

# Project Area Map



## CHAPTER 1 - PURPOSE & NEED

### What's in Chapter 1?

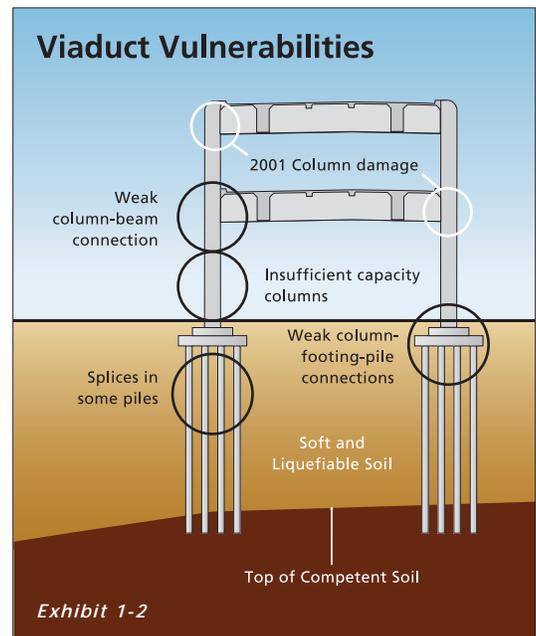
Chapter 1 explains the purpose of the project, why the viaduct needs to be replaced, how this project fits in with the broader Alaskan Way Viaduct and Seawall Replacement Program, and who is leading the project.

#### 1 What is the SR 99: S. Holgate Street to S. King Street Viaduct Replacement Project?

This project involves replacing about one mile of the State Route (SR) 99 mainline (also known as the Alaskan Way Viaduct) located between S. Holgate Street and S. King Street, as shown in Exhibit 1-1. Construction is expected to begin in mid-2009 and be completed in fall 2013.

#### 2 What is the purpose of this project?

The purpose of this project is to replace the seismically vulnerable SR 99 mainline with a seismically sound facility between approximately S. Holgate Street and S. King Street. This portion of SR 99 is vulnerable to earthquakes and is deteriorating. The new SR 99 facility would maintain or improve access to, from, and across SR 99 for general purpose vehicles, transit, and freight.



### 3 Why do we need this project?

#### Seismic Vulnerability

The ability of the Alaskan Way Viaduct to withstand earthquakes needs to be improved. The viaduct is vulnerable to earthquakes because of its age, design, and location. The viaduct was constructed in the 1950s and conformed to the design standards of that time. The structure was designed to seismic criteria that are less than one-third as stringent as today's criteria. The viaduct's existing foundations and column footings are embedded in liquefiable soil, and the structure is deteriorating, as shown in Exhibit 1-2. These factors make the structure vulnerable to earthquakes and necessitate its replacement. If another earthquake were to damage portions of SR 99, Washington State Department of Transportation (WSDOT) would likely restore the section of the SR 99 corridor south of downtown first because it provides transportation functions critical to south Seattle and the region.

#### Roadway Design Deficiencies

The Alaskan Way Viaduct does not meet current roadway design standards and has deficiencies that need to be improved. Specifically, the viaduct has narrow lanes that can adversely affect traffic safety, operating speeds, and roadway capacity. Substantial sections of the viaduct roadway have minimal or no shoulders. Lack of shoulders or narrow shoulder widths can also adversely affect roadway safety, operations, and capacity.

#### Transportation Functions

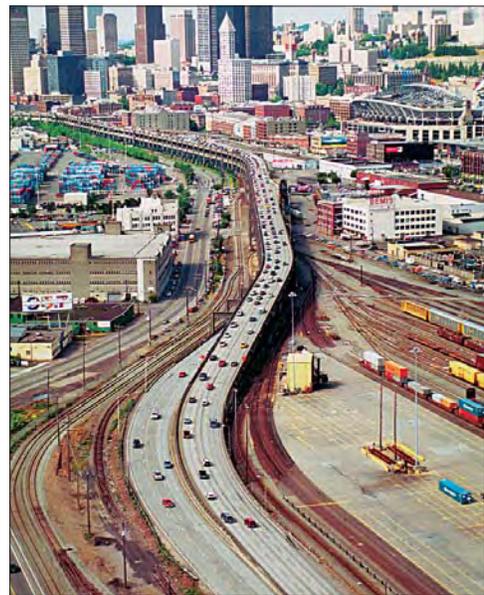
This section of SR 99 and E. Marginal Way S./Alaskan Way S. interacts with one of the largest ports on the west coast, the Port of Seattle. The Port/Duwamish industrial area surrounding this portion of SR 99 is home to one of the West Coast's largest industrial ports and just over 80 percent of Seattle's designated industrial lands. The transportation system in this area plays a crucial role in the movement of goods and services for the entire state and the Pacific Northwest region. As such, this surrounding area is a vital international trade and transportation crossroads, where goods are distributed via roadway, water, rail, and air. It is home to the Port of Seattle's primary shipping operations; the main Amtrak and freight railyards for Washington State; and the intersection of several major highway routes, including Interstate 5 (I-5), I-90, SR 99, and SR 519. Connections between these facilities are often

#### What is liquefiable soil?

When soil liquefies, it transforms from a solid material that can support roadways and other structures to a quicksand-like material that flows like a liquid, potentially damaging roadways or structures built on it.



*Exposed rebar in viaduct column.*



*SR 99 view towards the north with the Whatcom Railyard to the left and the BNSF/SIG Railyard to the right. Qwest Field is visible in the upper right corner, and a portion of Terminal 46 can be seen above the Whatcom Railyard.*

congested, and railyard operations often block freight and local traffic.

This area is also home to two professional sports stadiums and an event center. On game days and during special events, thousands of people, vehicles, pedestrians, and buses are present. This area also serves traffic getting to the Seattle Ferry Terminal, also known as Colman Dock, which is WSDOT's busiest ferry terminal. Hundreds of cars can queue up during the peak summer and holiday seasons to use the ferry's service in this section of the SR 99 corridor. Vehicles waiting to enter the Seattle Ferry Terminal during these peak periods line up along Alaskan Way and underneath the viaduct. In addition, this section of SR 99 supports transit to and from West Seattle and other areas south of downtown.

Specific areas where access needs to be improved to support key transportation functions along this section of SR 99 include:

- **Transit access into downtown.** Transit access to and from downtown is currently provided at Seneca and Columbia Streets, which are located in the middle of downtown. Transit access could be improved if access to and from SR 99 were provided south of downtown.
- **East-west access across SR 99** between Port/Duwamish industrial facilities, railyards, and the stadiums. This access is currently provided via at-grade connections at S. Atlantic Street and S. Royal Brougham Way and is often blocked by trains.

#### **4 How does this project fit in with the Alaskan Way Viaduct and Seawall Replacement Program?**

This project is one in a series of six independent safety and mobility projects underway to address earthquake vulnerabilities and improve and enhance mobility as part of the larger Alaskan Way Viaduct and Seawall Replacement Program. The larger Alaskan Way Viaduct and Seawall Replacement Program covers a variety of planned improvements in the SR 99 corridor located between S. Spokane Street and Roy Street.

Originally, replacing SR 99 between S. Holgate and S. King Streets was part of the evaluation of alternatives in the Draft and Supplemental Draft Environmental Impact Statements (EISs) for the Alaskan Way Viaduct and Seawall Replacement Project, which extended from S. Spokane Street to Roy Street. The 2004 Draft EIS evaluated the effects of five build alterna-

### **Additional Information**

There is a CD attached to the back cover of this document. This CD provides additional project information, including the *Transportation Discipline Report, Air Quality Discipline Report, Draft Section 4(f) Parts A, B, and C, Technical Memoranda*, and *Draft Memorandum of Agreement*.

tives. The 2006 Supplemental Draft EIS narrowed the number of build alternatives evaluated to two: the Elevated Structure Alternative and the Tunnel Alternative. On March 13, 2007, Seattle voters were asked to vote yes or no to the Elevated Structure Alternative and yes or no to a modified version of the Tunnel Alternative. Citizens voted “no” to both options.

As a result, Governor Christine Gregoire, Seattle Mayor Greg Nickels, and King County Executive Ron Sims held a post-vote press conference where they vowed to work collaboratively to find a solution for the central waterfront portion of the SR 99 corridor. In the press conference, they identified the six safety and mobility projects located in the SR 99 corridor that could be developed and constructed independently. These projects are to be built as soon as possible to provide direct benefits to the traveling public. The environmental effects of one of these safety projects, removing and replacing the SR 99 mainline between S. Holgate Street and S. King Street, is evaluated in this Environmental Assessment (EA).

## **5 What is the purpose of this Environmental Assessment?**

This EA is being prepared to:

- Evaluate the environmental effects of replacing the existing SR 99 mainline between S. Holgate Street and S. King Street.
- Inform and receive feedback from the public and decision makers about the environmental effects of the project.
- Determine whether effects are significant and require an EIS or if project effects can be sufficiently documented through a Finding of No Significant Impact (FONSI).

## **6 Who is leading this project?**

This project is being led by a partnership between the Federal Highway Administration (FHWA) and WSDOT. FHWA is involved because they are funding a portion of the project. As the federal lead agency for this project, FHWA has the primary responsibility for the content and accuracy of this National Environmental Policy Act (NEPA) EA.

Most of the project’s funding is being provided from state funds allocated to WSDOT. WSDOT owns SR 99 and is responsible for structural inspections and major maintenance. WSDOT is the lead for the State Environmental Policy Act (SEPA). For these reasons, WSDOT is a co-lead agency with FHWA.

The City of Seattle is involved as a cooperating agency for this project. The City is responsible for viaduct traffic operations and minor maintenance. The City also owns and maintains the E. Marginal Way S./Alaskan Way S. surface street, the area underneath the viaduct, and many of the utilities located in the project area. Additionally, the City is responsible for issuing several of the permits needed to construct the project.