Chapter 6
Effects

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.

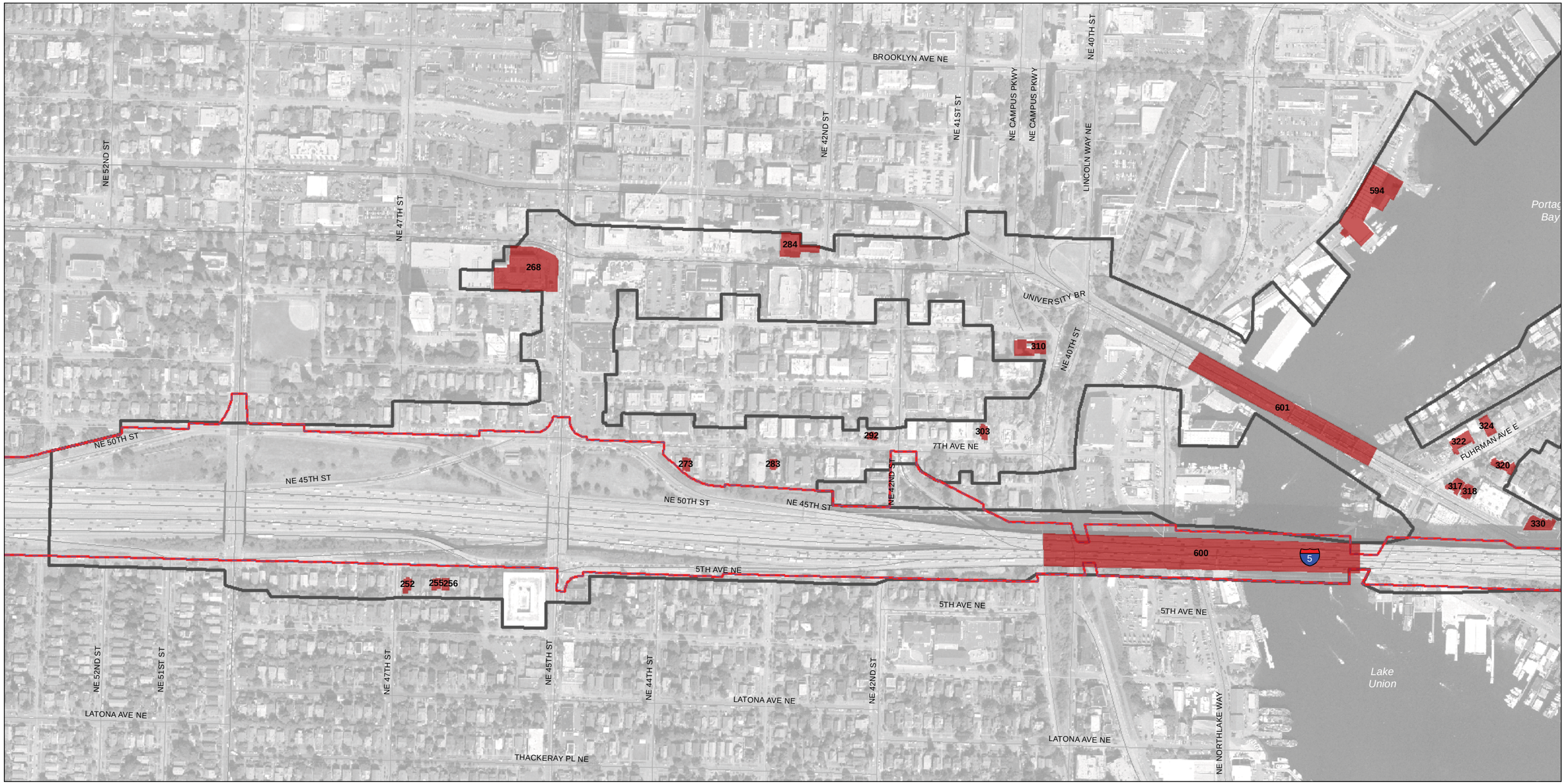
The Preferred Alternative would affect historic properties located in the APE. This chapter identifies the potential effects of the Preferred Alternative on historic properties in accordance with Section 106 of the NHPA.

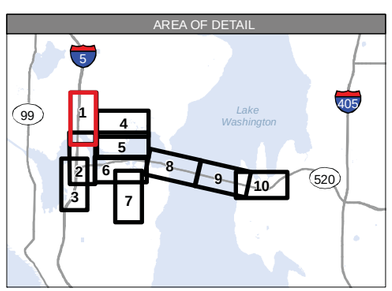
Exhibit 5-1 lists all of the historic properties in the APE; Exhibits 6-1a through 6-1j show the properties' locations in relation to project elements to illustrate the potential for effects.

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.

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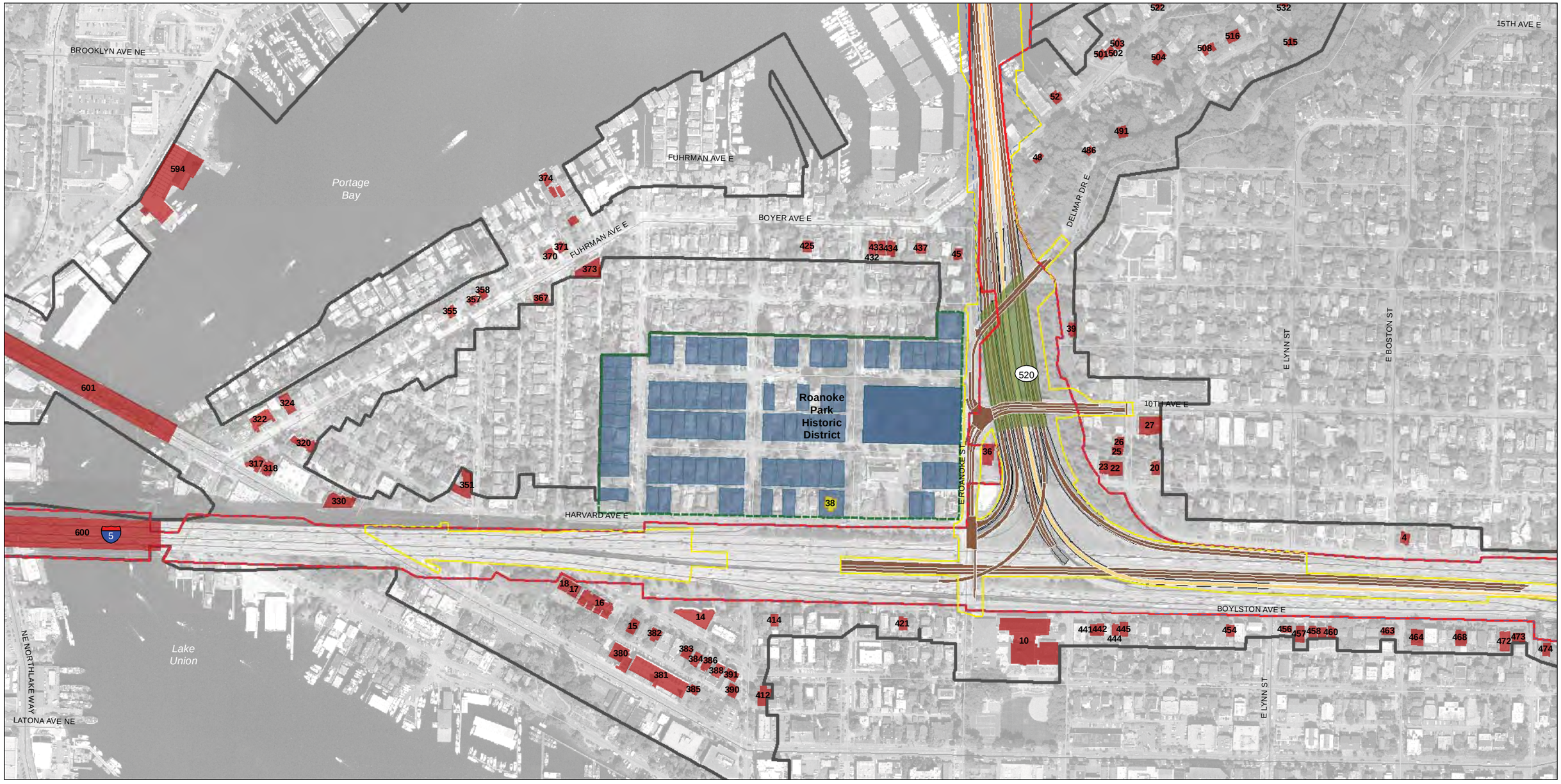
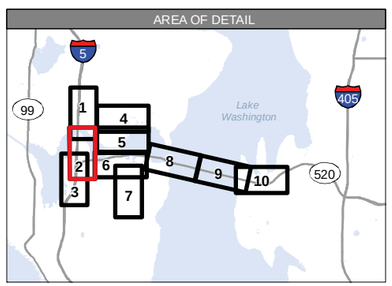
Exhibit 6-1a. **Project Elements of the Preferred Alternative and Historic Properties, Sheet 1**

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





NRHP Eligibility

- 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
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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

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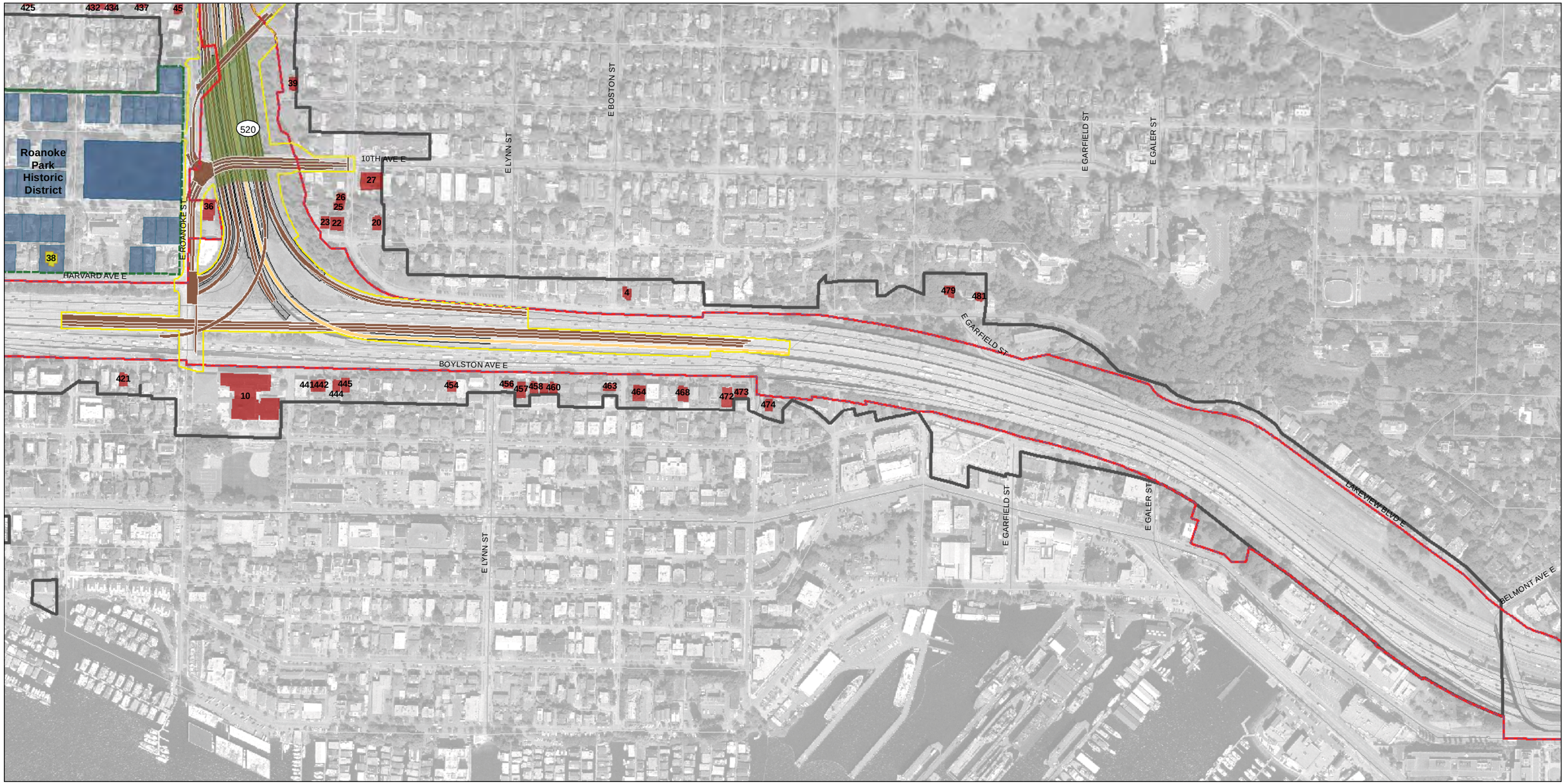
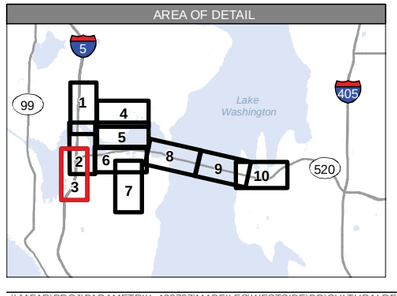


AREA OF DETAIL



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.

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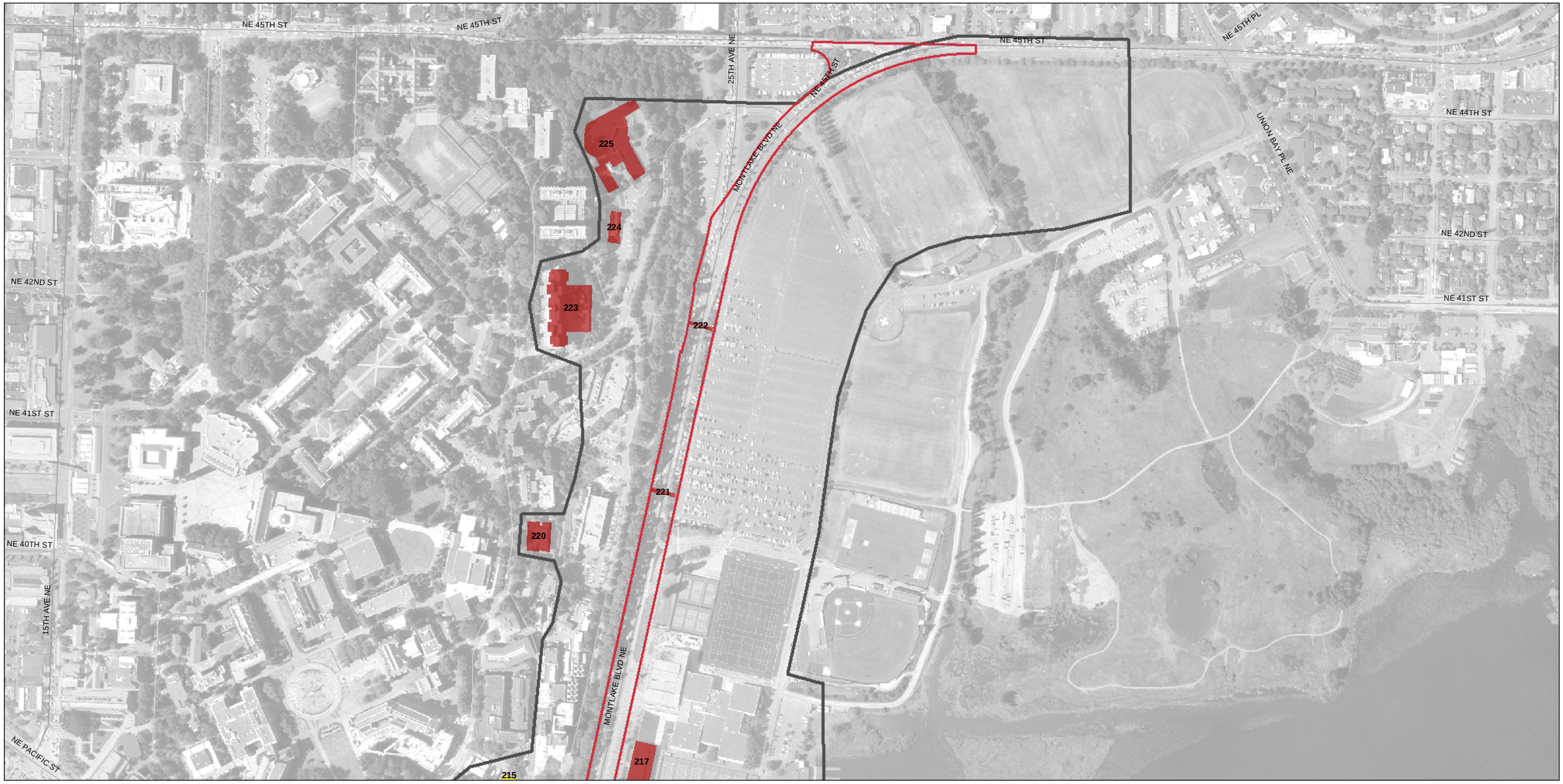
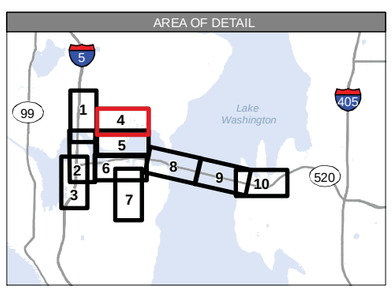
Exhibit 6-1c. **Project Elements of the Preferred Alternative and Historic Properties, Sheet 3**

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





NRHP Eligibility

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible

- Historic District Boundary
- Area of Potential Effects
- Proposed Right-of-way
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- Limits of Construction

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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

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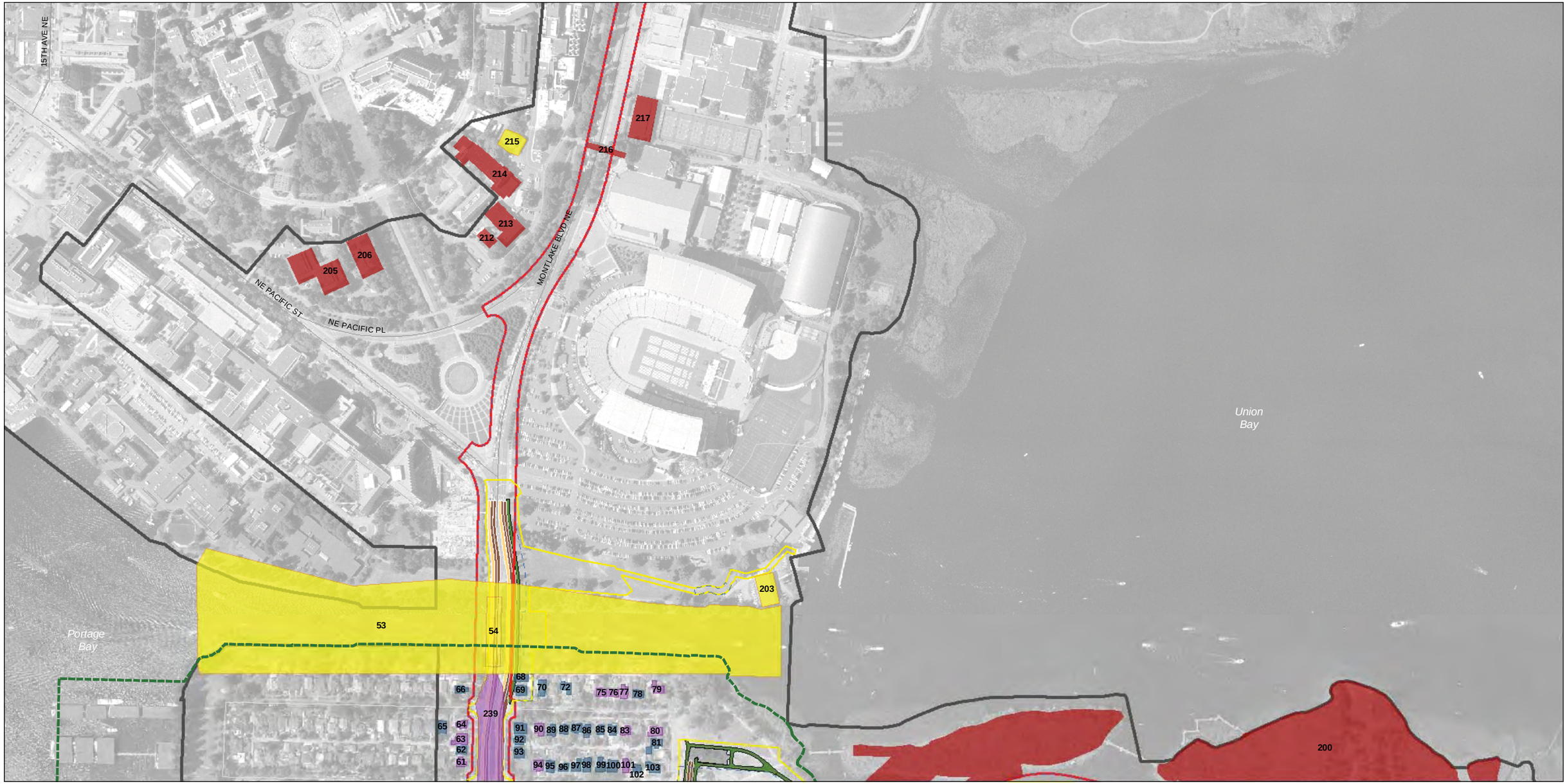

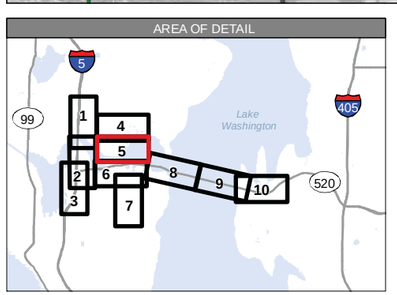

NRHP Eligibility

- NRHP Listed
- NRHP Eligible
- Contributing
- Contributing and Eligible

- Historic District Boundary
- Area of Potential Effects
- Proposed Right-of-way
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- HOV, Direct Access, and/or Transit-Only Lane
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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