5.0 PROJECT DESCRIPTION

The Salmon Creek Interchange Project considered a range of alternatives, which are discussed in Chapter 3, to address the mobility and safety issues in the Salmon Creek area, while minimizing effects to the community and the environment. The range of alternatives studied was narrowed to two alternatives, which are the focus of this Environmental Assessment (EA). They are:

1) The Proposed Build Alternative, commonly referred to as the Salmon Creek Interchange Project, and
2) The No Build Alternative.

This chapter provides an overview of the project study area and a description of these two alternatives.

5.1 Where is the project located?

The Salmon Creek Interchange Project is located north of Vancouver, Washington, in unincorporated Clark County. Exhibit 5.2-1 illustrates the overall project study area, or the area where direct and indirect effects from the project are anticipated.

The Salmon Creek Interchange project study area is bounded by NE 129th Street to the south, the NE 179th Interchange of I-5 to the north, NW 2nd Court to the west and NE 29th Avenue to the east. The project study area encompasses two interstate highway systems (I-5 and I-205). Land uses include residential (both single family homes and multifamily complexes), commercial and retail services, light industrial or manufacturing, and the Legacy Hospital on the east side of I-205.

Staging areas would be determined at the start of construction and would be limited to within the project study area. WSDOT would utilize areas within the right-of-way for staging and material storage. Staging would not occur in any natural resource area.

The project study area also includes four potential offsite mitigation areas located in unincorporated Clark County. The portions of the project study area associated with these sites are defined by a 500-foot buffer around the proposed mitigation footprints. The locations of these sites are as follows:

What is a direct effect?

Direct effects are caused by an action and occur at the same time and place (40 CFR 1508.8).

What is an indirect effect?

Indirect effects, also called secondary effects, are those that are "caused by an action and are later in time or farther removed in distance but are still reasonably foreseeable" (40 CFR 1508.8).

- **Carpio Mitigation Area** – located southwest of the NE 159th Street/NE 72nd Avenue intersection
- **Dietrich Mitigation Area** – located northeast of the NE 159th Street/NE 152nd Avenue intersection
- **Padden Mitigation Area** – located between NE Padden Parkway and NE 78th Street, west of NE Anderson Road
- **Grimm Mitigation Area** – located southwest of the NE 99th Street/NE 72nd Avenue intersection

The project study area is shown in Exhibit 5.2-1.

5.2 What are the principal features of the project?

The project is proposed to be built in two phases, coinciding with the availability of funding. Phase 1 improvements have been identified as the most crucial for improving mobility. Phase 2 improvements would continue to improve mobility within the Salmon Creek area. It is possible that some improvements proposed in one phase would be moved to the next phase. This would depend on funding availability and construction costs.

What is the project timeline?

The anticipated construction start date for Phase 1 is 2010. The time estimated for Phase 1 construction completion is approximately 3.5 years (2013). Phase 2 construction is expected to begin in 2015 and last 2.5 years (2017), provided funding becomes available.

As outlined in Chapter 2, both phases, in the context of this EA, are considered as a single project.

It is anticipated that funding for Phase 1 would come from a combination of state and local transportation funds and federal grants. Phase 2 is currently unfunded; however, the improvements are identified in the County's Capital Improvement Plan and State of Washington Transportation Plan.

Exhibit 5.2-2 and the exhibits in Appendix B provide an illustration of the proposed project. Conceptual visualizations and roadway sections of some of these improvements are shown in Exhibit 5.2-3 through Exhibit 5.2-6.

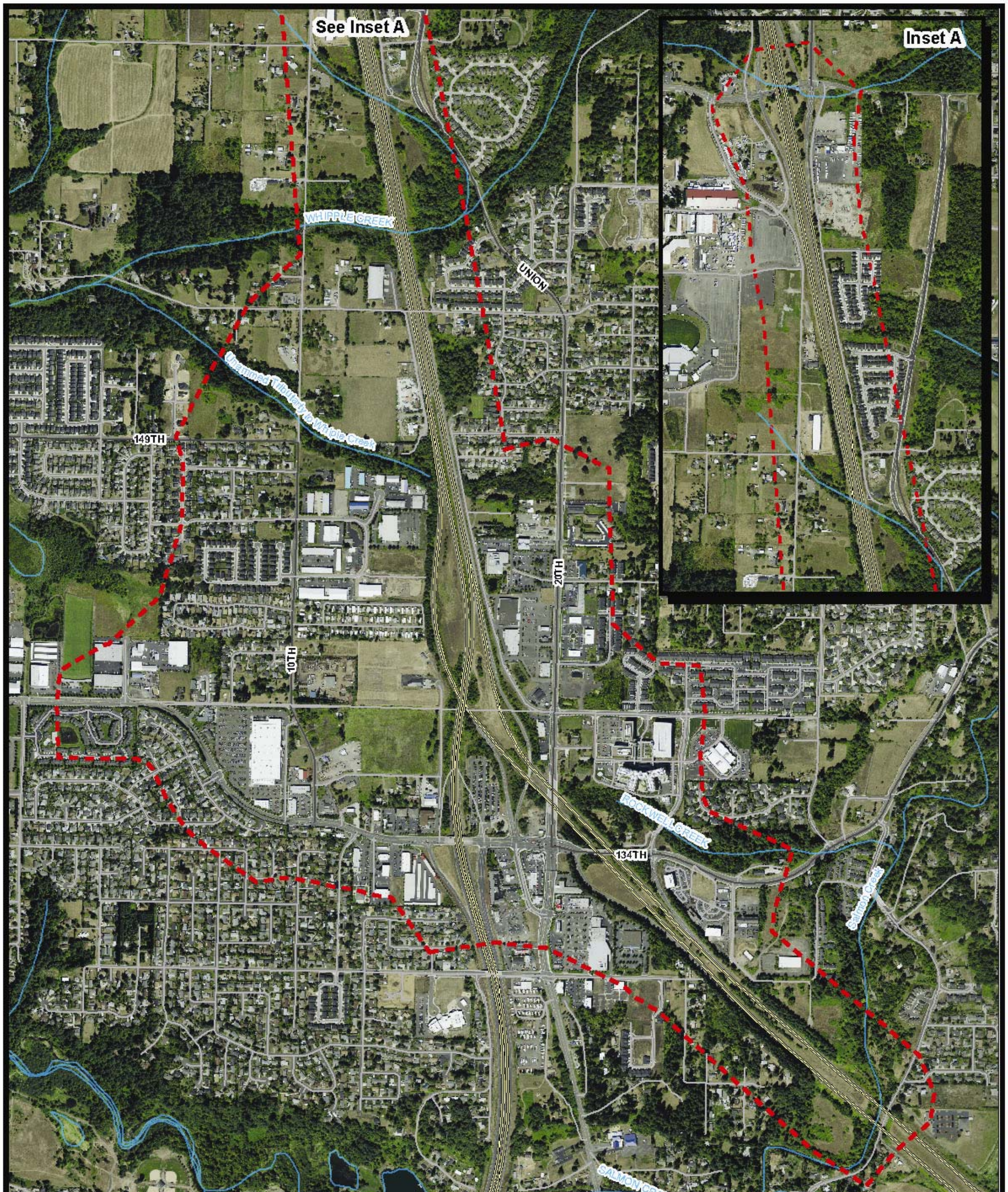

Exhibit 5.2-1 (Sheet 1 of 2)

Salmon Creek Interchange Project

Project Study Area

Legend

Project Study Area
Streams
Highway
Major Road
Minor Road
0 250 500 750 1,000 Feet

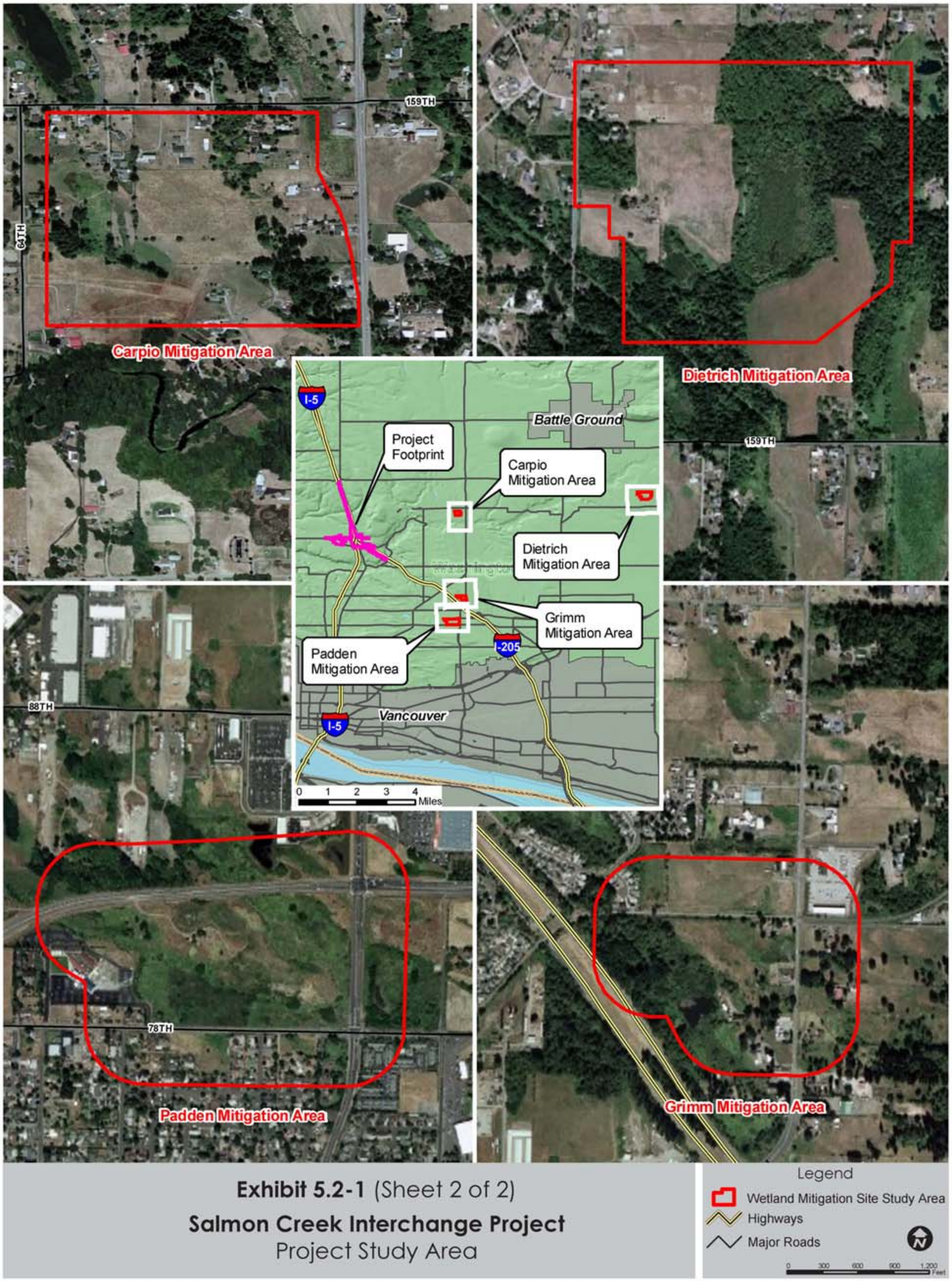

Exhibit 5.2-1 (Sheet 2 of 2)

Salmon Creek Interchange Project

Project Study Area

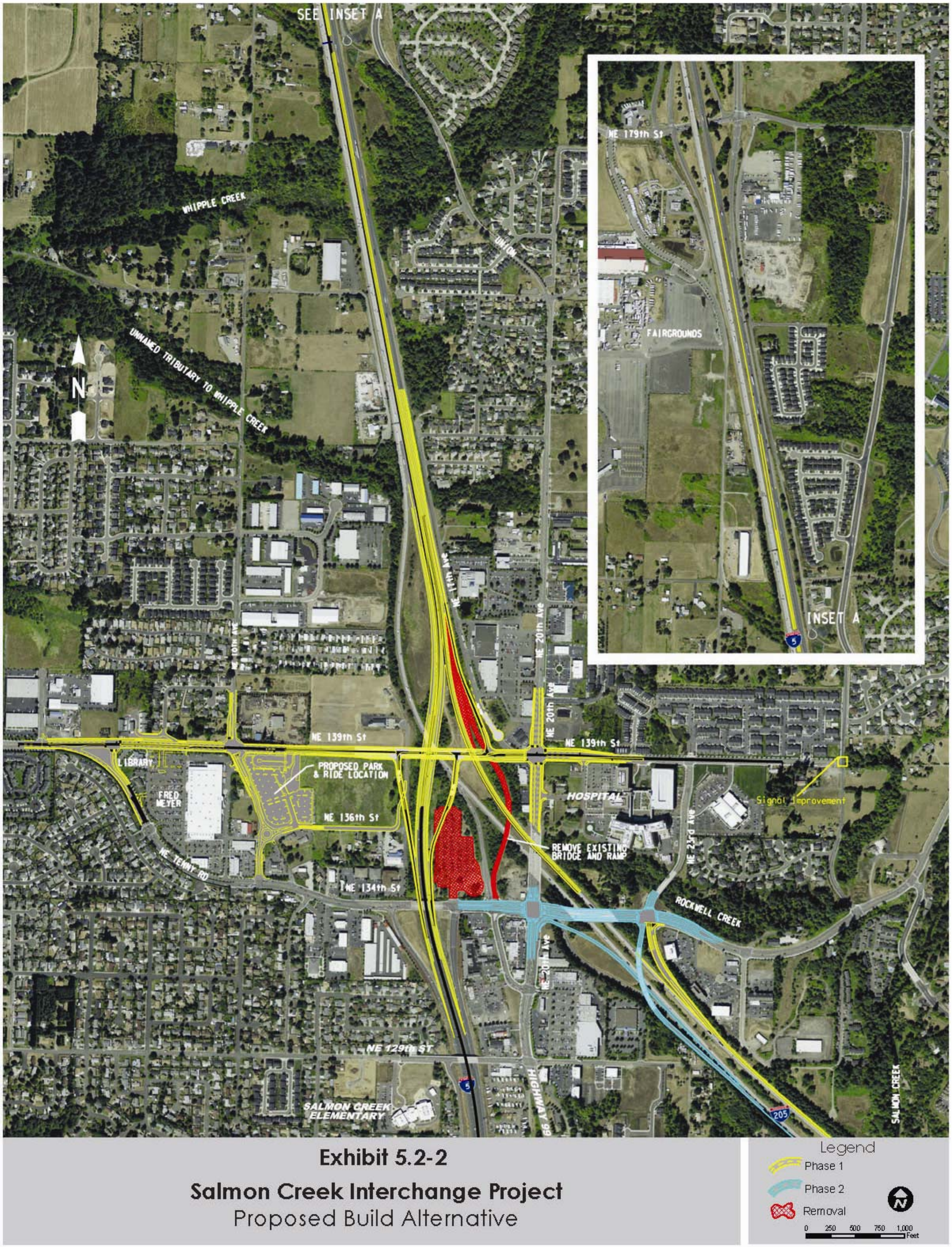

Exhibit 5.2-2

Salmon Creek Interchange Project

Proposed Build Alternative

5.2.1 Phase 1 Features

Interstate Improvements

Phase 1 improvements to I-5 and I-205 would include the following components:

- A new overcrossing of I-5 and I-205 would be constructed at NE 139th Street.
- New ramps would be added to NE 139th Street to expand the existing interchange into an interchange complex.
- The on-ramp from NE 134th Street to I-5/I-205 northbound would be removed and relocated to NE 139th Street. The existing I-205 southbound off-ramp and northbound Highway 99 legs would remain. The NE 134th Street westbound right-turn lane at the intersection would be removed as the northbound on-ramp would be demolished.
- The existing I-205 northbound off-ramp to NE 134th Street would be widened to provide a two-lane off-ramp with an exit only auxiliary lane on I-205 northbound.
- A new I-5 northbound auxiliary lane from the I-205 merge area to an auxiliary lane approaching the NE 179th Street interchange would be constructed in the existing median of I-5.
- A new I-5 bridge over I-205 southbound would be constructed and would be wide enough to accommodate the future expansion of I-5 to three lanes in both directions.
- Northbound I-205 would be realigned to the west at NE 139th Street to accommodate vertical clearance requirements with NE 139th Street.

What is an auxiliary lane?

An auxiliary lane is an extra or extended lane that provides space for vehicles to accelerate or decelerate. It helps to improve safety when entering and exiting vehicles merge at an intersection or interchange.

Exhibit 5.2-3: Conceptual Visualization of the Expanded Interchange Complex (I-5 Looking North)

Exhibit 5.2-4: Conceptual Visualization of the Expanded Interchange Complex (I-5 Looking South)

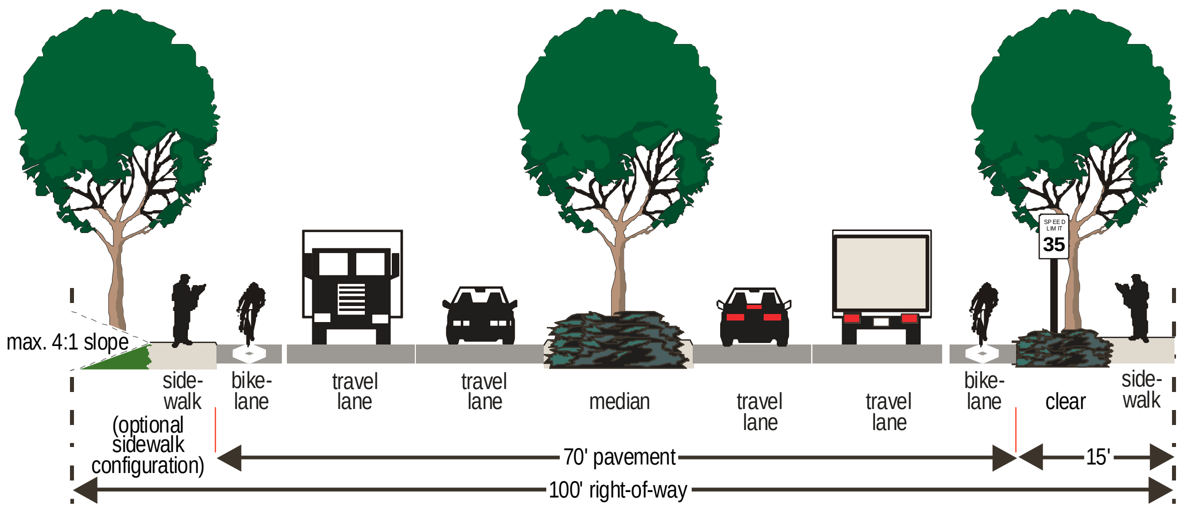

Exhibit 5.2-5: Conceptual Local Roadway, NE 139thStreet\ NE Tenney Road to the Main Driveway Entrance of Legacy Hospital

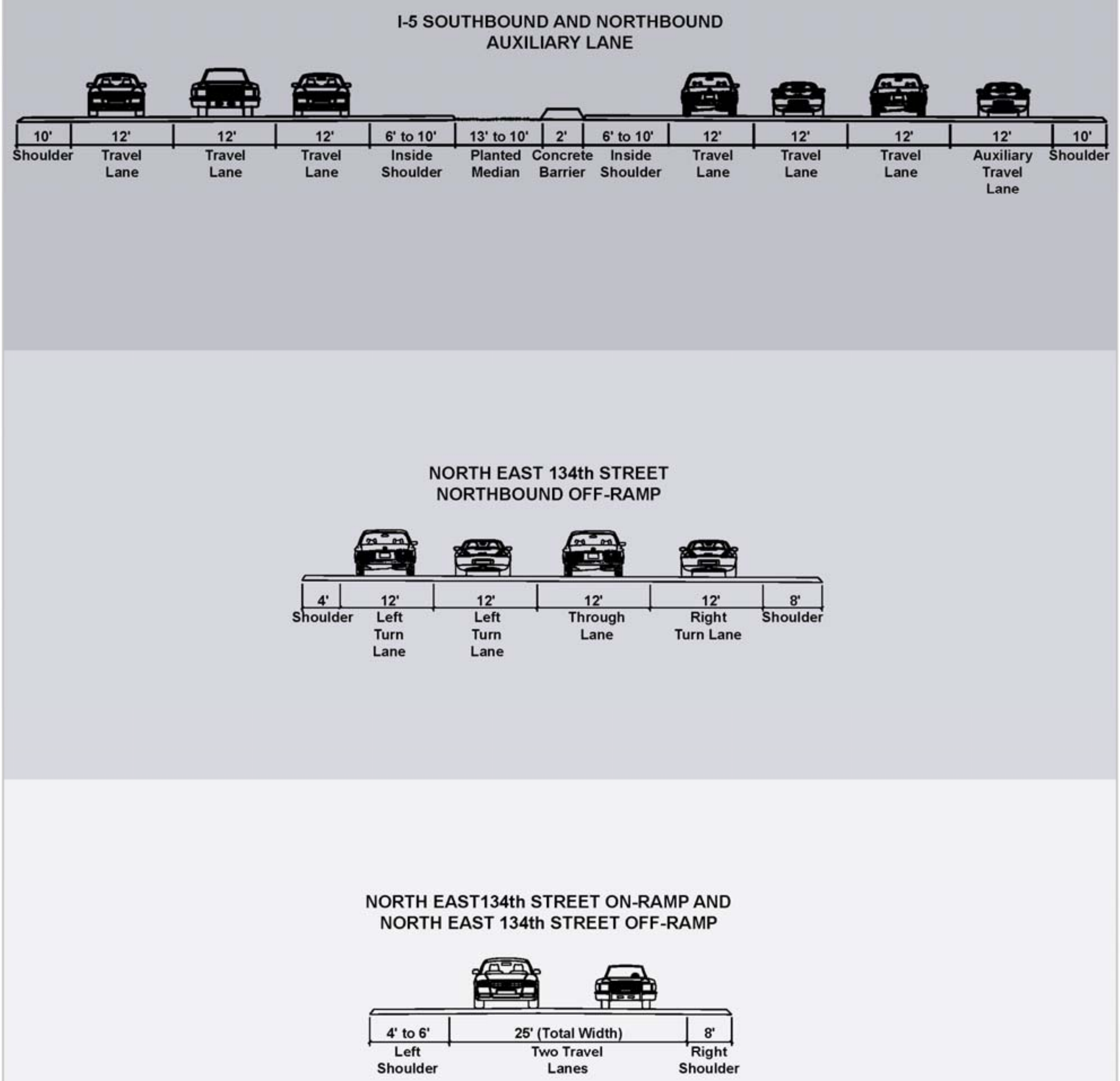

Exhibit 5.2-6

Salmon Creek Interchange Project

Conceptual Cross Sections (I-5)

Improvements to the Local Road System

Improvements to the local roadway system associated with Phase 1 of the project would include the following:

- The C-TRAN Park-and-Ride would be relocated from NE 134th Street to a new location near the SE corner of NE 139th Street and NE 10th Avenue. Riders would access the Park-and-Ride from NE 136th Street. Buses would access the Park-and-Ride from NE 139th Street. The associated frontage along NE 136th Street would be improved. The signal at the existing Park-and-Ride location across from the I-5 northbound off-ramp at NE 134th Street would be modified.
- NE 139th Street would be widened to a minimum of two lanes in each direction with bike lanes, a sidewalk on the south side, and a median from NE Tenney Road to the main driveway entrance of Legacy Hospital (west of 23rd Avenue). A new segment of NE 139th Street from NE 10th Avenue to NE 20th Avenue, which passes over I-5 and I-205, would be constructed with walls and structure and would contain the necessary channelization. New signals would be installed on NE 139th Street at the intersections of NE Tenney Road, NE 10th Avenue, and NE 29th Avenue.
- NE 20th Avenue and NE 139th Street would be redesigned with double left turn lanes and right turn lanes in all directions. The existing traffic signal would be replaced to accommodate the additional lanes at this intersection.
- NE 139th Street and NE Tenney Road would be redesigned to a signalized modified "T" configuration with NE 139th Street being the main through route. The eastbound NE 139th Street traffic would have a two-lane slip lane to NE Tenney Road.
- NE 16th Avenue would be realigned to the west to accommodate the I-5 southbound on-ramp from NE 139th Street.
- Access from NE 17th Avenue to NE 139th Street would be closed with the construction of the onramp from NE 139th Street to I-205 northbound. Access to the commercial property between NE 17th Avenue and NE 20th Avenue would be from NE 20th Avenue. Residential traffic would

use NE 150th Street to travel from NE 20th Avenue to NE 17th Avenue.

- NE 10th Avenue would be widened from NE 134th Street to NE 141st Street to one lane in each direction with bike lanes, sidewalks, and turn lanes at the signalized intersection of NE 10th Avenue and NE 139th Street. A roundabout would be at the intersection of NE 10th Avenue and NE 136th Street. Modifications would be made to the curb return from NE 134th Street westbound to NE 10th Avenue northbound.

5.2.2 Phase 2 Improvements

Interstate Improvements

A new southbound on-ramp from NE 134th Street at NE 23rd Avenue to I-205 southbound and a northbound NE 20th Ave to southbound I-205 slip ramp would be constructed as part of the Phase 2 improvements. The existing slip ramp from I-205 southbound to NE 134th Street would be removed.

What is a slip ramp?

A ramp where vehicles do not have to stop or yield to enter the ramp (i.e., no signal, stop sign, or yield sign is located at the ramp/cross-road intersection).

Local Roadway Improvements

Phase 2 improvements to the local roadway system would include the following:

- NE 134th Street from NE 20th Avenue to NE 23rd Avenue would be widened.
- The NE 134th Street/NE 20th Avenue intersection would be improved.

5.2.3 Noise Walls

WSDOT proposes to construct noise walls at four locations during Phase 1 of the project, provided adjacent residents are in agreement. Information about specific locations can be found in Chapter 6.2. The locations of the proposed walls are also shown in Exhibit 6.2-3.

What is a noise wall?

Noise walls are solid obstructions built between the highway and the receptors along a highway. They do not completely block all noise; they only reduce overall noise levels.

Sound is quantified by a meter which measures units called decibels (dB). Effective noise barriers typically reduce noise levels by 5 to 10 decibels (dB), cutting the loudness of traffic noise by as much as one half. For example, a barrier which achieves a 10-dB reduction can reduce the sound level of a typical tractor trailer passing to that of an automobile.

5.2.4 Retaining Walls

The project would require retaining walls in several locations along portions of the new roadway and interchange at NE 139th Street, at the new Park-and-Ride location, and at the southbound I-205 ramp. It may also be necessary to construct retaining walls in other locations near the proposed improvements. The exact location and height of these walls would be refined as the design progresses.

5.2.5 Wetland Mitigation

The Salmon Creek Interchange Project would also include wetland mitigation to compensate for effects associated with roadway improvements. Permanent effects to wetlands would be mitigated through the preservation, creation, rehabilitation, or enhancement of wetlands. At the time this Environmental Assessment was prepared, four potential sites (Carpio, Dietrich, Padden, and Grimm) were under consideration to meet the mitigation needs of the project. Any combination of these sites may ultimately be selected for inclusion in the project. All four sites are located within the Salmon Creek watershed, as shown in Exhibit 5.2-1.

5.2.6 Property Acquisition

The project would require partial acquisition of up to 35 properties and total acquisition of up to 17 properties. Of the properties to be partially acquired, four are residential, 15 are businesses, 2 are residences and business, and 14 are vacant land. Of the properties to be completely acquired, 8 are residential, 1 is a business, 1 is a residence and business, and 7 are vacant land. The locations of the proposed acquisitions are also shown in Exhibit 6.3-3.

In addition, property suitable for wetland mitigation would be purchased from willing sellers. The environmental effects of the land conversion to permanent wetland mitigation areas would not result in substantial effects.

5.3 How would stormwater be managed?

The project would result in approximately 23.5 acres of new pollution-generating impervious surface (PGIS). Stormwater runoff from the new PGIS or equivalent areas would receive water quality treatment and flow control. The project would also retrofit approximately 26 acres of existing PGIS for stormwater treatment and remove approximately 9 acres of existing pollution-generating impervious surfaces.

Stormwater flow control and quality treatment would be provided as appropriate according to WSDOT's Highway Runoff Manual (HRM) (2008b), which is consistent with the revised Washington State Department of Ecology 2005 Stormwater Management Manual for Western Washington (2005). Additional design references and guidelines would be used as required by local jurisdictional requirements, particularly those guidelines established by Clark County ordinance. Chapter 6.6 includes a more detailed discussion of stormwater and proposed treatment approach.

5.4 What is the No Build Alternative?

The No Build Alternative is defined as actions that would occur should the Proposed Build Alternative not be constructed. These are conditions that currently exist, as well as programmed and funded projects within the project study area (Exhibit 5.2-2; Appendix B). The No Build Alternative includes ongoing routine maintenance and short-term minor construction necessary for continued operation of existing WSDOT and Clark County transportation facilities and minor safety improvements, as required, within the project study area.