Chapter 4 Project Description

Chapter 4 describes the features and details of the proposed Variable Tolling Project. It also describes how the project will be built and various permits and approvals that will be required.

Existing truss structure on Evergreen Point Bridge

What are the features of the project?

The SR 520 Variable Tolling Project includes several components:

- A single, two-way mainline tolling location on SR 520.
- Vehicle-mounted transponders.
- Signs on routes approaching the tolling location.
- A customer service center with storefronts on both sides of Lake Washington.

Tolling Location

Example of gantry structure that could be used on the Evergreen Point Bridge

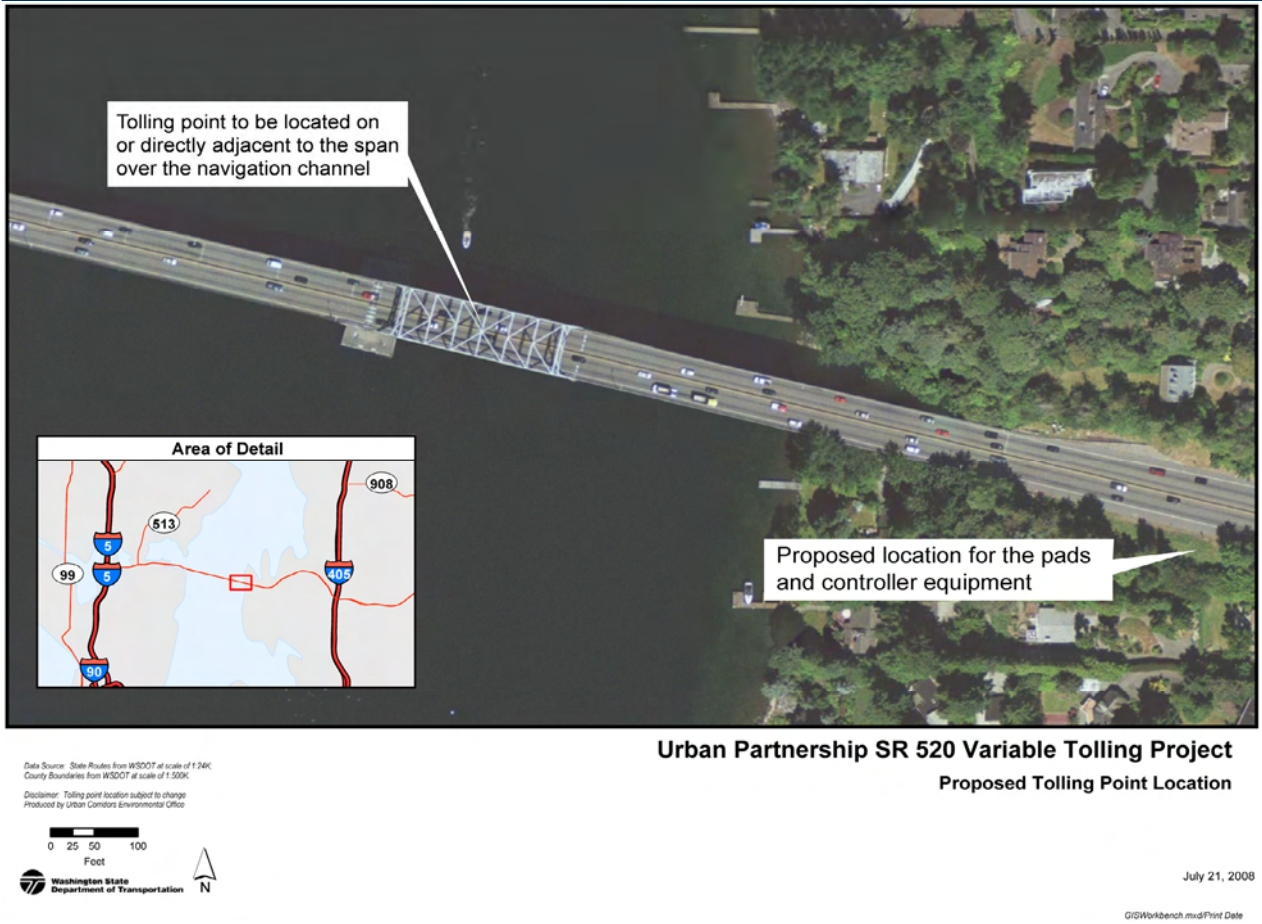
The project will place tolling equipment on the eastern end of the bridge either on the existing truss structure, or on a separate set of gantries near the truss structure. Tolling equipment will include overhead signs on the bridges for each direction of travel, an overhead automobile detection device, antennas, and other equipment that will read in-vehicle transponders, video cameras over each lane to capture license plate images, and either visible or infrared lighting.

In addition, roadside concrete pads, totaling approximately 150 square feet in area, with controller cabinets will be located on the east side of the lake just south of SR 520 in WSDOT right-of-way. A backup generator, or simply a generator transfer switch for

connection to a portable generator, will be included in case of power outages.

The proposed locations of the tolling equipment and the pads are shown in Exhibit 4-1.

Exhibit 4-1
Proposed Locations of the Tolling Equipment



Transponders

WSDOT will encourage drivers to obtain a transponder to place in their vehicle that is linked to a prepaid *Good To Go!*™ account. They will receive statements for their use of the bridge. This system is being used on both the Tacoma Narrows Bridge and the SR 167 High-Occupancy Toll (HOT) Lanes Pilot Project. Those without *Good To Go!*™ accounts will automatically have their license plate photographed and a bill sent to the address of where the

Windshield transponder

vehicle is registered. A surcharge will be added to the toll.

Signs

Signing along the corridor will be installed to inform drivers that they are approaching a tolled facility and identify the location of the last free exit. There are many options for the type and locations of the signing to be posted. For example, the toll rate could be posted, the price for the type of vehicle could be posted, the locations of the last opportunity to exit before being charged a toll could be posted, etc. We are currently studying these options and will make a decision before we implement tolling on SR 520. This decision will not affect the transportation analysis.

Customer Service Center

The customer service center maintains customer account and transaction information for those customers using the toll facility. Customers with *Good To Go!*™ accounts will have the amount of the toll debited directly from their accounts. Customers without *Good To Go!*™ accounts will be invoiced based on license plate information. Customers may access their accounts or make payments during business hours via walk-in storefronts, which will be located on both sides of Lake Washington, or 24 hours a day via telephone and the Internet. WSDOT is also evaluating whether the use of mobile units or retail locations will provide greater access to opening and maintaining accounts. WSDOT plans to migrate all current *Good To Go!*™ accounts to the new customer service center at some point to provide a single, integrated statewide center for all WSDOT tolling operations.

What is variable tolling and how will it reduce congestion?

Variable tolling can be defined as varying the price of tolls throughout the day to manage demand. This

reduces congestion by providing an incentive for drivers to change their behavior. For example, setting higher toll prices during the peak hours will encourage travelers to use an alternate route, an alternative mode of transportation, an alternate time of day, or eliminate trips altogether, which in turn will relieve congestion on SR 520 during peak periods.

WSDOT will collect tolls on SR 520 using electronic toll collection, which means no toll booths, no lines, and no delays for travelers since they will not have to stop and pay. This is similar to the way WSDOT collects tolls for the HOT lanes on SR 167 and a payment option for travelers using the Tacoma Narrows Bridge. The difference from these examples, however, is that electronic toll collection will be the only option for users of the Evergreen Point Bridge.

What toll rates are being considered?

Although the actual toll rates have not been determined, WSDOT developed two tolling scenarios that we used for this analysis. These scenarios represent the low and high ends of the range of likely toll rates. The low toll scenario represents an average one-way toll of $1.70, with daily rates between $1.00 and $2.95 depending on the time of day. The high toll scenario represents an average toll of $2.36, with daily rates between $1.50 and $3.80. All of these toll rates are expressed in 2007 dollars.

When and how will the project be built?

Currently our proposed construction schedule includes several elements. The first is to develop documents that request proposals from companies to build the project. We will complete this in early to mid-2009. Next, we will give the notice to proceed for construction in mid- to late-2009, and the project should be complete and opened in

mid- to late-2010. We expect construction to take approximately six months.

Prior to construction activities on SR 520, the WSDOT will require that the contractor install:

- High-visibility construction fencing to mark any sensitive areas located within the construction limits.
- Appropriate temporary erosion and sediment control measures in work areas prior to beginning construction activities. These measures will be monitored by WSDOT and the contractor for effectiveness throughout construction.

Installing tolling equipment above the roadway, building associated control equipment off the shoulder, and installing communications lines to connect the new system into the regional communications network will involve the following construction activities:

- Surveying the site to identify right-of-way limits, electrical and communication demarcation points.
- Clearing and grading areas adjacent to the existing highway where the tolling controller equipment will be located. WSDOT standard specifications, permit requirements and weather conditions (dry season or wet season) will limit the amount of clearing and open grading that can occur at any one time.
- Constructing the concrete pad upon which the control equipment will be mounted and installing the control equipment, transformer and backup generator on the concrete pad.
- Constructing the maintenance driveway to access the roadside equipment and the new electrical service. The driveway will be constructed of a pervious material like gravel. The new electrical service will be installed by the local utility company in coordination with WSDOT.

- Trenching in the south-side right-of-way east of the bridge structure and installing conduit to existing communications installations and the new electrical service.
- Installing conduit on the outside of the bridge, to connect over-lane equipment to the ground-mounted controllers.
- Running fiber optic lines and electrical conductors through the conduit. These will be connected on each end to create power and communications links to the new equipment.
- Installing lighting, cameras, and transponder readers overhead on the truss structure, over each lane.

The following final construction activities will be needed to complete the project:

- Testing the new equipment.
- Restoring roadside vegetation.
- Removing temporary erosion and sediment control measures and high-visibility construction fencing.

How will WSDOT let the public know about construction updates?

WSDOT will use the following techniques to provide people information regarding project construction activities:

- Updating project websites that report construction activities and the main SR 520 project Web site regularly
- Sending people messages using the existing SR 520 E-mail distribution list and other WSDOT e-mail lists
- Distributing media alerts to notify the media
- Ensuring that any road closures and detours are prominently signed

What permits and approvals will be required to build the project?

WSDOT will obtain the following permits and approvals for the project:

State

- Washington Department of Fish and Wildlife
  - Hydraulic Project Approval
- Washington State Department of Ecology
  - Coastal Zone Management Program Consistency Certification

Local

- City of Medina
  - Noise Variance
  - Shoreline Substantial Development Permit
  - Critical Areas Review

What are Critical Areas?

Critical Areas include wetlands, frequently flooded areas, critical recharge areas for local aquifers, geologically hazardous areas and fish and wildlife habitat conservation areas.

All cities and counties in Washington are required to adopt Critical Area regulations as stipulated by the Growth Management Act of 1995 (amended).