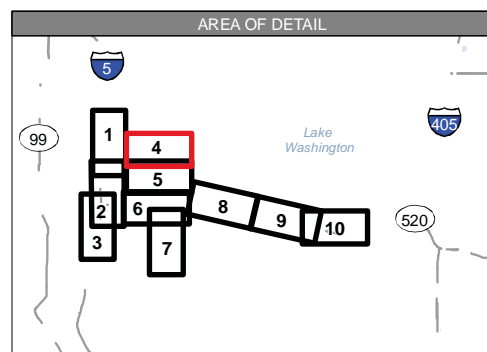


Exhibit 6-1c. Project Elements of the Preferred Alternative and Historic Properties, Sheet 3

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | |
|---------------------------|----------------------------|--|
| NRHP Eligibility | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane |
| NRHP Eligible | Proposed Right-of-way | Lid |
| Contributing | Existing Right-of-way | Proposed Bicycle/Pedestrian Path |
| Contributing and Eligible | Limits of Construction | |

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

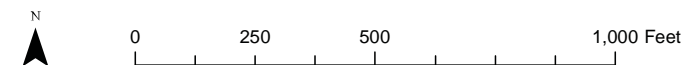
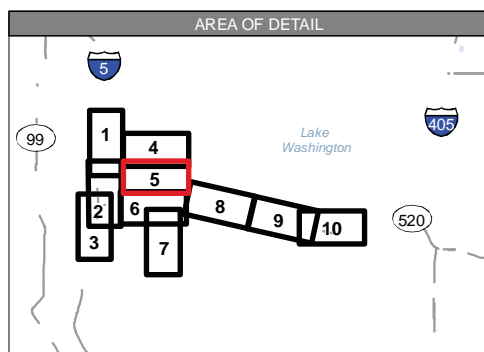
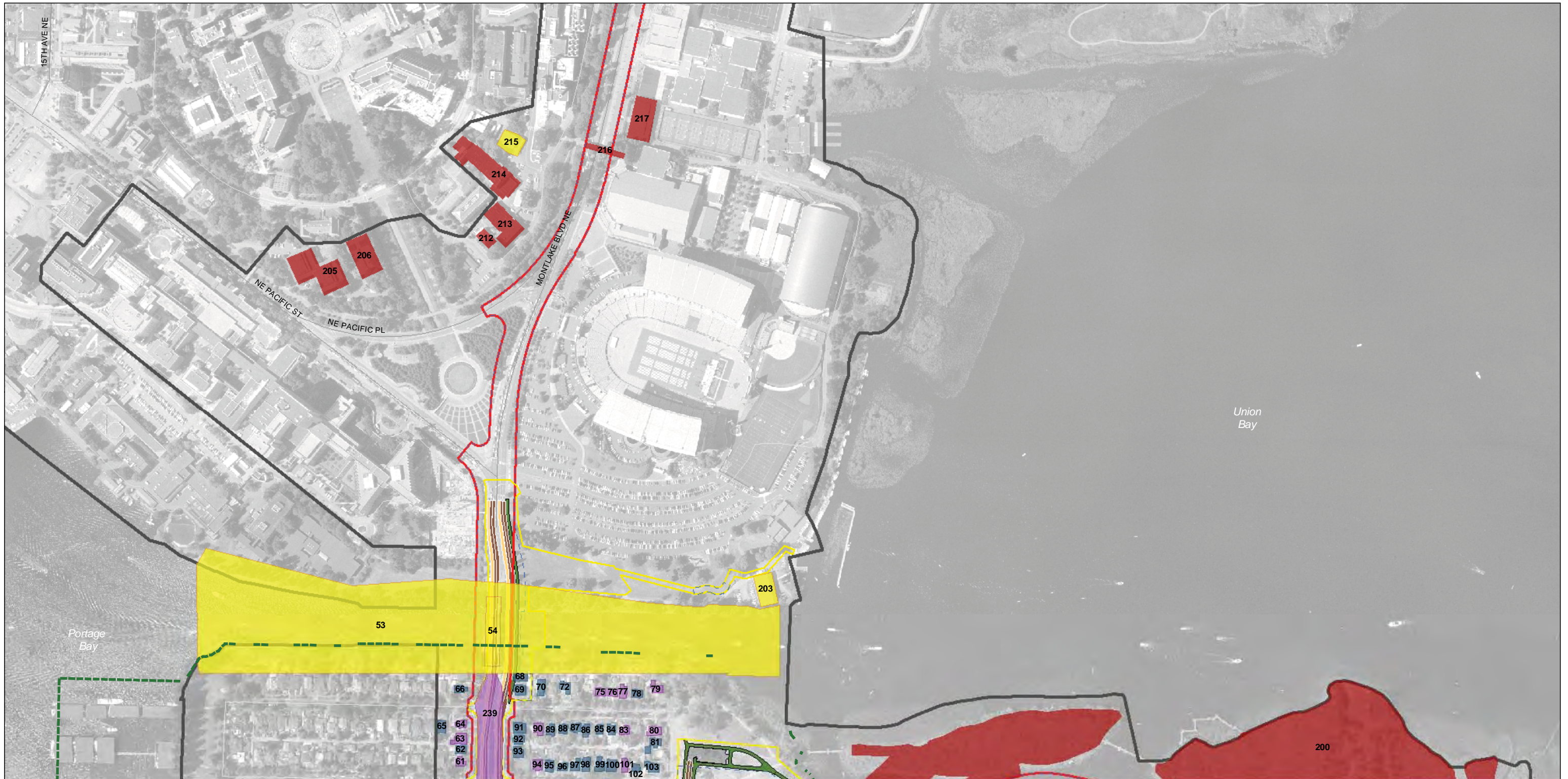


Exhibit 6-1d. Project Elements of the Preferred Alternative and Historic Properties, Sheet 4

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | |
|---------------------------|----------------------------|--|
| NRHP Eligibility | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane |
| NRHP Eligible | Proposed Right-of-way | Lid |
| Contributing | Existing Right-of-way | Proposed Bicycle/Pedestrian Path |
| Contributing and Eligible | Limits of Construction | |

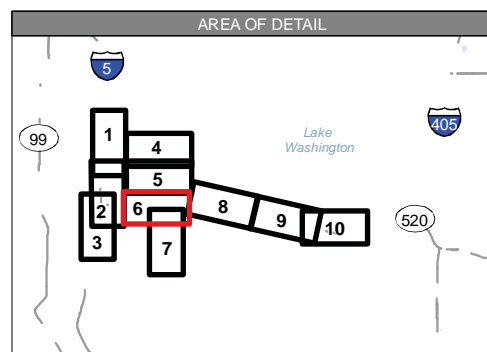
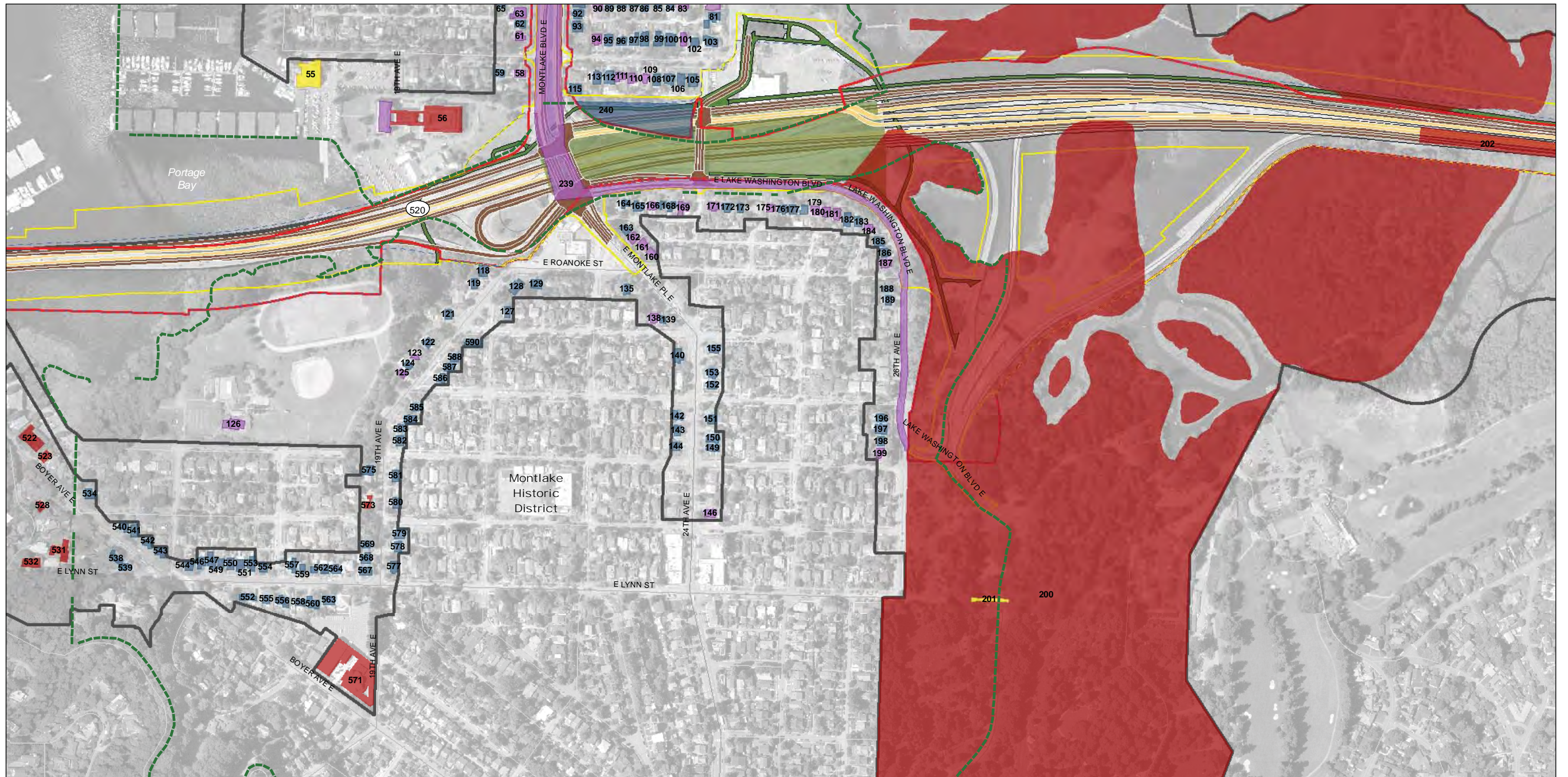
NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 6-1e. Project Elements of the Preferred Alternative and Historic Properties, Sheet 5

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | |
|---------------------------|----------------------------|--|
| NRHP Eligibility | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane |
| NRHP Eligible | Proposed Right-of-way | Lid |
| Contributing | Existing Right-of-way | Proposed Bicycle/Pedestrian Path |
| Contributing and Eligible | Limits of Construction | |

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

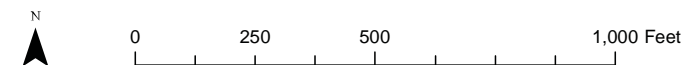
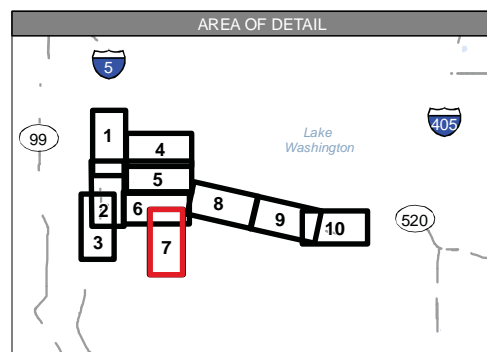
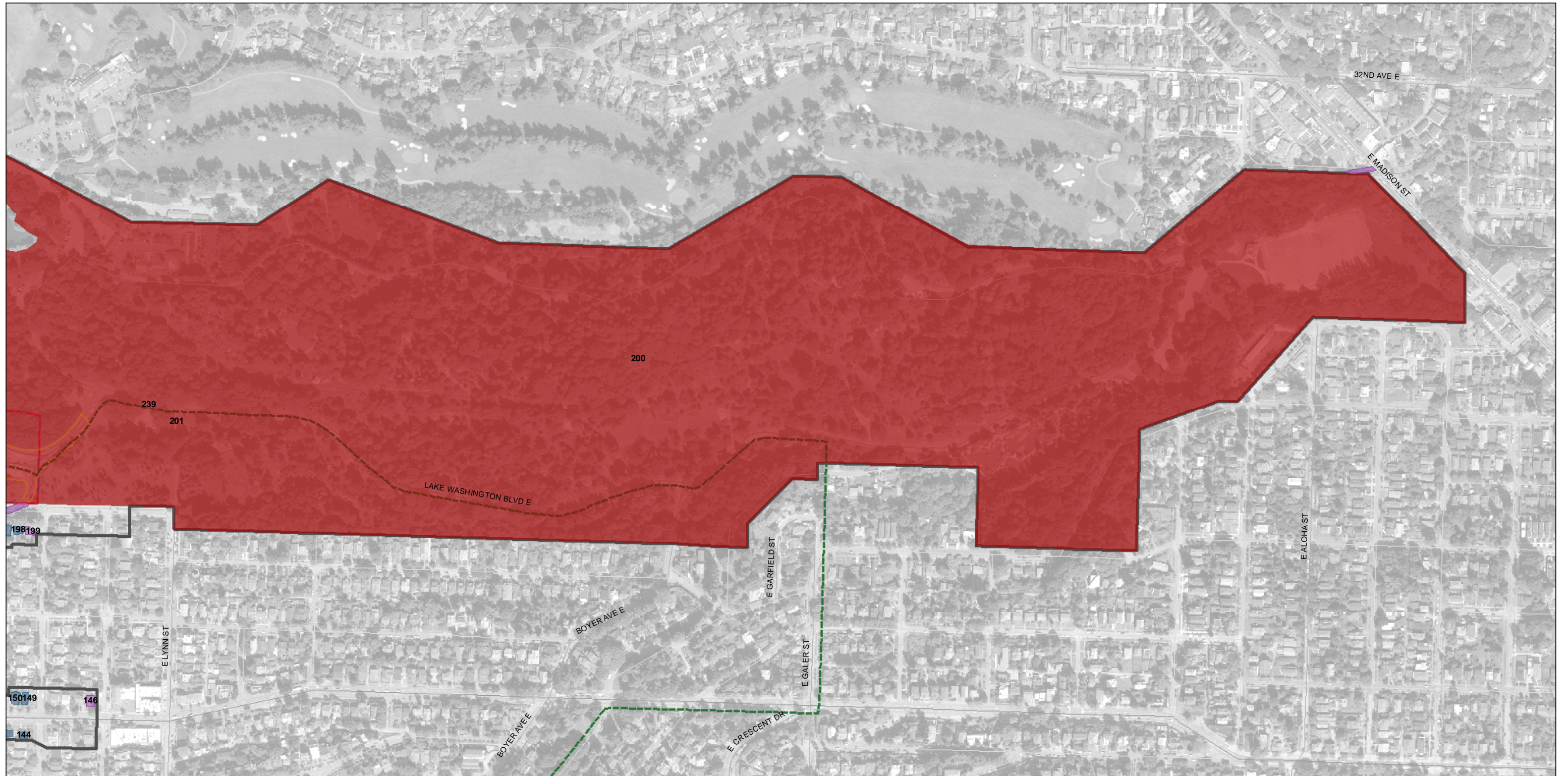


Exhibit 6-1f. Project Elements of the Preferred Alternative and Historic Properties, Sheet 6

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | |
|---------------------------|----------------------------|--|
| NRHP Eligibility | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane |
| NRHP Eligible | Proposed Right-of-way | Lid |
| Contributing | Existing Right-of-way | Proposed Bicycle/Pedestrian Path |
| Contributing and Eligible | Limits of Construction | |

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

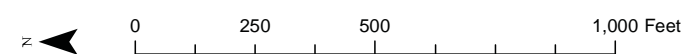
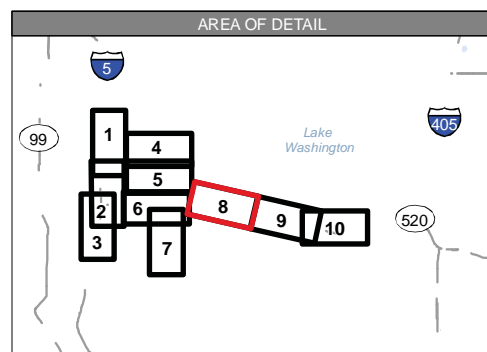
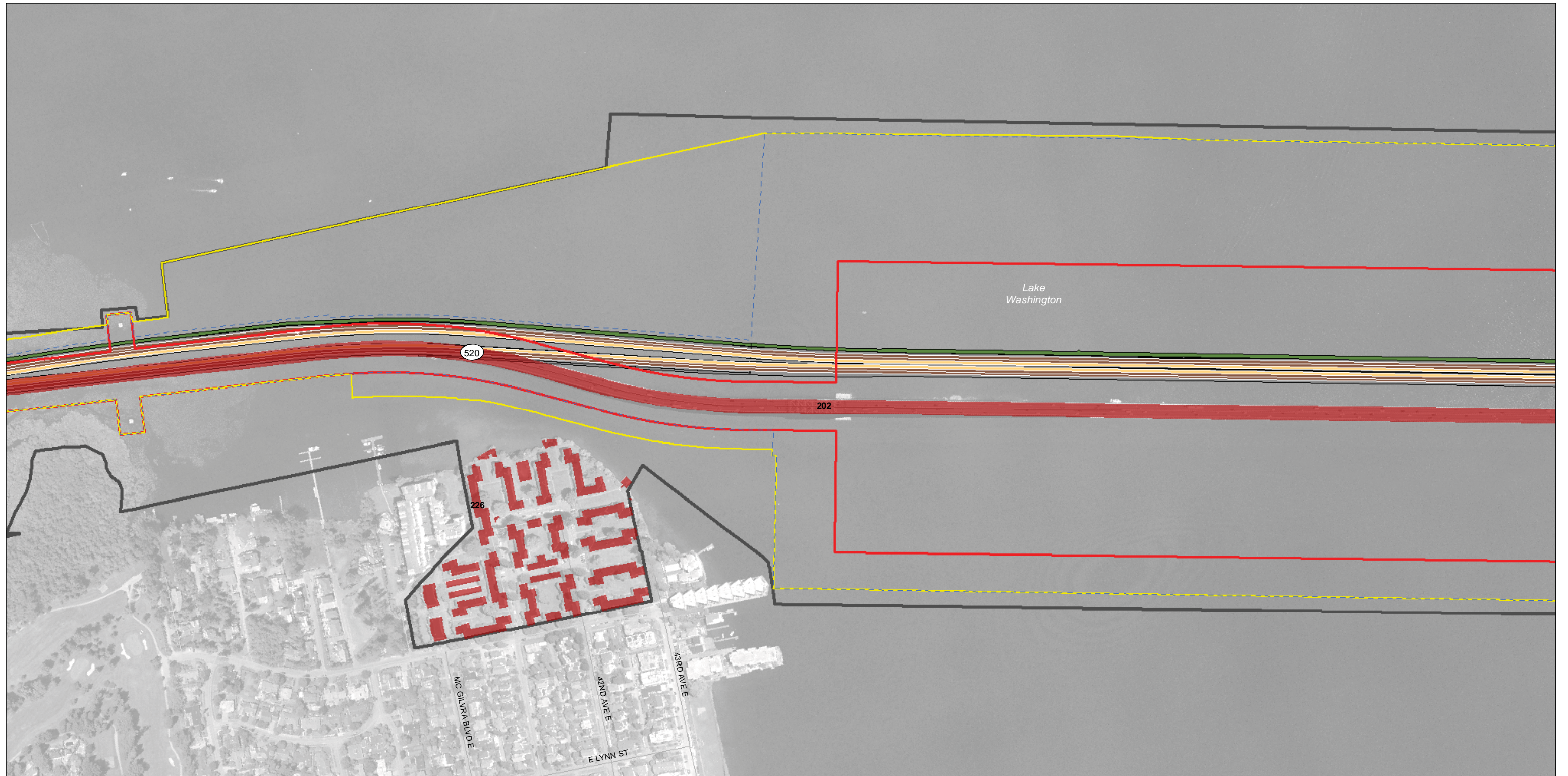


Exhibit 6-1g. Project Elements of the Preferred Alternative and Historic Properties, Sheet 7

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | | |
|---------------------------|---------------------------|--|----------------------|
| NRHP Eligibility | | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane | |
| NRHP Eligible | Proposed Right-of-way | Lid | |
| Contributing | Existing Right-of-way | Proposed Bicycle/Pedestrian Path | |
| Contributing and Eligible | Limits of Construction | | |

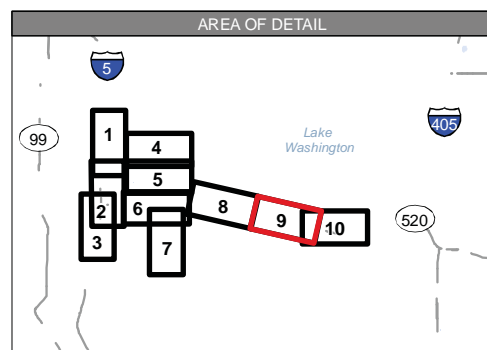
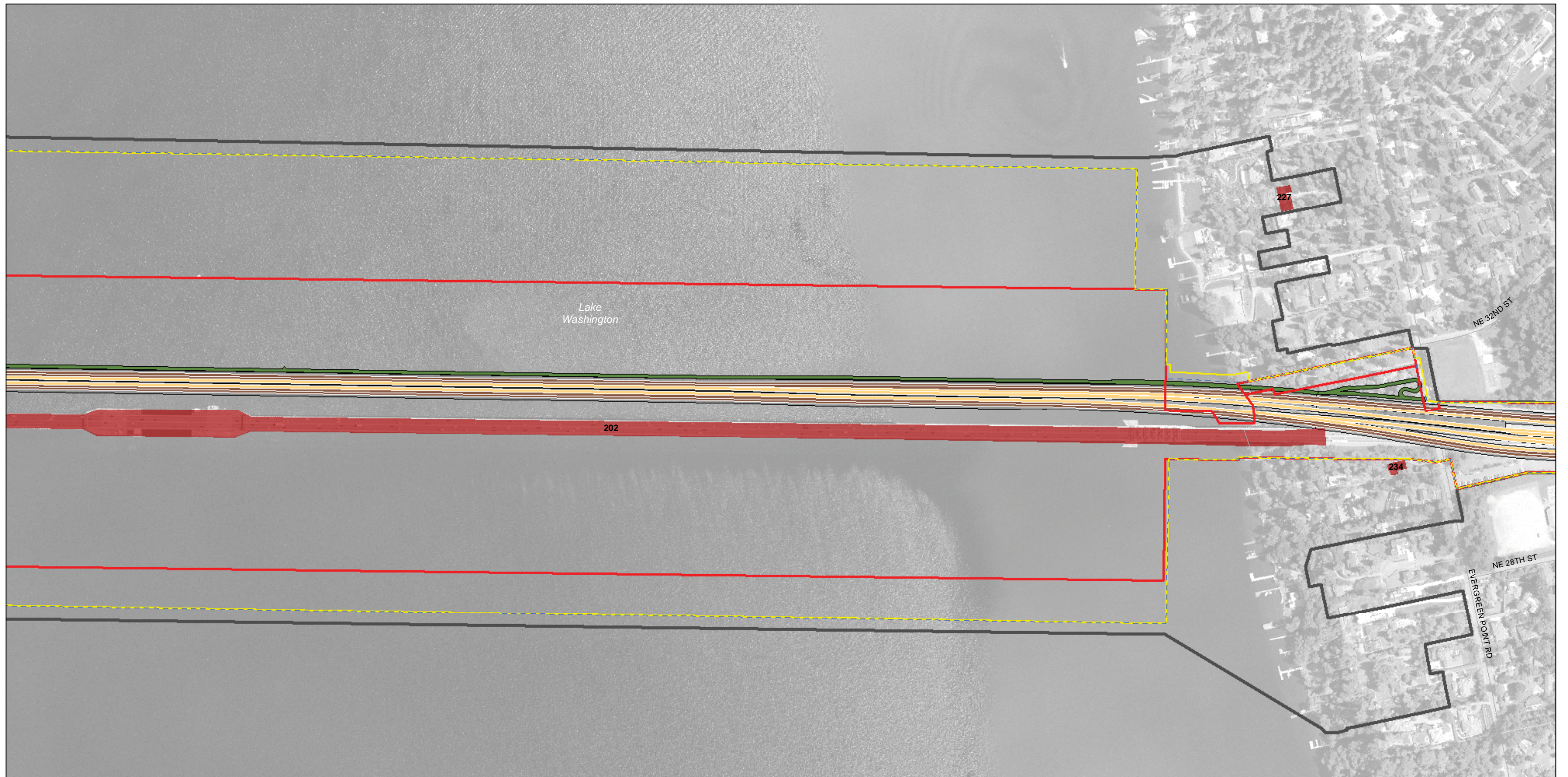
NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 6-1h. Project Elements of the Preferred Alternative and Historic Properties, Sheet 8

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | | |
|-------------------------|---------------------------|----------------------------|--|
| NRHP Eligibility | | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | NRHP Eligible | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane |
| Contributing | Contributing and Eligible | Proposed Right-of-way | Lid |
| | | Existing Right-of-way | Proposed Bicycle/Pedestrian Path |
| | | Limits of Construction | |

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

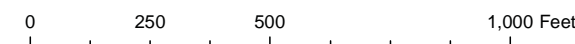
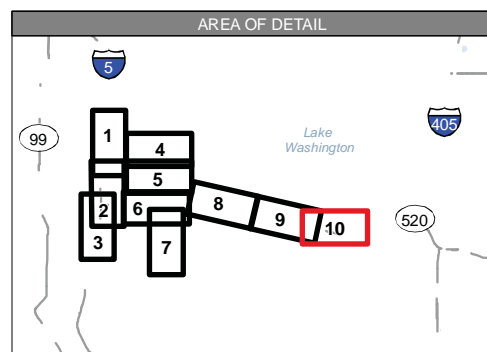
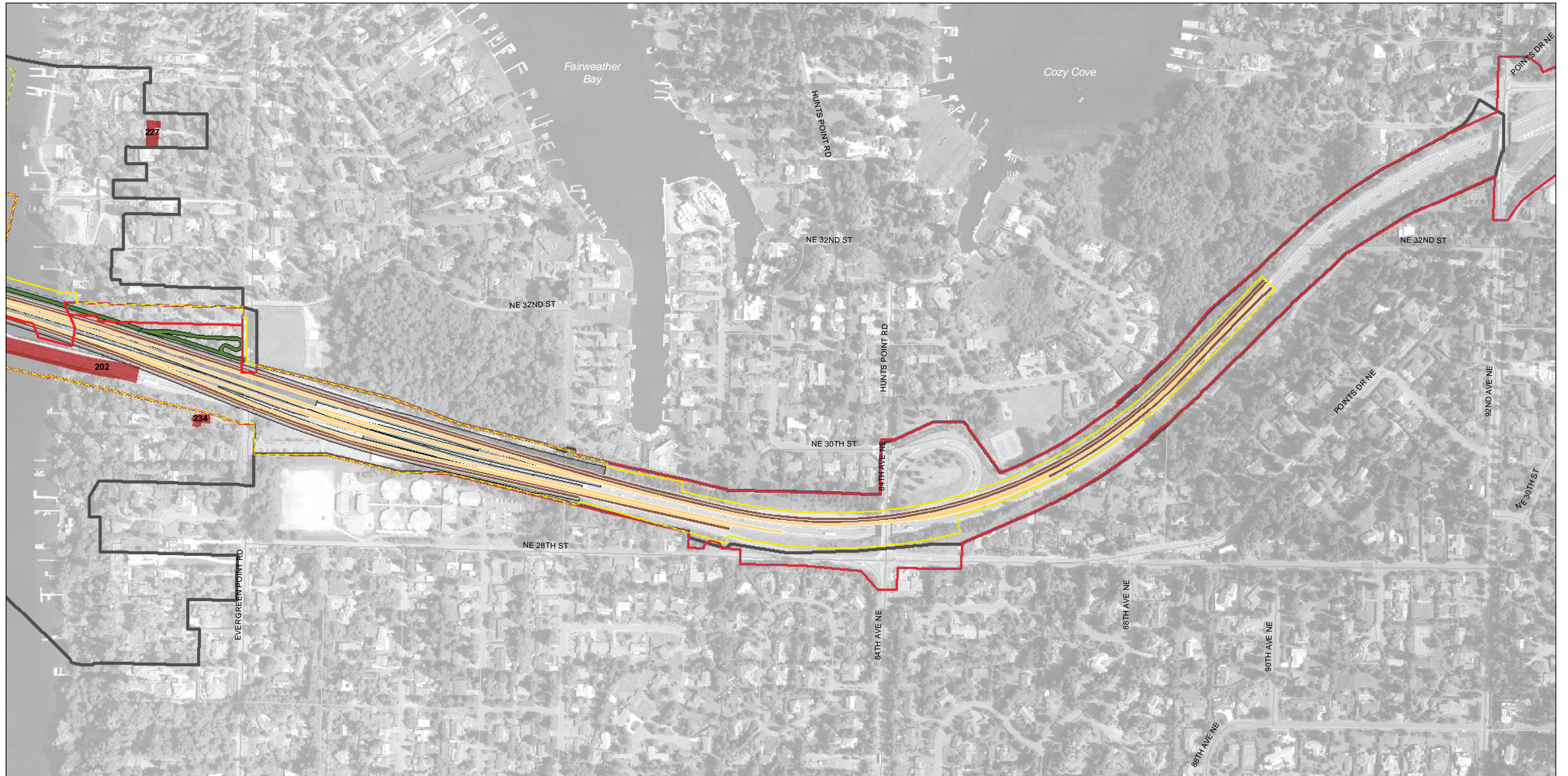


Exhibit 6-1i. Project Elements of the Preferred Alternative and Historic Properties, Sheet 9

SR 520, I-5 to Medina: Bridge Replacement and HOV Project



- | | | |
|---------------------------|----------------------------|--|
| NRHP Eligibility | Historic District Boundary | General-Purpose Lane |
| NRHP Listed | Area of Potential Effects | HOV, Direct Access, and/or Transit-Only Lane |
| NRHP Eligible | Proposed Right-of-way | Lid |
| Contributing | Existing Right-of-way | Proposed Bicycle/Pedestrian Path |
| Contributing and Eligible | Limits of Construction | |

NOTE: Property ID Numbers displayed on the map correspond to those in the tables in Appendix A – "Summary of Pre-1972 Properties Surveyed in the APE"

Source: King County (2005) GIS Data (Streams and Streets), King County (2007) GIS Data (Water Bodies), King County (2008) GIS Data (Parcel), CH2M HILL (2008) GIS Data (Parks). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

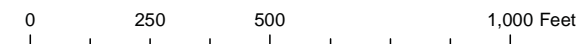


Exhibit 6-1j. Project Elements of the Preferred Alternative and Historic Properties, Sheet 10

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

Cumulative Effects

Cumulative effects are not defined under 36 CFR 800, but NEPA provides guidance on assessing these incremental effects. Cumulative effects are defined under NEPA as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). As noted above, these effects are discussed more thoroughly in the *Indirect and Cumulative Effects Discipline Report* (CH2M Hill 2009h). The Cumulative Effects Discipline Report concludes that the Preferred Alternative would make a minor contribution to the cumulative effect on cultural resources of the central Puget Sound region. Some historic properties would be removed by the project or experience other direct impacts. Other historic properties would experience indirect impacts, such as alterations to the viewshed or other changes to the setting. The project would make a minor contribution to the cumulative effect on traditional cultural properties due to its impacts on Foster Island. The project is not expected to have a cumulative effect on archaeological resources. The analysis of cumulative effects concluded that combining these effects with those from other past or future projects does not result in a significant cumulative effect on cultural resources, and thus there is no adverse effect from cumulative impacts under Section 106.

Methods for Identifying Potential Effects

To assess the scope of effects on historic properties, both permanent and temporary, during construction, technical reports in the SDEIS (CH2M Hill 2009c) were consulted. These technical studies, summarized in the SDEIS (CH2M Hill 2009c), provided extensive information regarding myriad factors that could affect historic properties. Some of the disciplines that provided information include: Transportation, Land Use and Economic Activity, Social Elements, Visual Quality, Noise, Air Quality, Geology and Soils, and Navigation. Many effects to historic properties are associated with changes in setting and feeling from noise and visual impacts. Therefore, two of the disciplines that were particularly helpful for informing how the Preferred Alternative would affect historic properties were the *Noise Discipline Report Addendum and Errata* (WSDOT 2011) and the *Visual Quality and Aesthetics Discipline Report* (Parametrix 2009a).

For example, the noise analysis for historic properties uses the noise data provided in the *Noise Discipline Report Addendum and Errata* (WSDOT 2011) to evaluate whether the introduction of audible elements or changes in noise levels would diminish the qualities of significance of historic properties. FHWA and WSDOT have developed guidelines regarding noise levels, which are referenced in the effects analysis for historic properties where appropriate (WSDOT 2011). The guidelines indicate that a change in noise levels of 3 A-weighted decibels (dBA) is the smallest change audible to humans, a 5-dBA change is readily perceptible, and a change of 10 dBA is perceived as either halving or doubling the relative loudness. These measurements are used only to gauge the relative changes in noise and to evaluate whether introducing noise or changes to existing noise levels would diminish the qualities of significance of historic properties, which vary by property. Noise modeling completed for the project indicates that where recommended along the SR 520 corridor, noise walls would meet all FHWA and WSDOT requirements for avoidance and minimization of negative noise effects. In areas where noise walls are warranted, they would only be constructed if approved by the affected communities. These measures are taken into account in analyzing noise effects on historic properties.

Exhibit 6-2. Historic Properties Whose Integrity would be Diminished by the Preferred Alternative

Property ID	Historic Property	Description	Project Element responsible for the Diminished Integrity
Multiple	All historic properties in the APE along construction haul routes	The Preferred Alternative would temporarily diminish integrity of setting and feeling during construction of the project.	All construction haul routes
4, 10, 20, 23, 22, 25, 26, 27, 36, 39, 45, 48, 52	Chung House, Denny-Fuhrman (Seward) School, Talder House, Sugamura House, East Miller Condominium, Wicklund-Jarr House, Glover Homes Building, Keuss Building, Fire Station #22, Gunby House, Boyd House, Mason House, and Kelley House	The Preferred Alternative would temporarily diminish integrity of setting and feeling during construction of the project.	Delmar Drive/10th Avenue Lid
37	Roanoke Park Historic District	The Preferred Alternative would temporarily diminish integrity of setting and feeling during construction of the project.	Delmar Drive/10th Avenue Lid Portage Bay Bridge
55	NOAA Northwest Fisheries Science Center	The Preferred Alternative would temporarily diminish integrity of setting, feeling, and association during construction of the project.	Portage Bay Bridge Montlake Interchange/Montlake lid
56	Seattle Yacht Club	The Preferred Alternative would temporarily diminish integrity of setting, feeling, and association during construction of the project.	Portage Bay Bridge Second Bascule Bridge Montlake Interchange/Montlake lid
54	Montlake Bridge	The Preferred Alternative would temporarily diminish setting and feeling during construction of the project, and would permanently diminish integrity of setting and feeling by placing a new bridge immediately adjacent to the existing bridge.	Second Bascule Bridge

Property ID	Historic Property	Description	Project Element responsible for the Diminished Integrity
238	Montlake Historic District (including 2904 and 2908 Montlake Boulevard NE; Montlake Boulevard Planting Strips; NOAA; Seattle Yacht Club; Canal Reserve Property)	The Preferred Alternative would temporarily diminish integrity of setting and feeling during construction of the project, and would permanently diminish integrity of setting, feeling, and materials by removing two properties (2904 and 2908 Montlake Blvd); removal of Montlake Boulevard planting strips; permanent acquisition of land in McCurdy Park, East Montlake Park, and Montlake Playfield; permanent acquisition of land on the NOAA property; permanent acquisition of the Canal Reserve Property.	Montlake Interchange/Montlake lid Second Bascule Bridge Portage Bay Bridge West Approach
202	Governor Albert D. Rosellini (Evergreen Point) Bridge	The Preferred Alternative would permanently diminish all aspects of integrity by removing and replacing the bridge.	New floating Bridge and landings
203	Canoe House	The Preferred Alternative would temporarily and permanently diminish integrity of setting and feeling by introducing new visual intrusions in the immediate vicinity of the building.	Second Bascule Bridge West Approach/New Floating Bridge

Evaluating visual impacts on historic properties involves an understanding of the aspects of the property which renders it eligible for inclusion in the NRHP under specific criteria and how introducing visual elements or changes to the existing visual setting would affect the qualities of significance of the property. Visual effects could include removing structures and vegetation in the immediate property vicinity, introducing new visual elements, or other viewshed interruptions that could alter the significance of the historic property. Information from and visualizations developed for the *Visual Quality and Aesthetics Discipline Report* (Parametrix 2009a) aided in assessing the effects of visual changes on historic properties.

Permanent Effects on Built Environment/Historic Properties

Construction of the Preferred Alternative would result in physical changes within the APE that would permanently affect historic properties. Examples of these changes include a new HOV ramp over I-5; a new lid at 10th Avenue and Delmar Drive; replacement of the Portage Bay Bridge; a second bascule bridge over the Montlake Cut; a new lid in the Montlake district, a new stormwater treatment facility in East Montlake Park; and a new Evergreen Point Bridge. The following paragraphs provide a more detailed analysis of the Preferred Alternative's potential permanent effects to historic properties.

I-5/Roanoke and Portage Bay Segments

Individually Eligible Historic Properties: Indirect

New Ramps and Lids

The proposed HOV ramp over I-5 would be roughly 30 feet wide and at approximately the same height as the existing ramp on the east end. It would be approximately 15 feet higher than the existing ramp at the west end as it turns and heads south. The new HOV ramp could be visible from the following historic property locations and would have a minor permanent indirect effect, slightly altering the integrity of setting of these properties:

- Denny-Fuhrman (Seward) School campus (ID 10),
- Talder House (ID 20),
- Sugamura House (ID 23),
- East Miller Condominiums (ID 22),
- Fire Station #22 (ID 36), and
- The southern portion of the Roanoke Park Historic District (to be evaluated separately, below).

This new HOV ramp would be adjacent to the existing ramp and would be consistent with the visual quality of the existing interchange. The ramp is shown in Exhibit 6-3, which is looking northwest toward Lake Union, Queen Anne, and the Aurora Bridge.

Exhibit 6-3. Visualization Showing the HOV Ramp over I-5 Facing Northwest

Existing View

- I-5 and existing on-ramp
- View toward Lake Union, Queen Anne and Aurora Bridge



Preferred Alternative

- New HOV on-ramp to SR 520
- View toward Lake Union, Queen Anne and Aurora Bridge



Under the Preferred Alternative, an enhanced bicycle and pedestrian path would be added to the south side of the existing East Roanoke Street Bridge over I-5, which would not affect historic properties. Also, the existing bridges at 10th Avenue East and Delmar Drive East would be replaced by a single lid that would accommodate both streets and would be landscaped to create a visual link with Roanoke Park. It would provide a pedestrian passageway between the North Capitol Hill and the Portage Bay/Roanoke Park neighborhoods currently separated by SR 520, increase landscaped green space in the area, and reduce noise levels for some properties. The lid would serve to visually shield many of the historic properties from the effects of the wider SR 520 roadway.

To a lesser extent, because they are located farther from the lid, the following properties could experience some reduced noise and visual effects from the landscaped lid over SR 520:

- Wicklund-Jarr House (ID 25),
- Glover Building (ID 26),
- Keuss Building (ID 27),

In summary, the new ramps and lids would permanently alter the integrity of setting of these historic properties.

Noise

Just east of the Roanoke Park Historic District at the Gunby House, noise levels under the Preferred Alternative would be reduced compared to the existing noise levels at this location. .

Noise modeling shows that current sound levels range from 65 to 73 dBA at the following locations (WSDOT 2011):

- Talder House,
- Sugamura House,
- Wicklund-Jarr House,
- East Miller Condominium,
- Glover Homes Building, and
- Keuss Building.

Under the Preferred Alternative, noise levels at the above locations would continue to exceed the noise abatement criterion (NAC) of 66 dBA, although would generally experience a reduction by 1 to 2 dBA; a change not perceptible to the human ear. In one location, noise models demonstrate that noise would increase by 2 dBA, but again, this change would be indistinguishable.

To the north of SR 520, at the Boyd House, the current average sound level is 64 dBA. Under the Preferred Alternative, the level would drop by approximately 3 dBA. In the vicinity of the Mason and Kelley houses, the current sound level is between 67 and 70 dBA, and the Preferred Alternative would potentially reduce noise in this area by 4 to 9 dBA. For more information on the projected noise levels, see the *Noise Discipline Report Addendum and Errata* (WSDOT 2011).

In summary, noise effects of the Preferred Alternative would not alter the integrity of the above-listed historic properties because overall noise in this segment would be reduced compared to existing conditions.

New Portage Bay Bridge

The new Portage Bay Bridge profile would match the existing profile for the western half of the bridge with a 5% grade. To remove a low point on the eastern half of the existing bridge, the grade would be adjusted to 0.5% beginning at approximately the midpoint of the bridge and continuing to the east. As a result, the new bridge would be less than 15 feet higher than the existing bridge at the lowest existing point of the bridge. The new bridge would not block views from the properties on the east bank to other notable buildings or natural resources within the existing viewshed, including, but not limited to, Portage Bay, Montlake Cut, Seattle Yacht Club, NOAA Northwest Fisheries Science Center buildings, University of Washington, or Queen City Yacht Club.

Compared to the existing bridge, the new Portage Bay Bridge would be 45 to 90 feet wider, less than 15 feet higher at the lowest point of the existing bridge, and would have 35 to 50 fewer columns. Although it would be wider, it would visually seem less dense because of the smaller number of columns. Speed limits on the bridge would be reduced from 60 miles per hour (mph) to 45 mph, and a planted median would be added down the center to make it similar to a park boulevard. Typically, a speed reduction of 10 mph can result in a reduction in traffic noise of up to 3dBA; a change that is perceptible to the human ear. Construction of the new Portage Bay Bridge would slightly alter the integrity of setting of all historic properties with a view of the bridge, but the alteration would be minor.

Roanoke Park Historic District (ID 37): Indirect

There would be no land acquisition of or direct impacts on any part of the Roanoke Park Historic District, its sidewalks, or other street features outside the WSDOT right-of-way on East Roanoke Street. The 10th Avenue/Delmar lid has been redesigned to avoid the district. The lid would shift to the south, leaving room to reconfigure the 10th Avenue East and East Roanoke Street intersection without changing the sidewalks in the district.

The Preferred Alternative would permanently alter the Roanoke Park Historic District's integrity of setting because of the following project elements:

- visual change to the setting from the new HOV ramp on I-5 for selected properties on the western edge of the district,
- visual change to the setting from the new Portage Bay Bridge,
- decreased noise from a reduced speed limit between I-5 and the Montlake lid, the addition of the 10th and Delmar lid, and from using 4-foot noise-absorptive concrete traffic barriers, and,
- new visual connections to adjacent neighborhoods as a result of the new 10th Avenue/Delmar Drive lid over SR 520.
- Views from some properties within the historic district of the second Bascule Bridge across the Montlake Cut.

As described below, as a result of these changes, the Preferred Alternative would alter the integrity of setting, but would not compromise any other aspect of integrity.

Under the Preferred Alternative, an enhanced bicycle and pedestrian path would be added to the south side of the existing East Roanoke Street Bridge over I-5, which would not affect historic properties. Also, the existing bridges at 10th Avenue East and Delmar Drive East would be replaced

by a single lid that would accommodate both streets and would be landscaped to create a visual link with Roanoke Park. The lid would provide a pedestrian passageway between the North Capitol Hill and the Portage Bay/Roanoke Park neighborhoods currently separated by SR 520, would increase landscaped green space in the area, and would reduce noise levels for some properties. The lid would also serve to visually shield many of the historic properties from the effects of the wider SR 520 roadway.

The new Portage Bay Bridge would have a visual effect on portions of the Roanoke Park Historic District. The new bridge would be less than 15 feet taller than the existing bridge on the eastern end, but would have the same profile on the western end, closest to the district. It would be 45 to 90 feet wider than the existing bridge and approximately 17 feet farther south on the west bank of Portage Bay. Exhibit 6-4 shows the views of Portage Bay Bridge looking southeast from Edgar Street under existing conditions and under the Preferred Alternative. The visual effect from the new bridge would be most pronounced for houses on the east side of 10th Avenue East between East Roanoke Street on the south and just north of East Shelby Street on the north. Those houses currently have direct views of the existing Portage Bay Bridge.

The bridge's wider profile and increased height on the western end would have a minor visual effect on the setting and feeling of the Roanoke Park Historic District and the contributing elements that have a view of the bridge and the bay. A wider west end of the bridge would affect views from the homes next to the bridge on the north side, which would make the bridge more dominant in eastward views. However, the new Portage Bay Bridge would not alter the integrity of design, materials, workmanship, location, or association of the district, which is listed in the NRHP for its association with the broad patterns of history and for its intact architectural features. The new bridge would alter the integrity of setting and feeling. Approximately a third of the contributing properties in the district (roughly 30 to 35 properties, depending on the season) have views of the replacement bridge.

The historic Montlake Bridge is also part of the distant viewshed of the Roanoke Park Historic District. The new bascule bridge on the east side of the historic bridge would be visible primarily from the rear of houses on 10th Avenue East between East Hamlin and East Shelby streets. The new bascule bridge would not obscure the view of the original Montlake Bridge from these houses, and would be only slightly visible beyond the historic bridge from this vantage point. The new bridge would not block views from the district of any other notable buildings or natural resources, including, but not limited to, the Montlake Cut, the Seattle Yacht Club, or the NOAA Northwest Fisheries Science Center buildings. Although it slightly alters the setting and feeling of some contributing properties, this effect would be minor because of the distance of the historic bridge from the district.

The noise levels for the Preferred Alternative would be substantially the same in the Roanoke Park Historic District as analyzed in the *Noise Discipline Report Addendum and Errata* (WSDOT 2011). That report states:

With the Preferred Alternative fewer receivers [in the Portage Bay/Roanoke neighborhood] would exceed the NAC compared to the No Build Alternative noise levels due to noise-reducing effects of the 10th Avenue East/Delmar Drive East lid, the 4-foot noise-absorptive traffic barriers, and the lower posted speed limit of 45 mph across the Portage Bay structure. Twenty-two residences would exceed the NAC under the Preferred Alternative compared to 24 residences with the No Build Alternative.

Exhibit 6-4. Visualization Looking Southeast toward Portage Bay Bridge from Edgar Street near Roanoke Park Historic District

Existing View

- 4-lane Portage Bay Bridge
- Mature residential landscapes



Preferred Alternative

- 6-lane Portage Bay Bridge
- Design of aesthetic bridge treatment to be determined



Existing sound levels in the Roanoke Park Historic District range from approximately 56 to 77 dBA. Under the Preferred Alternative, sound levels from operation could range from approximately 61 to 78 dBA.

In summary, the Preferred Alternative would permanently alter the Roanoke Park Historic District's integrity of setting and feeling as a result of the new Portage Bay Bridge, Montlake Bridge, and the 10th Avenue/Delmar Drive lid. Montlake Segment, but would not diminish any of the defining characteristics of the district.

Montlake Community Center Tudor Building (ID 126): Indirect

The new Portage Bay Bridge would be visible from the Montlake Community Center Tudor Building, but it would be a minor change from the view under existing conditions. The existing Portage Bay Bridge is partially screened from the Tudor Building by the adjacent gymnasium building and existing park vegetation. The lower speed limit on the new bridge and the addition four-foot concrete traffic barriers with noise-absorptive coating could reduce the noise levels at the Montlake Community Center Tudor Building.

The integrity of the Montlake Community Center Tudor Building would not be altered by the Preferred Alternative.

NOAA Northwest Fisheries Science Center (ID 56): Indirect

The existing Portage Bay Bridge is roughly 280 feet from the southwest corner of the NOAA Northwest Fisheries Science Center West Wing building, which is the corner closest to SR 520, and the new bridge would be approximately 170 feet from the southwest corner of this building. Therefore, the new Portage Bay Bridge would be about 110 feet closer to the historic NOAA buildings than the current bridge. Also, the Bill Dawson bicycle and pedestrian trail would be expanded along the south and east perimeter of the NOAA property. These elements of the Preferred Alternative would alter the NOAA property's integrity of setting and feeling.

The new Portage Bay Bridge would be less than 15 feet taller on the eastern end, but would have the same profile on the western end and would be 45 to 90 feet wider than the existing bridge, increasing the visual effect of the bridge from this viewpoint. Although there would be a visual effect on the setting and feeling of the historic NOAA buildings, it would not be a significant change from the existing condition. There would be no anticipated increase in vibration from operation of the new bridge; vibration levels would be substantially the same as the current levels from traffic on the existing bridge and is not anticipated to interfere with scientific activities at the center. The current noise level at the NOAA property is between 66 and 69 dBA. Under the Preferred Alternative, the noise level could decrease to between 62 and 64 dBA (WSDOT 2011). The 1931 Fisheries Building—which is individually NRHP-eligible under Criteria A and C, and also is a contributing element to the Montlake Historic District—would maintain its view north to Portage Bay, the property would retain its shoreline on the bay, and all of the property immediately surrounding the historic building would be retained. The two buildings connected to the 1931 Fisheries Building—built in 1965 and 1966 and also eligible for listing in the NRHP under Criteria A and C—would not be affected because their view to the new Portage Bay Bridge would be obscured by it.

The integrity of setting and feeling of the NOAA Northwest Fisheries Science Center would be altered slightly by the new Portage Bay Bridge and by the expansion of the bicycle and pedestrian

path along the south and east perimeter of the NOAA property, but it would retain integrity of location, association, design, workmanship, and materials.

Seattle Yacht Club (ID 55): Indirect

As stated previously, the new Portage Bay Bridge would operate approximately 110 feet north of the current bridge, which makes the bridge closer to the Seattle Yacht Club. Although the setting of the Seattle Yacht Club would be affected by this closer location, the visual effect would not be significant. The current noise level at the Seattle Yacht Club is between 65 and 69 dBA. Under the Preferred Alternative, noise levels could decrease between 5 and 7 dBA (WSDOT 2011), which is a perceptible change.

The Seattle Yacht Club's integrity of setting would be altered slightly by the larger, closer bridge, but the property would retain integrity of feeling, location, association, design, workmanship, and materials.

Montlake Bridge (ID 54): Indirect

A new bascule bridge would be constructed parallel and to the east of the historic Montlake Bridge, permanently diminishing the historic bridge's integrity of setting and feeling. Other aspects of integrity—location, design, materials, workmanship, or association— would not be altered or diminished. There currently is a clear view of the historic bridge from many vantage points east and west of the bridge on the north and south sides of the Montlake Cut, as well as from the cut itself and from Lake Washington. The bridge is primarily a part of the viewshed of the University of Washington, the Canoe House, the Montlake Historic District, and the Montlake Cut, but is also visible as far away as the Roanoke Park Historic District. This is an iconic bridge that is a part of the community's viewscape. Views from the bridge for those crossing it would also be affected by an adjacent bridge. The Montlake Bridge is shown under existing conditions and under the Preferred Alternative in Exhibit 6-5 as seen from the northeast corner East Montlake Park looking west along the Montlake Cut.

Canoe House (ID 203): Indirect

The new bascule bridge over the Montlake Cut would have a visual effect on the Canoe House, which is listed in the NRHP. The Canoe House currently has a clear, unobstructed view of the historic Montlake Bridge. The new bridge would be constructed on the east side of the historic bridge, so the view of the historic bridge from the Canoe House would be somewhat obstructed by the new bridge structure. The Canoe House would also have an open view of the west approach to the floating bridge and the floating bridge itself. These structures would be up to 20 feet higher than they are currently, and would diminish the setting and feeling of the Canoe House. The current sound level of 55 dBA at the Canoe House would increase to approximately 58 dBA under the Preferred Alternative (WSDOT 2011). There would be no other impacts on the Canoe House from the project.

The Preferred Alternative would diminish the Canoe House's integrity of feeling and setting, but would not alter other aspects of integrity.

Exhibit 6-5. Visualization of the Montlake Bridge Looking West along the Montlake Cut from East Montlake Park

Existing View

- Historic Montlake Bridge
- Mature vegetation on both sides of the channel



Preferred Alternative

- Second bascule bridge in front of the Historic Montlake Bridge
- Design and aesthetic treatments to be determined



Montlake Cut (ID 53): Indirect

The Montlake Cut is a navigable waterway with an existing bascule bridge crossing. The cut would be indirectly and permanently affected because the view of the historic Montlake Bridge from the east end of the cut would be partially blocked by the new bascule bridge, which would alter its integrity of setting and feeling. Also, a small portion of the shores of the Montlake Cut would be acquired for placement of the second bascule bridge.

Although the presence of an additional bascule bridge of similar size adjacent to the existing bridge would alter the integrity of setting and feeling of the Montlake Cut, it would continue to operate as a navigable waterway, which would not be impeded in any way by operation of the SR 520 project. The small acquisition would only cause a very minor effect to the Montlake Cut. The integrity of design, materials, location, workmanship, and association would remain intact.

Lake Washington Boulevard (ID 239): Direct

The segment of Lake Washington Boulevard surveyed for this project extends from Madison Street on the south to the edge of the University of Washington campus at NE Pacific Avenue. The Preferred Alternative makes direct and permanent physical changes to Lake Washington Boulevard, but it would remain in the same alignment as when it was designed from 1904–1907. As described below, under the Preferred Alternative, Lake Washington Boulevard would be adjacent to the new landscaped lid instead of the current grade-separated SR 520, which would reduce noise overall but alter the setting. The design is intended to be sympathetic to the original conditions of the park boulevard. The changes to Lake Washington Boulevard would alter its integrity of feeling, setting, and design, but would not alter the integrity of association or location of the linear property, which would continue its original purpose as a transportation facility. Integrity of workmanship and materials has already been diminished.

The Preferred Alternative requires the removal of all or part of one of the Montlake Boulevard medians between East Hamlin Street and SR 520. It also includes the addition of a new planted median and the widening of Lake Washington Boulevard in the section between Montlake Boulevard and where Lake Washington Boulevard curves to the south. This area would be south of the new Montlake lid. Exhibit 6-6 shows the location of the planted median.

Exhibit 6-6. Location of Lake Washington Boulevard Improvements



The existing south curb of the eastbound lane would remain in place, and the westbound lane would move to the north side of the new planted median. At the intersection with East Montlake Boulevard, there would be an added right-turn lane to the north of the westbound lane. Although construction activities would take place on the roadway to make these changes, the historic alignment of Lake Washington Boulevard would be maintained. The roadway materials, sidewalks, light standards, and other features have been previously replaced or upgraded as a part of regular maintenance, so the primary physical integrity lies in the location and alignment of the roadway.

The addition of a planted median on East Lake Washington Boulevard would create an enhanced park boulevard that incorporates visual screening, in keeping with the Olmsted Brothers' philosophy of blending pragmatic and picturesque design, and of providing visually appealing parkway transportation corridors (Takami and Keith 2003; Levee 2000). Exhibit 6-7 shows the existing conditions and the view of the Preferred Alternative of the planted median on Lake Washington Boulevard. To accommodate the median, the westbound lane would be extended northward, closer to the new landscaped lid.

Removal of the SR 520 Lake Washington Boulevard ramps and R. H. Thomson Expressway ramps would eliminate a large intersection that was not part of the original boulevard plan. As a result of the ramp removal and other design features, the average daily trip volume on Lake Washington Boulevard in the Arboretum would be reduced by approximately 18%.

Removal of the Montlake Boulevard median between East Hamlin Street and SR 520, as well as the other changes described above, would alter the setting and feeling of this segment of the historic Lake Washington Boulevard. It was designed as a park boulevard with planted medians, so the loss of this vegetation would alter the integrity of design of this segment. The final design for Montlake Boulevard is not complete, so the extent of the current median that would be removed is not known at this time.

Exhibit 6-7. Visualization showing the Lake Washington Boulevard Planted Median Looking East

Existing View

- West terminus of Lake Washington Boulevard at Montlake Boulevard
- Established planter along the north side of the Park Boulevard



Preferred Alternative

- Restored and enhanced plantings along Lake Washington Boulevard
- Montlake lid in background



Montlake Historic District (ID 238): Direct and Indirect

Elements of the Preferred Alternative would permanently diminish the integrity of setting, design, materials, and feeling of the Montlake Historic District. Direct and indirect effects on the district are listed below.

Direct Effects

- Removal of 2904 Montlake Boulevard NE, a contributing element to the district.
- Removal of 2908 Montlake Boulevard NE, a contributing element to the district.
- Permanent acquisition of 1.35 acres of McCurdy Park, 2.83 acres of East Montlake Park, and 1.19 acres of Montlake Playfield.
- Permanent acquisition of land in the southeast corner of the NOAA Northwest Fisheries Science Center parcel.
- Potential effects to ongoing research at NOAA Northwest Fisheries Science Center as a result of the proximity of construction activities.
- Permanent acquisition of Canal Reserve Land for construction of the Montlake lid, resulting in the loss of mature trees.
- Removal of all or part of the planted median on Montlake Boulevard.
- Change to the district boundaries resulting from the various property acquisitions.
- Change to setting and feeling of the district caused by the wider and higher profile of the eastern section of the Portage Bay Bridge.
- Change to setting and feeling of the district caused by the presence of the additional bascule bridge immediately adjacent to the historic Montlake Bridge.
- Change to setting and feeling from the loss of the Canal Reserve Land, resulting in the loss of secluded green space and the mature vegetation that provide landscaped buffer.
- Change to setting and feeling from the loss of all or part of the planted median on Montlake Boulevard, a contributing property to the district's listing in the NRHP.
- Change to setting and feeling from removing Lake Washington Boulevard ramps and R. H. Thomson Expressway ramps adjacent to the district.
- Change to setting and feeling from adding a planted median on Lake Washington Boulevard south of the lid and enhancing the roadway.

Indirect Effect

- Change to setting and feeling in the residential areas of the district as a result of the new Montlake lid.

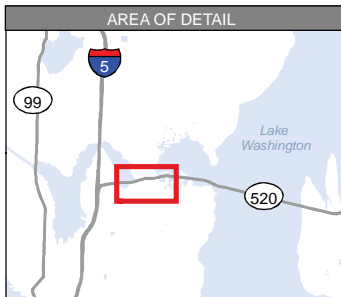
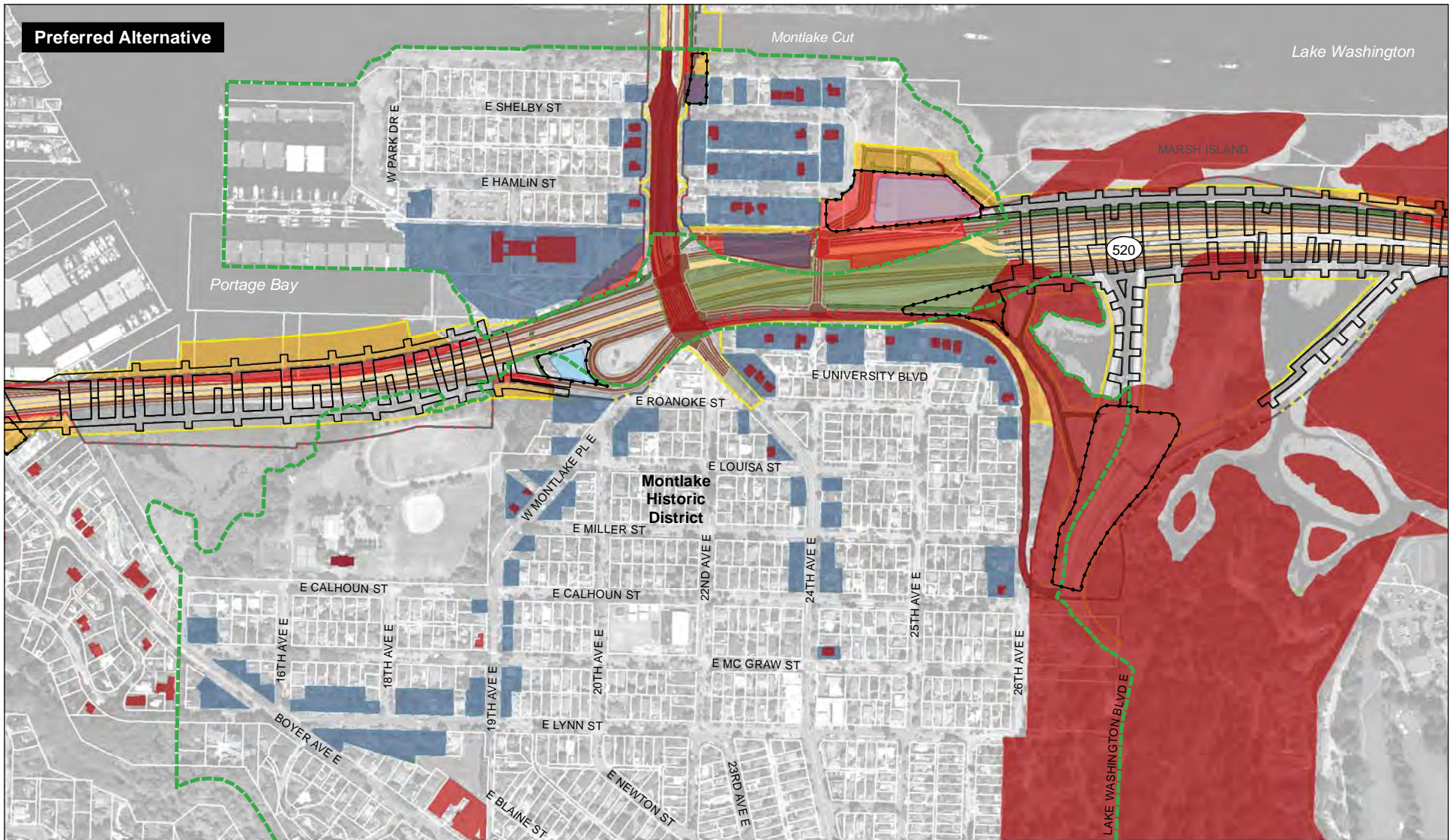
Direct effects include the demolition of two residential properties that contribute to the district, 2904 and 2908 Montlake Boulevard NE (ID 69 and 68, respectively). These houses would be demolished to accommodate the footprint of the new bascule bridge over the Montlake Cut. The project would also remove mature trees and shrubs on these property parcels. A portion of the NOAA parcel would be used as construction easement, and part of that portion would be

permanently acquired for the project. The Canal Reserve Land would be permanently acquired for construction of the Montlake lid, most of the mature vegetation would likely be removed, and part of the Montlake Boulevard median would be converted to roadway. McCurdy Park, part of East Montlake Park and part of Montlake Playfield, and a small portion of the Montlake Cut (where the new bascule bridge would be built) would be permanently acquired. Construction would occur along Lake Washington Boulevard, and construction staging would occur within the district. The demolition of residential buildings, removal of mature vegetation, acquisitions of land, and use of property in the district for construction staging are examples of the direct effects on the historic district. Indirect effects on the district include fugitive dust, increased noise and vibration from demolition, hauling and construction, and visual intrusions.

The Preferred Alternative would convert 6.33 acres of land within the historic district boundaries from parks, NOAA, residential property, the Montlake Cut, and the Canal Reserve Land to transportation right-of-way. These acquisitions would expand the WSDOT right-of-way into the boundaries of the district and reduce the amount of property included in the district. The expanded right-of-way would alter the footprint of the historic district's boundaries. This change in the district boundaries would diminish the integrity of design, setting, and materials of the overall district (Exhibit 6-8).

After the two historic properties on Montlake Boulevard NE are removed for bascule bridge construction and the new bascule bridge is completed, this change in view and use of the land would indirectly alter the setting of the northern portion of the district, particularly for three adjacent contributing properties at 2111 East Shelby Street, 2112 East Shelby Street, and 2818 Montlake Boulevard NE. Because of the location of the new bascule bridge, there would no longer be an adjacent property to buffer 2112 East Shelby Street from Montlake Boulevard NE. The bridge approach would be adjacent to the west side of this property, and the new bridge would be approximately 70 feet from the northwest corner of the property. There is already a shared driveway/alley on the west side of this property, which would remain, as well as a side yard, which serves as a partial buffer. WSDOT would also install landscaping or a buffer between the contributing properties and the new bascule bridge. Unlike the houses being removed for bridge construction, the house at 2112 East Shelby Street would not face the bridge approach, but it would be exposed to traffic and an alteration of setting and feeling.

Across the street, the property at 2111 East Shelby Street would still be partially buffered from Montlake Boulevard NE by the adjacent property at 2818 Montlake Boulevard NE. Both bascule bridges would be visible from the house once 2904 Montlake Boulevard NE, the property on the corner, is removed. It too would be exposed to traffic and an alteration of setting and feeling. The 2818 Montlake Boulevard NE property also would be more exposed than it is currently, becoming the last house on the east side of Montlake Boulevard NE before the bascule bridges. It would be open to the view toward both bridges from the front and north side of the property, leaving it more exposed to the roadway and immediately adjacent to the bridge approach. The combined direct changes to these contributing properties in the historic district would permanently diminish the Montlake Historic District's integrity of setting and feeling.



- | | | |
|----------------------------|---|--------------------------------------|
| Permanent Acquisition | Contributing Resource | Lid |
| Construction Easement | Eligible Structure | Proposed Bicycle/
Pedestrian Path |
| Montlake Historic District | General-Purpose Lane | Pavement |
| Proposed Right-of-way | HOV, Direct Access, and/or
Transit-Only Lane | Parcel |
| Existing Right-of-way | Work Bridge | |
| Limits of Construction | Stormwater Treatment Facility | |
| Staging Area | | |

Source: King County (2006) Aerial Photo, CH2M HILL (2008) GIS Data (Park and Trails), City of Seattle (2009) GIS Data (Section 6(f) Boundary). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.

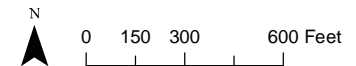


Exhibit 6-8. Project Elements of the Preferred Alternative in the Montlake Historic District

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

The Montlake lid would be built over the mainline of SR 520. The lid would be landscaped, with pedestrian pathways and open green space. Adding the lid would reduce visual intrusion and noise from SR 520. In addition, the lid would partially reunite the north and south sides of the Montlake Historic District that are currently separated by SR 520 and increase connectivity between these two sides of the district. Exhibit 6-9 shows existing and proposed aerial views of the Montlake lid and interchange over SR 520. The length of the lid would require the use of ventilation fans and specialized fire and safety equipment under the lid. At this stage of design, an above-grade ventilation station is not anticipated to be necessary.

As noted above, all or part of a Montlake Boulevard median between East Hamlin Street and SR 520 would be removed. Removing the planted median would alter the integrity of setting and feeling of the boulevard, and the loss of vegetation would alter the viewshed of the properties on both sides of the street. The final design for Montlake Boulevard is not complete, so the exact portion of the median to be removed has not yet been defined. Montlake Boulevard is part of the Lake Washington Boulevard linear resource that is individually eligible for listing in the NRHP, and is also a contributing element to the district.

The Preferred Alternative includes the removal of the SR 520 Lake Washington Boulevard and R. H. Thomson Expressway ramps, which would indirectly affect the Montlake Historic District. A new planted median on Lake Washington Boulevard would add green space to the viewshed of the contributing properties south of the Montlake lid and the view from the boulevard itself.

After construction, the Canal Reserve Land would no longer be a secluded green space with mature specimen trees, but would be part of the Montlake lid, including SR 520 ramps and a bicycle and pedestrian path. Buildings located on the south side of East Hamlin Street would lose the landscaped buffer provided by the Canal Reserve Land south of the alleyway behind them. Currently, the SR 520 ramp is 135 to 195 feet from the rear of the properties along East Hamlin Street. Under the Preferred Alternative, the ramp would be approximately 65 to 130 feet from the rear of these properties. The new bicycle and pedestrian path would be north of the ramp and below grade with retaining walls on each side. An approximate 45- to 100-foot buffer would remain between the rear yards of the houses and the north retaining wall of the new bicycle and pedestrian path. All of these properties are contributing elements to the Montlake Historic District, and three of them in the center of the block are also individually eligible for listing in the NRHP. Although the Canal Reserve Land and the mature specimen trees would be lost, the land would become part of the landscaped lid, so open green space would remain in the area. The integrity of setting and feeling of this part of the district would be diminished by the loss of this green space and the large-specimen trees dating back as far as 1909.

Current noise levels in the Montlake Historic District within the APE range from 59 to 72 dBA on the north side of SR 520, and from 56 to 74 dBA on the south side. On the north side of SR 520, most locations would experience a decrease in sound levels of approximately 1 to 7 dBA, a few would have no change, and a few would experience an increase of approximately 1 to 5 dBA. On the south side of SR 520, most locations would experience a decrease in sound of from approximately 1 to 9 dBA, a few would have no change, and a few would experience an increase of approximately 1 to 5 dBA.

In summary, the Preferred Alternative would permanently diminish the Montlake Historic District's integrity of setting, feeling, materials, feeling, and design, but would not alter the district's integrity of location, workmanship, or association.

Exhibit 6-9. Aerial Visualization of the Montlake Lid in the Montlake Historic District**Existing View**

- View of MOHAI, East Montlake Park, Montlake Historic District and the Washington Park Arboretum
- SR 520 corridor and R. H. Thompson Ramps

**Preferred Alternative**

- New Montlake lid and interchange over SR 520
- Stormwater facility at MOHAI location



West Approach Segment

Washington Park Arboretum (ID 200): Direct and Indirect

The Preferred Alternative would permanently alter the Arboretum's integrity of setting and feeling.

Direct Effects

In the Arboretum, the highway mainline would be elevated, rising from its existing clearance of approximately 8 feet over the Arboretum Waterfront Trail on Foster Island to a clearance of approximately 16 to 20 feet at this location. Because the mainline would be higher than the existing roadway, the highway would become a more dominant and noticeable feature, causing a visual effect in the northern portion of the Arboretum. The new SR 520 structure would also allow the trail to pass between columns of an elevated structure, replacing the current low and narrow pedestrian underpass, and improving the user experience by opening views at ground level. The columns would be spaced wider than the existing bridge to support the elevated structure.

Removing the Lake Washington Boulevard and R. H. Thomson Expressway ramps in the Arboretum would open views for park users and would enhance the recreational experience of the land and water in this area. Exhibit 6-10 shows the existing ramps and the proposed views of the landscape without the ramps looking northeast and east across the WSDOT peninsula. The new west approach would originate from the shoreline near East Montlake Park and maintain a low profile through the Arboretum. The height of SR 520 at the west transition span would be similar to the existing west transition span. Because of the similarity to the existing condition, this visual change would not alter any aspect of the Arboretum's integrity.

The segment of Lake Washington Boulevard in the Arboretum would be affected by the closure and removal of the Lake Washington Boulevard and R. H. Thomson Expressway ramps. Traffic to and from SR 520 would no longer exit and enter directly to and from this segment of Lake Washington Boulevard, which is a contributing element to the Arboretum. Removal of these ramps would reduce traffic on Lake Washington Boulevard in the Arboretum.

Indirect Effects

Current noise levels on Foster Island range from 56 to 72 dBA. Under the Preferred Alternative, these sound levels could be reduced by as much as 11 dBA because of the higher roadway profile, elimination of the Lake Washington Boulevard ramps, and the 4-foot concrete traffic barriers with noise absorptive coating included in the Preferred Alternative. There would be indirect visual effects on the Arboretum from the new bridge and approach, which would alter the resources' integrity of setting and feeling. In summary, as a result of the project changes described above, the Preferred Alternative would permanently, both directly and indirectly, alter the Arboretum's integrity of setting and feeling.

Exhibit 6-10. Visualization in the Washington Park Arboretum Looking Northeast toward the Former Ramps

Existing View

- R.H. Thompson Ramps
- Informal trail to shoreline



Preferred Alternative

- Ramps removed
- Mature trees protected



Exhibit 6-11. Visualization Looking Northwest from the Edgewater Condominium toward the SR 520 West Approach Bridge

Existing View

- 4-lane bridge
- Column spacing at 100 feet on center



Preferred Alternative

- Wider and higher 6-lane bridge
- Column spacing at 250 feet on center



Edgewater Condominiums (ID 226): Indirect

The Edgewater Condominiums would experience a slight alteration of setting and feeling from the new west approach of the Preferred Alternative. The west high-rise would be shifted westward, and the west approach would be higher, but approximately 70 feet farther north than the existing structures. The alignment shift would reveal more open water views in Union Bay from this residential property. The height of the floating bridge would increase to an elevation of approximately 20 feet above the water surface, which is 13 feet higher than the existing bridge deck. This change to the viewshed would alter the integrity of setting and feeling of the property to some degree, but it would not be a significant change from existing conditions. The existing and proposed viewshed from the Edgewater Condominiums toward the northwest at the SR 520 west approach are shown in Exhibit 6-11.

The current sound level at this property ranges from 63 dBA to 69 dBA. Under the Preferred Alternative, the sound level would decrease to a range of approximately 61 to 63 dBA. The setting and feeling of the Edgewater Condominiums would be altered by these changes, but the changes would be minor. The viewshed from this property currently includes a bridge approach and a floating bridge, so the changes would not be significant. This multi-unit residential complex would maintain integrity of design, materials, workmanship, association and location.

Lake Washington Segment

Evergreen Point Bridge (ID 202): Direct

The Preferred Alternative would require the demolition and removal of the existing Evergreen Point Bridge and construction of a new floating bridge across Lake Washington. Physical destruction of the Evergreen Point Bridge would directly and permanently diminish all aspects of this historic property's integrity.

Eastside Transition Segment

Eastside Transition Area: Indirect

The Preferred Alternative would slightly alter the integrity of setting and feeling of the Dixon and Arntson houses. The Dixon House is located approximately 1,000 feet north of the existing east approach to the Evergreen Point Bridge. The new bridge and the approach would be about 160 feet closer to the Dixon House, but still far enough away that operation of SR 520 would not diminish the setting and feeling of this property (see Exhibit 6-1g for details on the location of the bridge and the maintenance facility). Once completed, the floating portion of the Evergreen Point Bridge would be located approximately 160 feet north of its present location at the east end, and the east approach structure would be approximately 80 feet north.

The intersection of SR 520 and Evergreen Point Road, near the Arntson house, would be several lanes wider than the existing intersection. This could raise the traffic noise level at this property, but the house would retain the vegetative buffer between it and the roadway. The new floating portion of the bridge would be slightly higher than the existing floating portion, but this additional height would be a minimal visual change to the setting of historic properties in the Eastside Transition segment. The integrity of feeling and setting of the Dixon and Arntson houses would be altered slightly, but no other aspects of integrity would be compromised.

Section 6(f) Replacement Properties

Four historic properties were identified on sites that were considered for replacement property to fulfill the requirements of Section 6(f): the Bryant Building site at 1139–1299 NE Boat Street, 10034 Rainier Avenue, 10036 Rainier Avenue, and 10038 Rainier Avenue. This undertaking identified and evaluated those historic properties to help inform the decision by the Section 6(f) grantees—the University of Washington and the City of Seattle—of which sites they would select to serve as replacement properties for park and recreation use.

In addition, selected properties that are protected under Section 6(f) of the LWCF Act would be converted by the project from public outdoor recreation land to transportation right-of-way. This includes a portion of Foster Island, a portion of the Arboretum, and a portion of East Montlake Park and the Ship Canal Waterside Trail which are within the Montlake Historic District.

As of publication of this document, the Section 6(f) replacement site selected by the University of Washington and the City of Seattle is the Bryant Building site, a multicomponent warehouse and commercial building with several docks. As discussed in Chapter 5 of this report, the Bryant Building is eligible for listing in the NRHP under Criteria A and C. There would be no effects on any of the remaining potential 6(f) replacement properties identified as part of this study, because they are no longer under consideration as potential replacement properties. As a result of this selection, the three NRHP-eligible properties located on Rainier Avenue would not be affected by this project.

To comply with Section 6(f), the Bryant Building would need to be converted to recreational use, an action that would likely result in full or partial demolition of the property. If this were to occur, the removal of the building would result in an adverse effect on this historic property. However, if these or other future actions taken to develop the property result in an adverse effect, the U.S. National Park Service (NPS), as the responsible federal agency, would initiate Section 106 consultation for that undertaking and would resolve any adverse effects through the Section 106 process. FHWA and WSDOT are not responsible for the development of the property for recreational use; therefore, the Preferred Alternative would have no permanent effect on this historic property.

Further, conversion of portions of Foster Island, a portion of the Arboretum, and a portion of East Montlake Park and the Ship Canal Waterside Trail from public recreation land could result in an adverse effect. According to 36 CFR 800.5(a)(2)(vii), the transfer of property out of federal control, and the resulting removal of restrictions that serve to protect its historic significance, constitute an adverse effect. Therefore, the approval of conversion of property on Foster Island to transportation right-of-way, removing it from NPS protection, could be an adverse effect. The NPS, as the federal agency that would be relinquishing the protection, would be responsible for determining this adverse effect in consultation with the SHPO.

Port of Olympia and Port of Tacoma Pontoon Construction Segment

Production and transport of pontoons would only occur during construction of the Preferred Alternative, and would not permanently affect historic properties. The types of activities required for pontoon construction are similar to the current activities and uses of the buildings at the CTC facility. Because the four NRHP-eligible buildings at CTC function as part of an industrial zone, the activities required by this project would not permanently affect these historic properties.

Additionally, the NRHP-listed Fire Station # 15, also part of this industrial zone, would not be used or directly impacted by this project.

The Port of Olympia is no longer being considered as a potential site for pontoon construction, so the NRHP-eligible main office would not be affected by this project.

Temporary Effects on Built Environment/ Historic Properties

Construction of the Preferred Alternative would result in some impacts on properties in the vicinity of the project, including historic properties. These impacts could include, but are not limited to, temporary lane or roadway closures; fugitive dust; nighttime glare; increased truck traffic; and nonpermanent noise and visual impacts from construction work, bridges, and construction equipment and activities. Construction impacts were analyzed for their potential effect on historic properties using the information available in September 2010. Because the engineering design is not yet final and a contractor has not been hired, specifics of some construction details are not yet defined. The analysis of construction effects is based on all available knowledge for this project.

All Geographic Segments

Construction Haul Routes: Direct and Indirect

The Preferred Alternative would temporarily diminish the integrity of feeling and setting of all historic properties along all construction haul routes. Construction haul routes (Exhibit 5-43) would expose historic properties along each route to temporary increases in truck traffic volume, with accompanying potential for increases in fugitive dust, vehicle emissions, and noise. Haul truck volumes estimated for each potential haul route are intended to characterize truck activity anticipated during a typical day of construction for the duration of use as a haul route. For potential routes where haul truck volumes may vary substantially over the construction period, peak volumes are also estimated.

Construction materials would be transported to and from the construction work areas by trucks and barges. Barges would provide access to offshore work areas. Trucks would travel over identified haul routes through Seattle to SR 520, I-5, and I-405. Since publication of the SDEIS (CH2M Hill 2009c), construction staging areas and haul routes have been revised to account for the design of the Preferred Alternative, improve traffic management, respond to comments received on the SDEIS about haul routes, and accommodate changes in the construction schedule.

The project construction assumptions are intended to keep the majority of haul route traffic on major freeways such as I-5, SR 520, and I-405. However, there would be times when city streets would need to be used as secondary haul routes. Secondary haul routes for the SR 520, I-5 to Medina project were identified based on criteria such as shortest off-highway mileage, providing access to locations needed for construction where direct highway access is unavailable, and the ability to accommodate truck traffic. Potential construction haul routes described here include both local and regional roadways. Local jurisdictions can limit the use of non-arterial streets for truck traffic; therefore, efforts were made to identify designated arterial streets for potential use as haul routes. Final haul routes will be determined by local jurisdictions for those actions and activities that

require a street use or other jurisdictional permit. Integrity of setting and feeling of the eligible properties along these construction haul routes would be intermittently and indirectly diminished by the trucks passing the buildings. The properties would maintain integrity of materials, design, workmanship, location, and association and would retain the ability to demonstrate their architectural significance, which is the criterion that makes each of them eligible for listing in the NRHP. In addition, some properties such as Fire Station #22 and the Denny-Fuhrman (Seward) School are also eligible under Criterion A for their association with area history. Fire Station #22 is associated with the development of the Seattle Fire Department. WSDOT has committed to ensure that the historic and current use of the fire station would not be affected by the project. The Denny-Fuhrman School is eligible for listing in the NRHP because of its association with public education in Seattle and the development of the Eastlake neighborhood. The ability of the school to fulfill its educational mission and its involvement in the community would not be impaired by hauling activities (Exhibit 5-43).

The estimated truck peaks and averages represent a worst-case condition for each segment. To generate these estimates, program analysts assumed that all truck trips servicing each work site would need to use more than one haul route. Work sites could be accessed by more than one potential route, which could result in lower actual truck volumes during construction at some locations than presented below. To best represent how truck traffic would be experienced by a single observer, the number of trucks per day reported for this analysis is equal to twice the number of loads delivered. For example, the delivery of one load of concrete is estimated as two trucks per day because the truck is counted both when arriving and when leaving the site.

In general, the estimated number of truck trips along arterials would be relatively low compared to current traffic volumes on arterial routes. These truck volume estimates would continue to be updated as construction planning and schedules are finalized. The *Transportation Discipline Report* (Parametrix 2009b) includes more specific discussion about haul routes, effects on traffic volumes, and scheduling.

More detailed information about construction haul routes on specific geographic segments and their potential effects on historic properties is provided below.

I-5/Roanoke and Portage Bay Segments

The Preferred Alternative would temporarily affect historic properties, largely as a result of the extended project construction period, which includes but is not limited to, construction haul routes, detour routes, staging areas, and temporary work bridges. Construction of the SR 520 project would occur over a period of years and would result in increased noise, dust, and traffic; visual effects; and disruptions in access to some areas near construction sites.

Historic Properties Adjacent to the 10th Avenue East and Delmar Drive East Bridges over SR 520: Direct and Indirect

Historic properties within the APE adjacent to SR 520 have the potential to experience effects that would temporarily alter their integrity of setting and feeling. Construction of the 10th Avenue East and Delmar Drive East bridges over SR 520 could cause the following effects:

Direct Effects

- Increased vibration from demolition, heavy equipment operation, material hauling, and pile driving.
- Fugitive dust from areas where soils are exposed or stockpiled.

Indirect Effects

- Visual effects from vegetation removal, temporary structures, construction staging and equipment, glare from nighttime construction lighting, and active construction operations.
- Temporary disruptions in access to homes, businesses, and parks from lane closures and detours. .
- Increased traffic along detour and haul routes.

Although construction of the 10th Avenue and Delmar Drive lid would take approximately 26 months, the noise and other effects would vary in intensity during that period, depending on which activities were occurring. Glare from nighttime construction lighting would also be experienced intermittently. Increased noise, fugitive dust, and possible vibration from demolishing and removing the 10th Avenue East and Delmar Drive East bridges over SR 520, hauling material and constructing the new 10th Avenue/Delmar Drive lid would also affect historic properties. The following properties would experience these temporary, indirect effects to varying degrees. These properties' integrity of feeling and setting would be temporarily diminished as a result of implementing the Preferred Alternative:

- Fire Station #22 (ID 36),
- Denny-Fuhrman (Seward) School campus (ID 10),
- Chung House (ID 4),
- Talder House (ID 20),
- Sugamura House (ID 23),
- East Miller Condominium (ID 22),
- Wicklund-Jarr House (ID 25),
- Glover Homes Building (ID 26),
- Keuss Building (ID 27),
- Boyd House (ID 39),
- Gunby House (ID 45),
- Mason House (ID 48), and
- Kelley House (ID 52).

Some of the vegetative buffer between SR 520 and historic properties (the Gunby House on the north; the Sugamura, Boyd, and Mason houses on the south) would be entirely or partially removed during construction. Although the buffer area contains a variety of mature trees, it also has several invasive species. WSDOT would retain mature trees where possible. During construction of the new roadway and lids, mature vegetation would be protected and retained to the extent reasonable and

feasible. Although some existing buffer might be reduced, adding the lid at 10th Avenue East and Delmar Drive East would provide for a new type of buffer from the roadway that would be more extensive than the existing vegetative buffer. After construction is completed, permanent erosion control measures for areas affected by construction of the project would be implemented, and those areas where invasive species were cleared would be replanted with native plant materials, as appropriate in accordance with WSDOT policy (WSDOT 2010b) and in consultation with the neighborhood. Removal of this vegetation would temporarily alter integrity of setting for the properties listed on the previous page.

The most likely travel route to access the 10th Avenue East/Delmar Drive East lid construction area would be from I-5 to East Roanoke Street. Delmar Drive East is likely to experience truck traffic as a secondary travel route, mostly for egress from the lid construction area to eastbound SR 520. This potential haul route would use Delmar Drive South from SR 520 and continue east onto East Lynn Street, then north on 19th Avenue East (Exhibit 5-43). A haul route along Delmar Drive East as it nears 14th Avenue East could average 20 haul trucks per day during active construction. Estimated peak volume of 160 haul trucks per day could occur intermittently for as many as 30 nonconsecutive days over a period of roughly 21 months.

A potential haul route along Fuhrman Avenue East could be used throughout the construction period (Exhibit 5-43). This route may average 20 trucks per day when in use and may experience peak volumes up to 230 trucks per day, intermittently throughout construction. To provide some context for this volume of truck traffic, more than 170 trucks and buses per day pass along Fuhrman Avenue East at Eastlake Avenue East. A potential haul route along Boyer Avenue East at East Shelby Street could also have the same typical average volume from construction truck hauling as the route along Fuhrman Avenue East.

The Boylston Avenue East haul route would likely be used intermittently for the duration of construction, and could average approximately 25 trucks per day. Integrity of setting and feeling of all historic properties along construction haul routes would be temporarily diminished as a result of the Preferred Alternative.

There are no construction haul routes within the Roanoke Park Historic District. However, haul routes are located on the edges (outside of) the district boundaries. More discussion on potential effects on the Roanoke Park Historic District as a result of haul routes is provided later in this chapter.

Construction of the Portage Bay Bridge: Direct and Indirect

Direct Effects

The Mason and Kelley houses (both on Boyer Avenue East) and the Gunby and Boyd houses (both adjacent to SR 520) would be temporarily and indirectly affected by fugitive dust and possible vibration during demolition, hauling materials hauling, and reconstruction of the Portage Bay Bridge and erecting of the work bridges, including pile-driving for new piers. Potential dust and vibration are unlikely to alter these resources' integrity.

Indirect Effects

The Mason and Kelley houses would likely also experience glare from nighttime construction lighting because they are closer to the bridge and, thus, closer to construction activities.

The following properties are farther away from the Portage Bay Bridge construction activities than the four described above, but could experience some increased noise during demolition and reconstruction of the bridge, erecting the work bridges, and possibly by some nighttime glare, due to the topography. Their integrity of setting and feeling would be temporarily altered during construction.

- Fire Station #22,
- Denny-Fuhrman (Seward) School campus,
- Wicklund-Jarr House,
- Glover Homes Building, and
- Keuss Building.

The work bridges, barges, and heavy equipment used to demolish and construct the Portage Bay Bridge would create new visual effects, particularly due to the topography of the area and the views toward the bridge from the properties on the west side of the bay. The Kelley House would be affected by visual impacts because one of the work bridges is planned to be in the location of the current Portage Bayshore Condominium docks next door to the house. Some moorage at the Portage Bayshore Condominiums would be relocated during construction. Upon completion, the work bridges would be removed and the moorings would be restored. Portage Bay Bridge construction is anticipated to last for 5 to 6 years.

These indirect construction impacts, such as increased noise and visual intrusions would not permanently alter the integrity of the historic properties discussed above. The significance of these properties lies in their distinctive architectural characteristics of type, construction, period, or style, and—for Fire Station #22 and the Denny-Fuhrman (Seward) School—their association with area history. These properties also exhibit a high level of historic and architectural integrity. The construction impacts would temporarily alter the integrity of the setting and feeling of these properties, but the effects on the historic properties would not be permanent. The properties would maintain integrity of materials, design, workmanship, association, and location throughout the construction period.

A discussion on potential effects on the Roanoke Park Historic District as a result of the new Portage Bay Bridge is provided below.

Roanoke Park Historic District (ID 37): Direct and Indirect

Construction of the Preferred Alternative would result in a number of effects on this historic district, and would temporarily diminish the district's integrity of setting and feeling.

Direct Effects

- Change to setting at times during the construction period from increased truck traffic and vibration on the haul routes along East Roanoke Street and Harvard Avenue East.
- Noise, fugitive dust, and possible vibration effects from construction of the reconfigured intersection at East Roanoke Street and 10th Avenue East.
- Fugitive dust and vibration from construction of the work bridges flanking the Portage Bay Bridge, demolition of the existing bridge, and construction of the new bridge.

- Fugitive dust and possible vibrations from demolition of the 10th Avenue East and Delmar Drive East overcrossings and construction of the new lid.
- Fugitive dust, traffic, and possible vibration from construction, and glare from lighting for nighttime construction of I-5/SR 520 interchange and the HOV lane crossing over I-5.

Indirect Effects

- Increased noise from construction of the reconfigured intersection at East Roanoke Street and 10th Avenue East.
- Increased noise from construction of the work bridges flanking the Portage Bay Bridge, demolition of the existing bridge, and construction of the new bridge.
- Change in setting and feeling during the construction period from the visual interruptions of the work bridges and construction activity related to Portage Bay Bridge.
- Change in setting and feeling during the construction period from the loss of vegetative buffer between East Roanoke Street and SR 520.
- Increased noise from the demolition of the 10th Avenue East and Delmar Drive East overcrossings and construction of the new lid.
- Increased noise from construction and glare from lighting for nighttime construction of I-5/SR 520 interchange and the HOV lane crossing over I-5.

No construction or construction staging would occur within Roanoke Park or the Roanoke Park Historic District. Based on analysis in the *Geology and Soils Discipline Report* (CH2M Hill 2009g), the probability of landslides in the historic district from project construction in the vicinity is expected to be low.

Detour and Haul Routes

During construction, East Roanoke Street would experience temporary lane closures and detours while the realignment work of the 10th Avenue East and Delmar Drive East intersection occurs. These could include short-term closures during off-peak times, which might require intermittent and brief detours over an approximate 15-month period. This could result in temporarily restricted access along East Roanoke Street. However, at least one lane would be open at all times to allow local traffic access on East Roanoke Street. During construction, Fire Station #22—located on East Roanoke Street and immediately adjacent to the Roanoke Park Historic District—would be fully operational, and access for emergency response would not be affected.

Harvard Avenue East and East Roanoke Street, which border the Roanoke Park Historic District, could provide the most direct access to portions of the project construction sites, and are likely to experience truck traffic while serving as potential haul routes (Exhibit 5-43). As previously noted, the main travel route to access the 10th Avenue East/Delmar Drive East lid construction area would likely be from I-5 to East Roanoke Street, and Delmar Drive East could operate as a secondary route for egress from the lid to eastbound SR 520. Most trucks coming from westbound SR 520 would likely use the Harvard/Roanoke exit. On East Roanoke Street at Delmar Drive East, the potential route could average as many as 30 trucks per day intermittently for approximately 21 months. Worst-case peak levels could reach as many as 170 trucks per day, which could occur periodically over 21 months.

On Harvard Avenue East, north of East Roanoke Street, haul route volumes could average 15 trucks per day for the duration of construction (approximately 66 months). The existing truck and bus count at this location is more than 690 per day, so an additional 15 trucks per day would not be a significant change. Worst-case peak volumes could reach up to 70 trucks per day, occurring for 60 nonconsecutive days throughout the active construction period. This means approximately 3% of total construction days could experience peak volume levels. As noted above, average haul truck volumes are estimates meant to approximate construction truck activity during a typical day for the duration of a potential haul route's use; these estimates would be updated as construction planning and scheduling progress.

These potential haul routes would diminish the integrity of setting and feeling of the Roanoke Park Historic District and its contributing elements, including the William H. Parsons House, located on Harvard Avenue East. These properties could experience higher traffic volume, fugitive dust, and increased noise from the intermittent truck traffic along these haul routes.

Vegetation Removal and Replanting

Some of the vegetative buffer between SR 520 and the Roanoke Park Historic District would be entirely or partially removed during construction. During construction of the new roadway and lids, mature vegetation would be protected and retained to the extent reasonable and feasible. As noted above, although the buffer area contains a variety of mature trees, it also has several invasive species that would be cleared and replaced with native vegetation, in accordance with WSDOT policy (WSDOT 2010b). Although some existing buffer might be reduced, adding the lid at 10th Avenue East and Delmar Drive East would provide for a new type of buffer from the roadway that would be more extensive than the existing vegetative buffer. After construction is completed, permanent erosion control measures for areas affected by construction of the project would be implemented, and those areas where invasive species were cleared would be replanted with native plant materials, as appropriate. During replanting, WSDOT would consult with members of the Roanoke Park Historic District to identify and select plantings compatible with the historic character of the area to the extent feasible. Vegetation removal and replanting would temporarily alter the district's integrity of setting.

Montlake Segment

Montlake Community Center Tudor Building (ID 126): Direct and Indirect

Direct Effects

The Montlake Community Center Tudor Building, located at the Montlake Playfield within the boundaries of the Montlake Historic District, could be affected by fugitive dust and possible vibration during demolition and reconstruction of the Portage Bay Bridge and erecting of the work bridges, and possibly by some nighttime glare during these construction activities. Dust or vibration is extremely unlikely to alter integrity of setting of this resource.

Indirect Effect

Although the Montlake Community Center Tudor Building would experience effects from project construction, the existing gymnasium building and park vegetation would visually screen the building from most of these effects. The building's integrity of setting would be temporarily and

indirectly altered during construction, but the facility would still be able to function as an active community center, and the character-defining elements of the Tudor building would not be diminished, which are significant in terms of Tudor Revival architectural design and for its associations with area history.

NOAA Northwest Fisheries Science Center (ID 56): Direct and Indirect

The NOAA facility's three historic buildings house functions for the NOAA Northwest Fisheries Science Center campus. Implementation of the Preferred Alternative would temporarily diminish this resource's integrity of setting, feeling, and association (Exhibit 6-12).

Direct Effects

Demolition of the existing Portage Bay Bridge and construction of the work bridges and the new Portage Bay Bridge immediately adjacent to the NOAA property would generate additional dust and equipment emissions. Pile-driving for the construction bridges and use of heavy equipment could cause vibration effects on the property. If not adequately mitigated, these impacts have the potential to disrupt the biological experiments underway in the NOAA fish-rearing facilities and to affect sensitive equipment used for measurement and monitoring. These effects are anticipated to be minor and would not alter the integrity of this property.

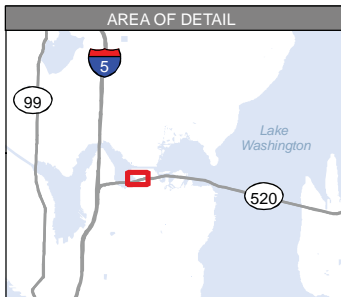
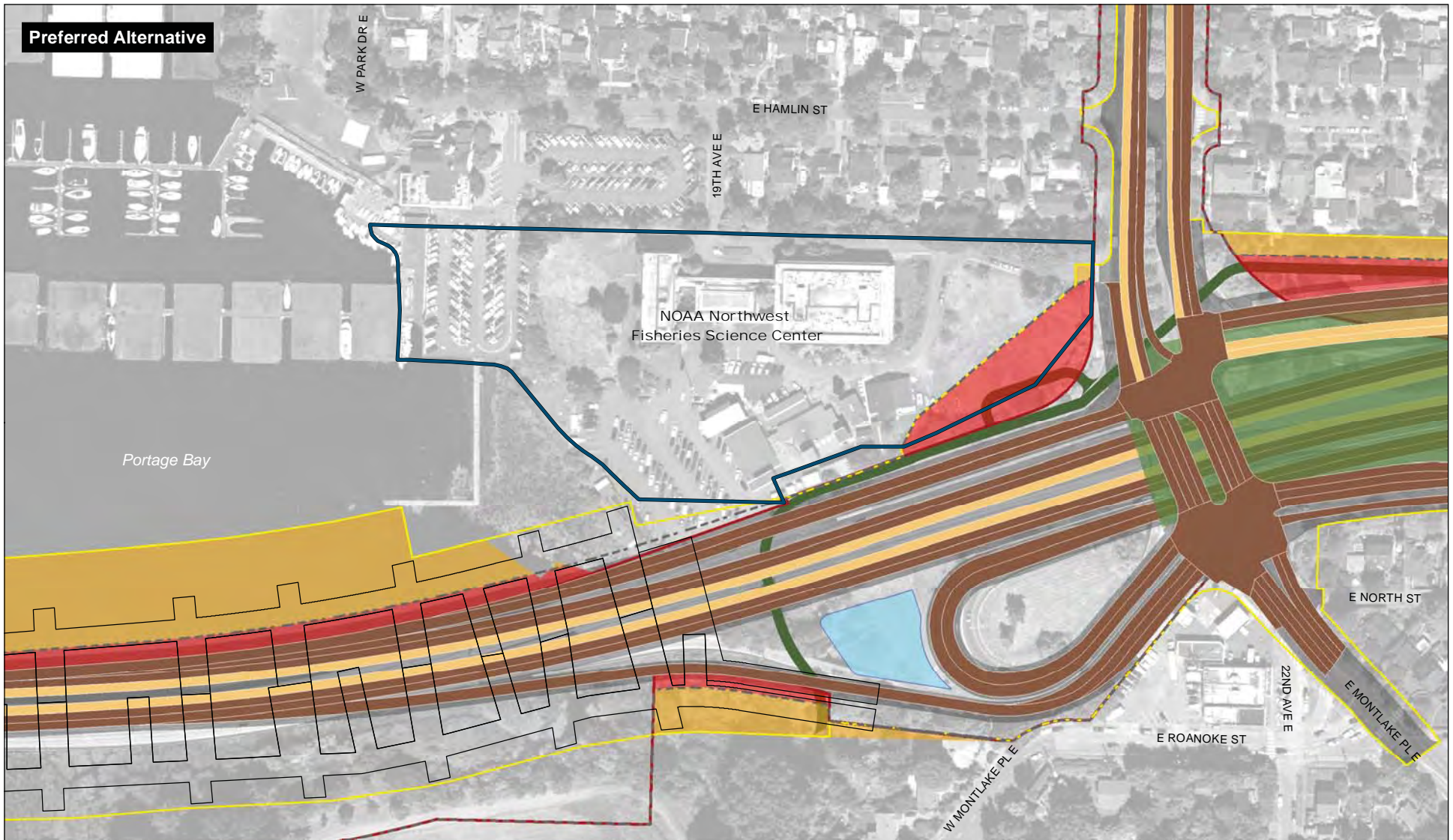
Indirect Effects

Demolition of the existing Portage Bay Bridge and construction of the work bridges and the new Portage Bay Bridge immediately adjacent to the NOAA property would generate additional noise and create visual effects on the NOAA Northwest Fisheries Science Center buildings.

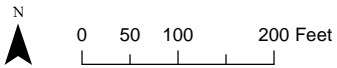
The construction impacts could create an acoustic environment that makes it more difficult to validate analytical results. Discussions are ongoing with NOAA officials to determine monitoring, construction management, and other measures to minimize construction effects on marine experiments and scientific activities.

To minimize potential effects disclosed in the SDEIS, the Preferred Alternative has narrowed the width of the Portage Bay Bridge and shifted its alignment to the south to avoid a direct impact on the structures at the NOAA facility. The Preferred Alternative would acquire 0.52 acre from the NOAA property, which does not contain any structures. There would be a construction easement on the east side of the NOAA property; after construction, most of this easement would be permanently acquired for use as a bicycle and pedestrian path. Construction would also require use of a portion of the area currently used as parking for the NOAA facility. This area is on WSDOT property, so although it would no longer be used as parking for the NOAA facility, using this portion of the parking area would not be an acquisition of NOAA property. The driveway that encircles the North Campus on three sides would remain intact, so access within the property would not be altered. Exhibit 6-13 illustrates the effects on the NOAA Northwest Fisheries Science Center buildings from the Preferred Alternative.

Despite WSDOT's continuing efforts to minimize construction effects, it is likely that the setting, feeling, and association of the property would be temporarily diminished during construction as a result of visual, noise, dust, and vibration effects. It is also likely that some aspects of the ongoing scientific activities of NOAA would be affected, which would diminish the integrity of association with the important research conducted there.



- | | |
|------------------------|----------------------------------|
| NOAA Property | Proposed Bicycle/Pedestrian Path |
| Permanent Acquisition | General Purpose Lane |
| Construction Easement | HOV Lane |
| Proposed Right-of-way | Work Bridge |
| Existing Right-of-way | Stormwater Facility |
| Limits of Construction | Lid |
| Pavement | |



Source: King County (2006) Aerial Photo, CH2M HILL (2008) GIS Data (Park and Trails), City of Seattle (2009) GIS Data (Section 6(f) Boundary). Horizontal datum for all layers is NAD83(91); vertical datum for layers is NAVD88.



Exhibit 6-12. Project Elements of the Preferred Alternative at the NOAA Northwest Fisheries Science Center

SR 520, I-5 to Medina: Bridge Replacement and HOV Project

Seattle Yacht Club (ID 55): Indirect

The Preferred Alternative would temporarily affect the Seattle Yacht Club. Temporary indirect effects, which diminish the resource's integrity of setting, feeling, and association, are discussed here.

The Seattle Yacht Club, listed in the NRHP under Criterion A for its association with the social and maritime history of Seattle, traditionally holds Opening Day ceremonies through the Montlake Cut and on Portage Bay at the beginning of May each year. Increased noise, fugitive dust, glare from nighttime construction lighting, and possible vibration from demolition of the existing Portage Bay Bridge and construction of work bridges and the new Portage Bay Bridge could temporarily diminish the Seattle Yacht Club's integrity of setting, feeling, and association.

Work bridges and barges used to demolish and construct the Portage Bay Bridge could occasionally interfere with the club's marine activities in Portage Bay; similarly, temporary supports and barges used to construct the new bascule bridge adjacent to the historic Montlake Bridge could occasionally interfere with the club's activities on the Montlake Cut. WSDOT has committed to not transport pontoons through these areas during Opening Day events, including the week before and the week after the ceremonies.

Although access to the Seattle Yacht Club would be maintained at all times, there could be periods during construction when some limitations on access to the Seattle Yacht Club and Portage Bay could be necessary. Access to Seattle Yacht Club facilities, both by land and by water, is critical for the continued operation of this historic property. The ability to maintain the historic structure depends on the economic and operational viability of the Club; its operational and economic viability depends on the revenues generated by members and guests having unimpeded access to the facility. Access and usage limitations could impair the Seattle Yacht Club's ability to manage its historic structure and conduct its traditional activities.

For the reasons described above, construction of the Preferred Alternative would diminish the Seattle Yacht Club's integrity of setting, feeling and association that may affect the historic maritime activities there, which are a character-defining feature under Criterion A. If not mitigated, these effects on the setting, feeling and association could also result in economic effects on the facility if reduced patronage were to occur as a result of the proximity of construction activities. These economic effects could impair the ability of the club to fulfill its historic maritime role. As the association with the social and maritime history of Seattle is the sole reason for NRHP listing of the Seattle Yacht Club, these activities are the primary character-defining feature of the club, and diminution of the ability to perform these activities would affect the club's integrity of association.

Montlake Bridge (ID 54): Indirect

Montlake Bridge is listed in the NRHP under Criterion C for its engineering and architectural design. The Preferred Alternative includes a new bascule bridge immediately east of the existing historic Montlake Bridge. Because of the close physical proximity, constructing a new bascule bridge immediately adjacent to the historic Montlake Bridge would alter the historic bridge's integrity of setting and feeling.

Montlake Cut (ID 53): Indirect

The Montlake Cut is a navigable waterway with an existing bascule bridge crossing. The new bascule bridge would span the official navigation channel in the Montlake Cut. The cut must be open to ship traffic year-round, and bridge construction would not be allowed to interfere with marine navigation. The only exception would be a few short periods of time when the spans are being erected, requiring the Montlake Cut to be temporarily closed to marine traffic. This would involve brief closures (up to five total), ranging from several hours to 2 days. None of these closures would occur during traditional Opening Day ceremonies for boating season. As an active navigational channel listed in the NRHP for engineering significance, the integrity of the Montlake Cut would not be altered by building a new bascule bridge across it or by towing pontoons through it.

Canoe House (ID 203): Direct and Indirect

The Canoe House is listed in the NRHP under Criterion C for its architectural significance. Its integrity of setting and feeling would be temporarily altered during construction.

Direct Effects

Construction of the new bascule bridge, which is expected to last approximately 29 months, would introduce fugitive dust surrounding and possible vibration on the Canoe House. This would temporarily alter the Canoe House's integrity of setting and feeling.

Indirect Effects

Construction of the new bascule bridge would introduce increased noise and glare from nighttime construction on the Canoe House. Construction of the Preferred Alternative would also have a visual effect on the Canoe House, as construction of the second bascule bridge, the new floating bridge, and the west approach to the floating bridge would all be visible for the duration of the construction period. Construction of the Preferred Alternative would not diminish the architectural features that make the Canoe House significant. However, the integrity of setting and feeling would be temporarily diminished, particularly to the west, in the direction of the new bascule bridge, but overall, the integrity of association, materials, workmanship, location and design would remain.

Lake Washington Boulevard (ID 239): Direct and Indirect

The segment of Lake Washington Boulevard within the Montlake Historic District is eligible for listing in the NRHP under Criterion A for its association with the Olmsted Brothers' plan for parks and parkways in Seattle. Where it falls within the boundaries of the Montlake Historic District, it is a contributing element to that district. The portion of the boulevard within the Arboretum also contributes to that historic property. Implementation of the Preferred Alternative would temporarily—directly and indirectly— affect Lake Washington Boulevard, compromising the resource's integrity of setting and feeling, are discussed here.

Direct Effects

Construction of the Preferred Alternative could include using portions of Lake Washington Boulevard from 26th Street to Montlake Boulevard East as a potential haul route and detour route after the Lake Washington Boulevard and R. H. Thomson ramps are closed. The setting and feeling of the boulevard could be somewhat affected during times of higher traffic use for construction Traffic

increases from these project activities on Lake Washington Boulevard, however, would not alter the significance of this linear resource, because the historic alignment and transportation purpose of the road would remain intact, and its association with the Olmsted plan would not be diminished. Because Lake Washington Boulevard is a transportation facility, its integrity of setting and feeling would be altered, but not diminished, during construction.

Indirect Effects

There would be a construction staging area located on the WSDOT right-of-way near the Arboretum, just south of the existing SR 520 (for more information about the staging area, see the Arboretum discussion below). This staging area would be adjacent to Lake Washington Boulevard and could temporarily alter the setting and feeling of the roadway for the duration of construction resulting from continuous use of the area by heavy construction vehicles and machinery. The viewshed in this area near the Arboretum would be affected by the presence of the staging area to the northeast of the boulevard, even though the current viewshed includes the SR 520 exit and entrance ramps. The setting and feeling of Lake Washington Boulevard would be altered during construction by the use of the adjacent staging area. This effect on the boulevard would not alter the significance of this linear resource, however, because its association with the Olmsted plan would not be diminished and the characteristics of the historic transportation facility would remain intact.

Construction of the Preferred Alternative would introduce periods of increased traffic from haul and detour routes, visual effects from the adjacent staging area, and physical construction to make median and lane changes to the roadway. The setting and feeling of Lake Washington Boulevard would be temporarily altered by project construction. This resource's association with the Olmsted plan would not be diminished, and the intact characteristics of the historic transportation facility—location, alignment and design—would remain.

Montlake Historic District (ID 238): Direct and Indirect

The Montlake Historic District is eligible for listing in the NRHP under Criterion C as a significant, cohesive collection of primarily residential architecture typical of the early twentieth century. It also contains the individually listed Seattle Yacht Club and several individually eligible properties as contributing elements. Construction of the Preferred Alternative would result in numerous direct and indirect effects on the Montlake Historic District (Exhibit 6-9). Many effects are associated with construction haul routes, which are described below.

Direct Effects

- Construction on Lake Washington Boulevard to add a new planted median and a right-turn lane at Montlake Boulevard.
- Increased dust and possible vibration from construction of the Portage Bay Bridge, west approach, and Montlake lid.
- Increased dust and possible vibration from demolition of MOHAI, the Portage Bay Bridge, the west approach, the SR 520 overpasses, and the Lake Washington Boulevard and R. H. Thompson ramps.
- Possible increased dust and vibration from construction at the staging areas, which could be utilized around the clock.

- Possible increased dust and vibration from construction at the staging area south of SR 520, adjacent to the Arboretum and the Montlake Historic District.
- Intermittent increases in dust and possible vibration from haul routes on East Lynn Street, 19th Avenue East, Montlake Place, East Roanoke Street, and 24th Avenue from East Roanoke Street to SR 520.
- Intermittent increases in dust and possible vibration from use of Lake Washington Boulevard as a potential secondary haul route and detour route.

Indirect Effects

- Visual effects of construction of the new bascule bridge parallel to the Montlake Bridge for properties on the north side of the district; the view of the historic bridge would be impeded during construction.
- Effects on Seattle Yacht Club resulting from the proximity of construction and related effects on boating or commercial activities.
- Increased noise and visual effects from demolition of MOHAI, the Portage Bay Bridge, the west approach, the SR 520 overpasses, and the Lake Washington Boulevard and R. H. Thompson ramps.
- Increased noise, visual effects, and possible glare from lighting for nighttime construction of the Portage Bay Bridge, west approach, and Montlake lid.
- Temporary traffic detours, congestion, and intermittent restricted access to selected areas in the district.
- Possible increased noise, visual effects, and glare from lighting for nighttime construction at the staging areas, which could be utilized around the clock. Possible increased noise, visual effects, and glare from lighting for nighttime construction at the staging area south of SR 520, adjacent to the Arboretum and the Montlake Historic District
- Intermittent increases in noise and traffic from haul routes on East Lynn Street, 19th Avenue East, Montlake Place, East Roanoke Street, Lake Washington Boulevard, and 24th Avenue from East Roanoke Street to SR 520.

Detour and Haul Routes

Local jurisdictions can limit the use of non-arterial streets for truck traffic; therefore, efforts were made to identify designated arterial streets for potential use as haul routes. A potential secondary haul route from Delmar Drive would pass along East Lynn Street, north on 19th Avenue East to Montlake Place to East Roanoke Street, and along the northernmost portion of 24th Avenue from East Roanoke Street to SR 520 (Exhibit 5-43). Average haul truck volume along E. Lynn Street could be 15 trips per day when used, while the peak number of haul trucks could range up to 120 trucks per day. These peak truck trips could occur over a total of approximately 60 non-consecutive days, spread intermittently over the construction duration (70 months). Haul route traffic on East Roanoke Street at Montlake Place East could average up to 20 trucks per day for the duration of construction in the area (66 months). Construction activity would likely peak for 60 nonconsecutive days, and could result in peak haul route volumes as high as 290 trucks per day.

Lake Washington Boulevard from the SR 520 exit ramps north and west to the intersection with Montlake Boulevard East could be used as a potential haul route. Construction could also include using portions of Lake Washington Boulevard from 26th Street to Montlake Boulevard East, as a potential haul route and detour route after the Lake Washington Boulevard and R. H. Thomson ramps are closed.

As described earlier, the integrity of setting and feeling of all historic properties along haul routes would be temporarily diminished during construction. Hauling could diminish the setting and feeling of the historic district by exposing the contributing elements of the district and individually eligible properties along Montlake Place, East Roanoke Street, East Lynn Street, 19th Avenue East, Lake Washington Boulevard, and a small part of Boyer Avenue East to increased traffic, noise, and fugitive dust from the haul trucks. Construction effects would occur intermittently, and none would be permanent.

Stormwater Treatment

A constructed wetland for stormwater treatment would be built on most of the site currently occupied by MOHAI, necessitating removal of the MOHAI building and acquisition of the land. This project element would also have permanent effects, to be discussed later in this analysis, but temporary, construction-related effects are discussed here. The demolition of MOHAI would bring additional noise, and possibly dust and vibration, to the properties along the east end of East Shelby and East Hamlin streets, and to some properties along Lake Washington Boulevard East. This area would also be used as a staging area, which would be active for the duration of the construction period. This staging area would be available for use 24 hours per day to support mobilization and demobilization of construction. It would house construction vehicles, equipment, materials, and related construction activities. These construction activities would generate dust, noise, and visual interruptions in the district for the duration of construction. The visual and audible impacts associated with the construction staging area would temporarily diminish the district's integrity of setting and feeling.

Noise/Dust/Glare/Vibration

Properties that are contributing elements of the Montlake Historic District and are located near SR 520 would experience increased noise, fugitive dust, possible vibration, visual effects, and possible glare from lighting for nighttime construction during demolition of the 24th Avenue East bridge over SR 520; demolition of the Montlake Boulevard bridge over SR 520; and construction of the Montlake lid. Properties along Lake Washington Boulevard East and 26th Avenue East would also experience these effects in association with demolishing and removing the Lake Washington Boulevard ramps and R. H. Thomson Expressway ramps, and demolishing and reconstructing the west approach to the floating bridge. Throughout the construction period of approximately 56 months, areas of this historic district would experience increased traffic congestion, along with detours and brief and intermittent restricted access to selected areas. These disruptions would temporarily alter the district's integrity of setting.

Montlake Boulevard Median

The Preferred Alternative design requires the removal of all or part of one Montlake Boulevard median planting strip between East Hamlin Street and SR 520. Some portion of the median may be replaced with another median of context-sensitive design once construction is complete. Design is

ongoing, so the precise actions at this location are not certain. This is not expected to alter any aspect of the district's integrity.

In summary, there would be temporary effects on the Montlake Historic District from construction of the Preferred Alternative. The combined construction effects on the historic district as a whole would exert considerable pressure on the district. Construction staging would occur both within and immediately adjacent to the historic district. In addition the district would experience indirect effects from construction activities in Lake Washington, Union Bay, and Portage Bay for the duration of construction in these areas (lasting for five to six years). Despite WSDOT's efforts to avoid and minimize effects from construction, the overall construction effects of the Preferred Alternative on the Montlake Historic District would temporarily diminish the integrity of the characteristics that qualify the historic district for listing in the NRHP, including feeling and setting.

West Approach Segment

Washington Park Arboretum (ID 200): Direct and Indirect

The Arboretum is eligible for listing in the NRHP as a historic designed landscape under Criterion A for its association with the Alaska-Yukon-Pacific Exposition, the University of Washington, the WPA, and Olmsted Brothers Parks and Parkways system of Seattle, and under Criterion C for its design by the Olmsted Brothers as well as the many other talented designers and architects who have contributed to it. In the Arboretum, SR 520 would cross Foster Island with a pier and span bridge that would require acquisition of 0.5 acre of land on Foster Island. Construction activities would include a work bridge located on the island that would be removed after the permanent structure is completed. There would also be 1.6 acres of construction easements on Foster and Marsh islands for the duration of construction. Construction for the west approach area adjacent to the Arboretum is planned to take approximately four to five years.

Temporary effects on the Arboretum are both direct and indirect, and may temporarily alter the Arboretum's integrity of setting and feeling during construction.

Direct Effect

- Potential dust and vibration from demolition of the Lake Washington Boulevard and R.H. Thomson ramps

Indirect Effect

- Potential visual intrusion from construction staging area

Demolition of the Lake Washington Boulevard and R. H. Thomson ramps would occur entirely on WSDOT-owned property, but adjacent park areas could experience fugitive dust, noise, visual effects, and vibration. This construction activity would be an indirect effect that would affect the setting and feeling of the northern portion of the Arboretum. Construction effects from the demolition of the ramps would not lead to a loss of significance for the historic property, because the existing visual and audible intrusion of the existing ramps and elevated SR 520 bridge already affects the setting in this area.

The WSDOT right-of-way area south of SR 520 between the ramps and Lake Washington Boulevard was historically part of the Arboretum, and is included within the historic property boundaries, but

lacks integrity. During construction, this area would be a construction staging area. The staging area would be active for the full 66-month duration of the construction period. This would be the largest of the project staging areas and would be heavily used because of its proximity to all major project elements and because it is located on WSDOT right-of-way. This staging area would be available for use 24 hours per day to support mobilization and demobilization of construction. It would house construction vehicles, equipment, materials, and related construction activities. These construction activities would generate dust, noise, and visual interruptions near active park areas for the duration of construction. No staging would occur on Arboretum property, but the construction activity would be near some park activities in the northern part of the Arboretum. The construction staging area would cause a visual and audible effect on the setting and feeling of the park during construction, but it would not diminish these, or other, aspects of integrity.

During construction of the Preferred Alternative, the Lake Washington Boulevard ramps to and from SR 520 would be closed and traffic would use the Montlake interchange instead. When the ramps are closed, more traffic would travel through the Montlake/SR 520 interchange during periods of construction, instead of through the Arboretum. Temporary effects on the Arboretum are both direct and indirect, and may temporarily alter the Arboretum's integrity of setting and feeling during construction, but the Preferred Alternative would not diminish any aspect of this resource's integrity. The features of this designed landscape were created to provide education and public beautification. The construction effects would not reduce the Arboretum's historic associations or the architectural features that make the Arboretum significant.

Edgewater Condominiums (ID 226): Indirect

The easternmost historic property in the West Approach segment, the Edgewater Condominiums are eligible for listing in the NRHP under Criterion C as part of a multiple property nomination for Seattle apartment buildings. They are recognized as a distinctive architectural type and as the work of master architect John Graham Jr. The property is located on the shoreline south of the existing floating bridge and east of the Arboretum, and has a clear view of the bridge (Exhibit 6-1g). The Edgewater Condominiums would experience increased noise from demolition and construction of the west approach to the Evergreen Point Bridge, as well as potential glare from nighttime construction activities. These indirect construction impacts would occur during demolition and reconstruction of the west approach, as well as construction of the work bridges and the replacement floating bridge. Furthermore, WSDOT has determined that to most efficiently construct the replacement floating bridge, an additional barge may be needed in this location for construction staging, and it may be anchored there temporarily during construction. The period such a barge would be needed for is unknown at this time. This would temporarily alter the Edgewater Condominiums' integrity of setting and feeling. Integrity of setting and feeling of the historic property would also be temporarily altered by increased noise and glare during construction, but these effects would be very minor.

Lake Washington Segment

There are no temporary, construction-related effects on historic properties in the Lake Washington Segment.

Eastside Transition Segment

Historic Properties: Indirect

The NRHP-eligible Arntson (ID 234) and Dixon (ID 227) houses would experience moderately increased noise levels, fugitive dust, and possible vibration associated with demolishing the east approach of the Evergreen Point Bridge and construction of the new east approach structure (Exhibit 6-1g). Both the Arntson and Dixon houses could experience fugitive dust and noise increases associated with construction of the bridge operations facility and dock located under the approach area. Most of these effects would occur intermittently, and none would be permanent. These resources' integrity would not be altered during construction.

Section 6(f) Replacement Properties

The Section 106 regulatory framework was discussed earlier in this chapter. The Preferred Alternative would have no temporary effects on Section 6(f) replacement properties.

Port of Olympia and Port of Tacoma Pontoon Construction Segment

Construction of the pontoons would not affect any known historic properties within the APE for this project. The types of activities required for pontoon construction are similar to the current activities and uses of the buildings at the CTC facility. Because the four NRHP-eligible buildings at CTC function as part of an industrial zone, the activities required by this project would not temporarily alter or diminish any aspect of these historic properties' integrity. Additionally, the NRHP-listed Fire Station # 15, also part of this industrial zone, would not be used or directly impacted by this project, and no aspect of integrity would be altered or diminished.

Summary

The prolonged construction period, as well as some direct and indirect effects once the project is built, would affect historic properties within the APE. As described, the Preferred Alternative would adversely affect historic properties. Currently, a PA is being developed, in consultation with SHPO, ACHP, and other Section 106 consulting parties, which will identify means to avoid, minimize, and mitigate adverse effect. Potential measures that may be included in the PA are presented in Chapter 7.

Chapter 7

Determination of Adverse Effect

Pursuant to 36 CFR 800(5)(a), the previous chapter describes how WSDOT, on behalf of FHWA, applied the criteria of adverse effect to historic properties located in the APE. As previously stated, several historic properties would see at least one aspect of integrity diminish, either temporarily or permanently, as a result of the Preferred Alternative. The changes in integrity, which occur within a very tight and culturally sensitive APE, have resulted in WSDOT's determination that the Preferred Alternative would adversely affect historic properties. The determination of adverse effect is based on both temporary, construction-related impacts and permanent impacts that result in an alteration of setting and feeling.

Permanent effects that would diminish one or more aspects of historic properties' integrity include the following:

- The Preferred Alternative's construction of a new bascule bridge over the Montlake Cut, immediately adjacent to the existing Montlake Bridge, would permanently diminish the historic bridge's integrity of setting and feeling.
- The Preferred Alternative would convert 6.5 acres of land within the Montlake Historic District's boundaries from parks, a portion of the NOAA property, residential property, and the Canal Reserve Land to transportation right-of-way. These acquisitions would expand the WSDOT right-of-way into the boundaries of the district and reduce the amount of property included in the district. The expanded right-of-way would alter the footprint of the historic property's boundaries, which would diminish the integrity of design, setting, and materials of the overall district.
- The Preferred Alternative's construction of a new bascule bridge in close proximity to the Canoe House would permanently diminish the Canoe House's integrity of setting and feeling.
- The Preferred Alternative would require the demolition and removal of the existing Evergreen Point Bridge and construction of a new floating bridge across Lake Washington. The physical destruction of the Evergreen Point Bridge would directly and permanently diminish all aspects of this historic property's integrity.

During construction of the Preferred Alternative, some historic properties would see aspects of integrity temporarily diminish. Construction of the project would occur over a period of several years and would result in increased noise, dust, and traffic; visual effects; and disruptions in access to some areas near construction sites. Because of its extent and duration, construction would have significant effects in the vicinity of active construction areas. Some of the specific effects of temporary construction activities include, but are not limited to:

- increased noise and vibration from demolition, heavy equipment operation, material hauling, and pile driving;
- fugitive dust from areas where soils are exposed or stockpiled;
- visual effects from vegetation removal, temporary structures, construction staging and equipment, and active construction operations; or
- temporary disruptions in access to homes and businesses.

Because the project area encompasses many historic properties, the impacts described above would be experienced at one level or another by most historic properties in the APE. For some properties, the proximity of construction activities, the intensity and duration of construction in that area, and the nature of the property's historic characteristics would combine to result in an adverse effect under Section 106. Construction effects on other historic properties—even though they might not meet the definition of adverse effect under Section 106—would still have the potential to create substantial disruptions in community activities and residents' quality of life.

One specific effect of the Preferred Alternative—increased traffic along detour and haul routes—would temporarily diminish integrity of setting and feeling of all historic properties along the proposed haul routes, if used. Construction haul routes would expose historic properties along the route to temporary increases in truck traffic volume, with accompanying potential for increases in fugitive dust, vehicle emissions, and noise. Haul truck volumes estimated for each potential haul route are intended to characterize truck activity anticipated during a typical day of construction for the duration of use as a haul route. For potential routes where haul truck volumes may vary substantially over the construction period, peak volumes are also estimated. The Preferred Alternative would temporarily diminish integrity of feeling and setting of all historic properties, including both historic districts in the APE, along all construction haul routes.

Additional historic properties whose integrity would be temporarily diminished during construction include:

- All historic properties along construction haul routes, as described above,
- Historic properties near the 10th Avenue and Delmar Drive lid,
- Roanoke Park Historic District,
- Montlake Historic District,
- NOAA Northwest Fisheries Science Center, and
- Seattle Yacht Club.

The Preferred Alternative would also cross Foster Island with a pier and span bridge that would require acquisition of 0.5 acre of land on Foster Island and expansion of the right-of-way to the north of the existing alignment. Construction effects would include a construction work bridge located on the island that would be removed after the permanent structure was completed. Construction activities would generate dust and construction-related noise and vibration on Foster Island; during construction, access to the north part of the island would be restricted. Construction in this area would take approximately 5 years (60 months). Once construction is completed, construction easements on Foster Island would be returned to park use.

Volume 1 discusses the Foster Island TCP located in the APE. The Foster Island TCP was determined eligible for listing in the NRHP. The Preferred Alternative would have an effect on the TCP that contributes to the project-wide adverse effect determination.

The net impact of considering all historic properties that would experience a diminishment in one or more areas of integrity, either temporarily or permanently, results in the determination that the Preferred Alternative would have an adverse effect on historic properties. Resolution of adverse effects is ongoing, and subject to consultation with DAHP, affected tribes, and other Section 106 consulting parties. However, Chapter 8 provides an overview of potential mitigation measures that have been identified at the time of this document's publication.

Chapter 8

Potential Avoidance, Minimization, and Mitigation Measures

Section 106 of the NHPA stipulates that the agency official, in consultation with the SHPO and other consulting parties, must “develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize, or mitigate adverse effects on historic properties (36 CFR 800.6(a)).” This chapter provides an overview of avoidance and minimization measures of both permanent and temporary effects on historic properties. Where adverse effects cannot be avoided or minimized, they will be resolved through mitigation measures and memorialized in a Programmatic Agreement (PA), pursuant to 36 CFR 800.14(b).

WSDOT has elected to use a PA to resolve adverse effects because the specific effects on all historic properties may not be fully known prior to project approval. The PA binds FHWA with responsibility to mitigate known adverse effects on historic properties, while allowing for completion of cultural resources investigations and providing a process to govern the actions to be taken if historic properties are discovered during the phased identification. The PA is currently in development, and may still be modified during the Section 106 process. Potential mitigation measures are presented in this chapter.

As provided for in 36 CFR 800.2(b), WSDOT invited the ACHP to participate in the consultation process for this project on May 20, 2010. After receiving additional information regarding the project, the ACHP accepted the invitation to participate in developing the PA on July 22, 2010.

Throughout the design and planning process, WSDOT has taken care to avoid and minimize adverse effects on historic properties. General measures taken through planning and design to avoid and minimize adverse effects on historic properties include the following:

- Reducing the footprint and/or shifting the alignment of SR 520 to avoid or minimize effects on historic properties, including the Montlake Historic District, the NOAA Northwest Fisheries Science Center, the Arboretum, and the Foster Island TCP.
- Reducing noise levels in the two historic districts, the Seattle Yacht Club, the NOAA Northwest Fisheries Science Center, Lake Washington Boulevard, the Arboretum, and the Foster Island TCP by incorporating noise-reduction measures such as quieter concrete pavement and 4-foot concrete traffic barriers with noise-absorptive coating, noise-absorptive materials around the lid portals, and a reduced speed limit on the Portage Bay Bridge. Adjusting construction haul and detour routes to avoid or minimize construction effects on the Montlake Historic District and Roanoke Park Historic District as much as possible.
- Involving the affected communities in context-sensitive design of the new lids as part of SR 520 design development and under existing processes of the City of Seattle and the Seattle Design Commission, which will help preserve the setting and feeling of the Montlake Historic District and Roanoke Park Historic District, as well as contributing and individually NRHP-eligible properties within those districts.

As described in previous chapters, even with WSDOT and FHWA’s ongoing efforts to avoid adverse effects on the greatest extent feasible, it will not be possible to avoid all adverse effects on historic

properties from construction or operation of the Preferred Alternative. Where the project causes adverse effects on historic properties, those adverse effects will be mitigated, and the mitigation measures are part of the PA development process.

Project Modifications that Would Avoid or Minimize Effects

As a result of ongoing consultation, WSDOT has made alterations in the original project description. The new project elements, which are components of the Preferred Alternative, will avoid or minimize some effects on historic properties. These measures include the following changes:

- WSDOT has changed the project alignment to avoid direct physical effects on the Roanoke Park Historic District. These changes avoid direct effects on the sidewalk, street, and planted median within the district.
- WSDOT has changed the Portage Bay Bridge width and alignment to avoid demolition of buildings at the NOAA Northwest Fisheries Science Center that would have occurred under Option A of the SDEIS. As described in the SDEIS, these demolitions could have resulted in permanent displacement of the property's historic use.
- WSDOT will post a 45- mph speed limit along the Portage Bay Bridge to help reduce noise levels at nearby properties, including the Roanoke Park Historic District, the Seattle Yacht Club, and the NOAA Northwest Fisheries Science Center.
- WSDOT will develop context-sensitive designs for the Portage Bay Bridge, the new bascule bridge, and the West Approach bridge that will maintain or enhance the historic setting and feeling of the Roanoke Park and Montlake Historic Districts, the Seattle Yacht Club, NOAA Northwest Fisheries Science Center, and the Arboretum.
- WSDOT will minimize the number of columns across Foster Island to reduce effects on the Foster Island TCP and the Arboretum.
- The project will enhance the historic setting of the Arboretum by removing the existing ramps, incorporating noise reduction measures, and providing improved pedestrian and bicyclist connections under the highway.
- WSDOT has included a number of noise reduction strategies into the design of the Preferred Alternative, including 4-foot concrete traffic barriers with noise-absorptive coating, noise-absorptive materials around lid portals and on bridge expansion joints, and a reduced speed limit on the Portage Bay Bridge. WSDOT has also committed to using quieter concrete pavement throughout the corridor.

Measures to Avoid and Minimize Construction Impacts

Construction of the Preferred Alternative would occur over a period of 6 to 7 years and would result in noise, dust, and visual effects on many historic properties in the APE. The proximity of construction activities, the intensity and duration of construction in that area, and the presence of a large number of significant cultural resources all contribute to the effect on historic properties.

A major minimization element is the development of a Community Construction Management Plan (CCMP). The purpose of a CCMP is to provide an ongoing opportunity for the consulting parties of this agreement and the public to provide input on construction management decisions that can help avoid or minimize the effects of construction activities on historic properties. The CCMP will be developed with input from the consulting parties and the public prior to the beginning of construction.

Through standard best management practices (BMPs), WSDOT will take precautions to protect historic properties from excessive noise, vibrations, excavations, and damage from heavy equipment. Applicable BMPs also include those for traffic control, glare, vibrations, noise, and fugitive dust management. Although the proposed CCMP is in its very early stages of development and is subject to change as the PA process continues, the components of a CCMP are expected to include the following:

- A plan for access by emergency service providers to homes and businesses.
- A plan for maintenance of basic services (water, gas, electric, internet, etc.) and for timely response in case of accidental interruptions of service as a result of construction activities.
- A communications plan covering the following:
 - A process for making up-to-date construction information (schedules, schedule changes, potential delays, current work areas, street closures and detours, results of monitoring, etc.) available to the public; potential notification mechanisms could include a website, smart phone application, and/or automated traffic management signs;
 - Development and maintenance of an email list to be used to inform communities of upcoming construction information; email notification will include Community Council officers so that timely information can be distributed through community online forums;
 - A single-point communications center established for the duration of construction, which will include a 24/7 contact phone number and an email address to which problems, questions, and concerns can be sent; these communications will be directed to the appropriate jurisdiction or agency for resolution; and
 - Routine construction updates/outlooks to Section 106 consulting parties, as well as notifications of applicable permit conditions such as periods when noise variances will be in place.
- A vegetation management plan to include provisions for:
 - Surveying mature trees within and near the limits of construction along the entire corridor; the report of this survey will be made available to the concurring parties to the PA when it is completed;
 - Protecting trees and other screening vegetation located outside the construction work area from construction effects;
 - Replacing removed trees following City of Seattle street tree standards;
 - Monitoring by WSDOT of contractor adherence to this plan; and
 - Developing and implementing treatment plans for significant or heritage trees, funded by WSDOT.

- An erosion control plan to be implemented throughout the construction period.
- A plan for traffic management during construction to keep traffic flowing, limit detour routes through residential areas, and ensure access for residents, etc.
- A haul route management plan including the following commitments:
 - WSDOT will ensure that, to the maximum feasible extent, the construction contractor uses the mainline of I-5 and SR 520 for all material hauling during construction;
 - Construction traffic will be limited to city-designated arterials; and
 - If the haul routes change after execution of the PA, WSDOT will consult with the SHPO and consulting parties regarding any additional potential effects on historic properties following the Section 106 framework.

In addition, WSDOT has engaged the services of a vibration expert to evaluate the project corridor, including any potential haul routes along city arterial-streets, and to identify areas where vibration may be of concern. WSDOT will avoid or minimize vibration effects from construction on historic properties by implementing BMPs for vibration currently being developed by this expert. Areas under study include historic properties on steep hillside, the NOAA facility, East Lake Washington Boulevard, and the Lynn/19th Avenue potential haul route, among others.

Implementation of the CCMP, as determined in the forthcoming PA, will avoid and minimize adverse effects onto historic properties. Potential measures to mitigate adverse effects will be determined in the forthcoming PA and are listed below.

Potential Measures to Mitigate Effects on Historic Properties

The following potential mitigation measures are conceptual at this time. Mitigation measures of the Preferred Alternative will be determined through the development of the PA among WSDOT, FHWA, ACHP, the SHPO, affected tribes, and other consulting parties.

If WSDOT, on behalf of FHWA and in consultation with the SHPO, ACHP, and other consulting parties, does not include some or all of the following potential mitigation measures in the PA, additional mitigation measures, as determined by these parties, will resolve the Preferred Alternative's adverse effect on historic properties.

Mitigation of permanent adverse effects on historic properties may include the following commitments on the part of WSDOT:

- In consultation with the SHPO and consulting parties, WSDOT will create a web-based interpretive site on the history of the project area. Topics to be presented on the site might include information on the historic properties within the APE; the Olmsted plan and the Alaska Yukon Pacific Exposition; summarized findings of archaeological investigations; and a redacted, non-confidential report on the ethnography of the project area and Lake Washington.
- If the FEIS for the project determines that noise walls are warranted at any locations within the APE, WSDOT will consult with affected property owners, the City of Seattle Landmarks Preservation Board, DAHP, and the concurring parties of the PA to determine the aesthetic

treatment of the noise walls and ensure compatibility with the historic character of nearby historic properties. Consultations will follow WSDOT policy and procedures.

- WSDOT and the Seattle Department of Transportation (SDOT) will coordinate to ensure that one of these agencies or another specifically identified party will be responsible for maintenance of landscaping installed as part of the project.
- WSDOT will ensure that permanent lighting throughout the corridor is designed to minimize glare into homes and parks and out over the water; lighting on the lids will be reviewed by the Seattle Design Commission and DAHP to ensure compatibility with the historic setting and residential character of surrounding areas.
- In consultation with the concurring parties to the PA, WSDOT will consider requests to install landscaping or landscaped buffers where practicable in areas where buffer zones are being removed or reduced and where new or relocated traffic lanes would intrude on the character of a historic district or the settings of individual historic properties.

Potential Mitigation of Permanent Direct Effects

Governor Albert D. Rosellini Bridge (Evergreen Point Bridge) Demolition

To A mitigation measure that would document the Evergreen Point Bridge, is the preparation of Level II Historic American Engineering Record (HAER) documentation of the bridge, including photographs, reproductions of selected as-built drawings, and a written history. Copies of the documentation will be provided to local repositories and will be presented on a project website.

West Approach Area

Possible options for mitigating effects associated with the new west approach area include the following measures:

- WSDOT will consult with the Arboretum and Botanical Garden Committee, affected area Indian tribes, and other stakeholders, including homeowners in surrounding areas and Friends of Seattle's Olmsted Parks, to develop a plan for aesthetic design of the west approach and surrounding area.
- WSDOT will consult with the Arboretum and Botanical Garden Committee, affected area Indian tribes, and other stakeholders, including homeowners in surrounding areas and Friends of Seattle's Olmsted Parks, to develop a plan for landscape design, including grading and planting, within the WSDOT peninsula and current ramp locations. The plan would likely include habitat and wetland restoration and enhancement projects.
- WSDOT will facilitate coordination between tribes and the Arboretum and Botanical Garden Committee concerning landscape planning and management of Foster Island.

Montlake Boulevard and Lake Washington Boulevard

Possible options for mitigating effects associated with changes to Montlake Boulevard and Lake Washington Boulevard include the following measures:

- WSDOT will consult with DAHP, the concurring parties of the PA, and local homeowners, about the final design for changes to Lake Washington Boulevard.
- WSDOT will ensure that changes to Lake Washington Boulevard are consistent with the Olmsted plan, including park furniture standards.
- WSDOT will ensure that the median in Montlake Boulevard that will be partially removed is reestablished such that it reflects the Olmsted plan as much as possible.
- Within areas of Montlake Boulevard where WSDOT plans modifications to medians, WSDOT will coordinate with appropriate concurring parties to the PA on design, wording, and placement of a sign about the Alaska-Yukon-Pacific Exposition and the Olmsted plan.
- WSDOT will prepare an NRHP Multiple Property Documentation Form for Seattle's Olmsted parks and boulevards and prepare the associated nomination form for Lake Washington Boulevard.
- WSDOT will cooperate with the Seattle Parks and Recreation Department, Friends of Seattle Olmsted Parks, and the Montlake Community Council to design signage or some other indicator of the significance of Lake Washington Boulevard as an Olmsted property. The signage or similar indicator will be placed on the small piece of Seattle Parks and Recreation Department property at the southeast corner of Montlake Boulevard and Lake Washington Boulevard.

New Montlake Lid and Interchange

Possible options for mitigating effects associated with changes to the new Montlake lid and interchange include the following measures:

- To facilitate future historic preservation planning efforts within the Montlake community, WSDOT will complete a survey and nomination of contributing and noncontributing properties within the Montlake Historic District. This effort will be completed once the project has received all necessary permits but prior to construction of the Montlake lid. Survey materials will be compiled in a format compatible with the City of Seattle's historic property database.
- Once construction of the lid is complete, WSDOT will reestablish a visual buffer on the remaining Canal Reserve Lands south of historic properties on East Hamlin Street. This buffer will be designed in consultation with the affected property owners.
- WSDOT will assist the concurring parties of the PA to develop a sign plan for historic markers or signage for the Montlake Historic District. Once the sign plan is approved by WSDOT in consultation with DAHP and the City of Seattle, WSDOT will fund fabrication and installation of up to five historic markers or signs within the district. The information from the markers/signage may become part of a project-wide educational website.
- The MOHAI clock tower, bell, and cannon are iconic features of the Montlake Historic District. If MOHAI does not relocate these features to its new facility, WSDOT will coordinate with MOHAI, the appropriate offices within the City of Seattle (including the Department of Parks and Recreation), and the concurring parties to this Agreement to determine whether these features

can be preserved and reused in the East Montlake Park or elsewhere within the Montlake Historic District. If the clock tower, bell, and cannon remain within the historic district, WSDOT will coordinate with the City of Seattle to identify maintenance responsibilities and to establish a long-term preservation plan for these items.

New Montlake Bridge

Possible options for mitigating effects associated with construction of the new bascule bridge include the following measures:

- WSDOT will facilitate efforts to relocate the two contributing houses (2904 and 2908 Montlake Boulevard) in the Montlake Historic District that are planned for demolition in advance of construction of the second bridge.
- If these houses cannot be relocated and must be demolished, WSDOT will record them to DAHP Level III standards prior to demolition and allow salvage of architectural elements including, but not limited to, doors, windows, or molding for reuse.

Potential Mitigation of Permanent Indirect Effects

West Approach Area

Possible options for mitigating effects associated with changes to the west approach area include the following measures:

- WSDOT will use quieter concrete pavement throughout the corridor, including on the west approach bridge.
- WSDOT will place sound-absorptive material on the inside face of the currently planned 4-foot barriers along the west approach bridge.
- WSDOT will consult with affected property owners and the Arboretum and Botanical Garden Committee about the possibility of establishing visual buffers between Lake Washington Boulevard residences and the west approach bridge as part of planning for the WSDOT peninsula once the SR 520 ramps are removed.

New Montlake Lid and Interchange

Possible options for mitigating effects associated with changes to the new Montlake lid and interchange include the following measures:

- In collaboration with the Seattle Design Commission, the Landmark Preservation Board, DAHP, and the concurring parties to the PA, WSDOT will create a landscape design plan for the Montlake lid that is compatible with the historic character of the Montlake Historic District. This plan could include urban design elements for the reconstruction and restoration of streets and landscapes, such as median and planter strip design, interpretive signage, and bus shelter coordination and design.
- WSDOT may include in the lid design historically compatible interpretive exhibits and markers describing the evolution of the Olmsted landscape and the effects of SR 520 on the landscape. Exhibits should note that the lid reconnects communities and recovers the landscape connections that were important historically within the landscape of Seattle.

- WSDOT will ensure that the design of the median strip on Montlake Boulevard where it crosses the lid reflects the historical connection between Montlake Boulevard and Lake Washington Boulevard; this median should reflect the original design principles of Lake Washington Boulevard and other Olmsted-designed boulevards in Seattle to the degree possible.
- WSDOT will provide for the use of underground wiring on the Montlake lid to the extent feasible.

Montlake Bridge

Possible options for mitigating effects associated with changes to the new bascule bridge include the following measures:

- In consultation with DAHP, the Seattle Design Commission, the Seattle Landmarks Preservation Board, the concurring parties of the PA, and the public, WSDOT will develop a design-review process for the new bascule bridge that will ensure context-sensitive design and consistency with the Secretary of the Interior's *Standards for the Treatment of Historic Properties* and the City of Seattle's historic preservation standards.
- WSDOT will ensure that the design for the new bascule bridge is compatible with the existing bridge and neither competes with nor replicates that bridge.
- If necessary, WSDOT will secure the services of an outside design expert with the appropriate experience in historic bridge design and compatibility.
- WSDOT will consult with nearby property owners, the Montlake Community Council, and DAHP on feasible ways to provide a buffer between the adjacent properties and Montlake Boulevard and the new bridge.

Portage Bay Bridge

Possible options for mitigating effects associated with changes to the Portage Bay Bridge include the following measures:

- WSDOT is committed to a context-sensitive-solutions approach for the replacement of the Portage Bay Bridge. In consultation with the Seattle Design Commission, DAHP, the concurring parties to the PA, and the public, WSDOT will develop a design-review process for the new Portage Bay Bridge that will address overall urban design. If necessary, WSDOT will secure the services of an outside design expert with appropriate experience in designing new bridges within historically sensitive areas.
- WSDOT will use quieter concrete pavement on the new Portage Bay Bridge and approaches monitor quieter concrete pavement for effectiveness.
- WSDOT will place sound-absorbing material on the inside face of the currently planned 4-foot barriers along both sides of the structure.
- WSDOT will place noise-absorbing materials along expansion joints and will reduce the speed limit to 45, which would further reduce noise.
- Through the design of the Preferred Alternative, WSDOT will re-establish the link between the Bill Dawson trail and the Ship Canal Waterside Trail via the Arboretum Waterfront Trail.

- In partnership with Seattle Parks and Recreation Department, WSDOT will install appropriate retaining wall treatments and lighting along the Bill Dawson Trail to enhance the user experience and promote safety. Interpretive features about marine resources and historic properties in the trail locale will be incorporated in trail design.
- In consultation with the concurring parties to this agreement, WSDOT will include improved open space as part of bridge design, especially the space under the west end of the bridge, making it usable space while not creating an attractive nuisance.
- WSDOT will make parking under the bridge available to NWFSC employees again after completion of construction, pending application for and approval of an airspace lease.
- To assist the Roanoke Park/Portage Bay community in future historic preservation planning efforts, WSDOT will record and evaluate for NRHP eligibility, both individually and as a potential district, the houseboats currently docked on the west shore of Portage Bay between University Bridge and the Queen City Yacht Club docks. The resulting data will be in a form compatible with the City of Seattle historic property data base.

10th Avenue and Delmar Lid

Possible options for mitigating effects associated with changes to the 10th Avenue and Delmar Lid include the following measures:

- WSDOT will adopt the design for the 10th Ave/Roanoke intersection that was negotiated between SDOT and the adjacent neighborhoods, provided the neighborhoods continue to support the agreed upon design. This design agreement with the communities must be in place prior to the start of construction.
- In collaboration with the Seattle Design Commission, Seattle Landmarks Preservation Board, DAHP, and the concurring parties to this Agreement, and using the services of a landscape architect, WSDOT will create a landscape design plan for the Delmar/10th Ave lid, including the Delmar Drive bridge and Bagley Viewpoint that is compatible with the historic character of the Roanoke Park Historic District and other adjacent historic properties. This collaborative plan should include:
 - provisions for design, fabrication, and installation of historically compatible interpretive markers describing the evolution of the Olmsted landscape and the effects of SR 520 on the landscape, if adopted as part of the design plan. Exhibits should note that the lid reconnects communities and recovers the landscape connections that were important historically within the landscape of Seattle;
 - provisions for incorporating Olmsted characteristics, perhaps using the Seattle Olmsted design standards as guidelines, into the design of the lid and the Bagley viewpoint;
 - provisions articulating the lid gracefully into the hillslope to the south;
 - provisions for retaining or replacing existing fences on the south side of the lid to protect the security of surrounding homes;
- Previous conceptual design plan elements will be considered in the final design, but details such as curb bed design, retention or replacement of the current features of Bagley Viewpoint, and location of signage will be determined through the collaborative design process.

- WSDOT will maintain as much mature vegetation as possible on all sides of the lid. This issue will also be addressed with vegetation management component of the Community Construction Management Plan.
- WSDOT will provide for the use of underground wiring on the Delmar/10th Avenue lid to the extent feasible
- WSDOT will assist the Portage Bay/Roanoke Park Community Council, as a concurring party to this Agreement, to develop a sign plan for historic markers or signage for the Roanoke Park Historic District. Once the sign plan is approved by WSDOT, in consultation with DAHP and the Seattle Design Commission, WSDOT will fund fabrication and installation of historic markers or signage at the major entrances to the district. WSDOT will consult with City of Seattle and Portage Bay/Roanoke Park Community Council on a plan for ensuring maintenance of the signs. Information from the markers or signage may become part of the project-wide educational website.

I-5 Interchange

Possible options for mitigating effects associated with changes to the I-5 Interchange include the following measures:

- WSDOT will use quieter concrete pavement on all parts of SR 520 west of the Portage Bay Bridge, including ramps, and will monitor quieter concrete pavement for effectiveness.
- WSDOT will place noise-absorptive material on the inside face of the currently planned 4-foot barriers along both sides of this structure.
- WSDOT will provide a landscaped bicycle/pedestrian path on the south side of the I-5 overpass at East Roanoke Street.
- WSDOT will consult with appropriate concurring parties to this Agreement about the aesthetic treatment of the flyover HOV ramp and other potential measures for protecting views from historic properties.
- WSDOT will preserve the trees along the north and south sides of SR-520 between I-5 and the Portage Bay Bridge in place to the maximum practicable extent. Trees that must be taken down during construction will be replaced after construction, where practicable, per City of Seattle requirements. There will be public involvement with both the Roanoke Park and North Capitol Hill communities in developing the vegetation management plan for this area.
- WSDOT will revegetate the SR 520 roadside areas from I-5 to the 10th/Delmar lid according to WSDOT standards but will consult with the Roanoke Park and North Capitol Hill communities to identify and select plantings compatible with the historic character of the area to the extent feasible.
- Where right-of-way fence is required, WSDOT will consult with the Portage Bay/Roanoke and North Capitol Hill communities about the possibilities for visually compatible fencing.
- To assist the North Capitol Hill community in future historic preservation planning efforts, WSDOT will record and evaluate for NRHP eligibility the Billodue House at 2333 Broadway Avenue East.

Potential Mitigation of Temporary Direct Effects

Montlake Bridge

Possible options for mitigating effects associated with changes from constructing the second Bascule Bridge include the following measures:

- In consultation with DAHP, the Seattle Landmarks Board, and the concurring parties to this Agreement, WSDOT will ensure that safeguards are in place such that, to the greatest extent possible, the historic Montlake Bridge is protected from inadvertent physical damage during construction of the new bascule bridge.
- In consultation with DAHP and the University of Washington, and any other concerned concurring parties to this Agreement, WSDOT will ensure that safeguards are in place such that, to the maximum extent feasible, vibrations, excavations, and heavy equipment do not affect the Canoe House during construction of the new bascule bridge. No construction staging or storage will occur in the vicinity of the Canoe House.
- WSDOT will ensure that access to the Ship Canal Waterside Trail will be maintained throughout construction of the new bridge by means of temporary detours. Full access to the trail will be re-established once bridge construction is completed; the nature of this access will be determined as part of the bridge design process.
- During construction of the second bascule bridge, WSDOT will maintain access through the Montlake Cut for marine traffic, except for 6 days of closure over a 9-day period, when the bridge spans are being erected.
- If 2904 and 2908 Montlake Boulevard are demolished, WSDOT will undertake planning for and disposal of any resultant hazardous materials.

Portage Bay Bridge

Possible options for mitigating effects associated with changes to the Portage Bay Bridge include the following measures:

- WSDOT will develop a coordination plan with the Seattle Yacht Club to minimize disruption of traditional activities at the Seattle Yacht Club Main Station and on Portage Bay, the Montlake Cut, and Union Bay during construction. At a minimum, the plan will address the following issues:
 - key periods during which Seattle Yacht Club considers both water access and land access to its facilities particularly crucial;
 - ongoing coordination relative to special events being held at the Seattle Yacht Club or on the water;
 - provisions for water, vehicular, and pedestrian access to the Seattle Yacht Club Main Station for members and guests throughout the construction period;
 - mechanisms for WSDOT to communicate with Seattle Yacht Club about construction schedules on Portage Bay;
 - prohibition on the use of West Montlake Park for construction staging or other construction-related activities;

- provisions for coordination between WSDOT and Seattle Yacht Club regarding construction activities in Portage Bay and the Montlake Cut during Opening Day Events (one week before the first Saturday of May and one week after);
- a moratorium on towing of pontoons through Portage Bay, the Montlake Cut, and Union Bay during the Opening Day Events period; and
- a commitment from WSDOT that barge activity (transport, moorage, construction, etc.) will be timed to avoid interfering with Opening Day Events in Portage Bay.
- WSDOT will negotiate an agreement with the NOAA Northwest Fisheries Science Center to avoid damage to their historic structures and interruption of historic research functions at their facility during SR 520 construction.

Other Historic Properties

Possible options for mitigating other effects on historic properties include the following measures:

Access to Historic Properties

- Except for unavoidable brief periods, WSDOT will maintain access to all historic properties during construction.
- WSDOT will coordinate with St. Demetrios Church to develop a plan for ensuring access to the church grounds and facilities in the event that the Lynn/19th Avenue potential haul route is chosen for use at any time during Project construction. This plan will include the following:
 - A prohibition on any use of the potential Lynn/19th haul route during the weekend of the annual Greek Festival and on the day of the annual fund-raising auction.
 - A requirement that the contractor provide a flagman to assist parishioners entering and exiting the St. Demetrios parking lot during any use of the potential Lynn/19th Avenue haul route one half hour before, during, and one half hour after regularly scheduled Sunday services.
 - A process for ensuring safe access to the St. Demetrios parking lot for special events scheduled during any period of use of the potential Lynn/19th Avenue haul route.
- To minimize effects on the Roanoke Park Historic District, WSDOT will offer to develop a coordination process with St. Patrick's Church to ensure access to the church grounds and facilities during construction.
- To minimize effects on the Roanoke Park Historic District, WSDOT will maintain pedestrian access to St. Patrick's Church, Seward School, St. Demetrios Church, and local bus stops throughout the construction period.

Project-wide Direct Effects from Construction, including Demolition of Existing SR 520 Features and Hauling of Debris and Materials

- WSDOT will develop measures to protect traffic circles and planters from construction/hauling traffic and will restore islands and planters to their original condition should any modifications be necessary or should any inadvertent damage occur as a result of construction hauling.

- WSDOT will repair potholes and other pavement breaks that occur as a result of construction and hauling activities in a timely manner.
- WSDOT will repair local streets and curbs damaged by construction activities during and after construction.
- Through the construction management planning process, WSDOT will identify appropriate best management practices (BMPs) to control fugitive dust; these practices may include some or all of the following:
 - avoiding grading and scraping activities during high winds;
 - keeping soils moist by using water trucks and sprays;
 - covering loads of soil and keeping dumpsters covered;
 - washing wheels and fender wells of haul trucks immediately prior to exiting the construction area;
 - cleaning the haul routes with a street sweeper;
 - using water sprays before, during, and after use of a wrecking ball or bulldozer for demolitions;
 - using covers or spray stabilizers on soil stockpiles;
 - using plants, bushes, rock walls, or wood fences to provide erosion control;
 - using filter fabric around catch basins to collect sediment from runoff;
 - installing a stabilized construction entrance (gravel buffer area) at the exits from construction areas.
- WSDOT will use visual barriers (e.g., orange snow fence, flagging) to mark limits of allowed disturbance in order to protect trees (including their root systems out to drip line) and other screening vegetation identified as being retained and protected in place.
- To the maximum extent feasible, WSDOT will avoid placement of temporary work bridges and other short-term construction features where they would require permanent removal of mature trees.

Potential Mitigation of Temporary Indirect Effects

Potential Mitigation Measures of Temporary Indirect Effects Associated with the Montlake Bridge

Possible options for mitigating other effects on historic properties include the following measures:

Project-wide Indirect Effects from Construction, including Demolition of Existing SR 520 Features and Hauling of Debris and Materials

- WSDOT will monitor and ensure compliance with local noise regulations for construction and equipment operation.

- Where feasible, WSDOT will locate construction sheds, barricades, and material storage away from historic properties, and avoid obscuring views of or from historic properties, as much as is practicable.
- Where feasible, WSDOT will install temporary construction screens/barriers (fencing, plantings) around constructions areas so that visual impact of construction activities on historic properties are minimized.
- WSDOT will limit use of construction lighting as much as possible and keep necessary lighting pointed away from residences and other sensitive areas to the maximum extent feasible

Summary

Development of avoidance, minimization, and mitigation measures are ongoing, and are not yet completed. The PA is currently being developed in consultation with SHPO, ACHP, and other Section 106 consulting parties. The purpose of this section was to identify potential means for resolving the project's adverse effects on historic properties. These potential measures represent the mitigation measures presented in a draft PA that were provided to DAHP, ACHP, and other consulting parties on January 10, 2011.

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