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Background Brief on ...

Columbia River Crossing

Background

The Columbia River Crossing (CRC) project is a bridge, transit, highway, bicycle and pedestrian improvement project proposed by the Oregon Department of Transportation (ODOT), the Washington Department of Transportation (WSDOT), and federal and local agencies. The project proposes to replace the existing two highway spans on Interstate 5 (I-5) across the Columbia River with two new spans, along with new interchanges on both the Oregon and Washington sides of the river and extension of light rail public transit into Vancouver, Washington. The project focuses on a five-mile segment of the I-5 corridor, beginning at State Route 500 in northern Vancouver and extending to just north of Columbia Boulevard in north Portland. The project's stated intent is to improve safety, reduce traffic congestion, increase mobility of motorists, freight traffic, transit riders, bicyclists and pedestrians, and to mitigate seismic risks.

The existing two spans of the I-5 bridge are one of two crossings of the Columbia River in the Portland/Vancouver metropolitan region – the other being the Glen Jackson Bridge on Interstate 205. The older of the two spans, the northbound span, opened to two-way traffic in 1917; once the second span opened in 1958, the original span was converted to one-way traffic. The bridge currently carries three lanes of traffic in each direction, with a narrow pedestrian walkway on each span. The bridge was originally built to replace an overcrowded ferry system.

The existing spans also include a bridge lift, which brings road traffic to a stop when a vessel exceeds the bridge's typical clearance. With the lift span, the

bridges can accommodate traffic as tall as 179 feet. Between 2009 and 2011 there were 409, 412 and 429 bridge lifts respectively.

Identifying the Problem

In early 1999, ODOT and WSDOT initiated the I-5 Trade Corridor Freight Feasibility and Needs Assessment, appointing a leadership committee to address five questions:

- Is there a congestion freight mobility problem on the corridor and, if so, what is its magnitude?
- What is the cost of inaction?
- What improvements are needed?
- How can improvements be funded?
- What are the next steps?

The leadership committee determined that without improvements, future congestion in the I-5 corridor threatened the economic promise of the Portland/Vancouver region. Doing nothing was not considered as an option; instead, it was decided that what was needed was a multi-faceted solution to address demand management, highway, transit and rail.

In 2000, the governors of Oregon and Washington appointed a 26-member I-5 Transportation and Trade Partnership Task Force, which recommended improvements to the I-5 trade corridor, including: light rail and express bus service; new vehicle and transit capacity; a bi-state land use accord; strong transportation demand management (**TDM**) and transportation system management (**TSM**); and commencement of the environmental impact statement (**EIS**) process. The governors then appointed co-chairs to lead a 39-member Columbia River Crossing Task Force to advise on the project development process, including the identification of transportation problems, potential solutions and evaluation criteria.

Purpose and Need

At the onset of the CRC project, the CRC Task Force, members of the public and stakeholders identified the current and future transportation problems in the corridor. This process informed the development of the Statement of Purpose and Need for the project and creation of the

evaluation criteria. The Columbia River Crossing project is designed to address six specific problems:

Growing travel demand and congestion: Heavy congestion on I-5 is the result of population growth in the region, with concurrent growth in employment and economic activity. The existing bridges are capable of accommodating about 5,500 vehicles per hour each direction. However, during peak periods, the number of vehicles traveling through the area results in significant congestion – two hours of congestion southbound during the morning commute, and four hours of congestion during the evening commute. This problem is exacerbated when an accident or breakdown occurs, as the existing bridges have no room to pull off the roadway.

Analysis by ODOT and WSDOT indicates that as the population of the region increases, congestion is likely to increase. Projections suggest that if no improvements are made, congestion will increase to 6.25 hours southbound during the morning hours, and 7.75 hours northbound and one hour southbound during afternoon and evening hours by 2030. Projections indicate that if the replacement bridge is built, by 2030 congestion will be approximately 3.5 hours southbound in the morning and zero to two hours northbound in the afternoon and evening.

Impaired freight mobility: Traffic congestion on I-5 reduces freight mobility between regional markets in Portland and Vancouver, as well as national and international destinations along the corridor. As the number of hours of congestion increases, it will continue to crowd out regular hours of freight movement, which tends currently to avoid the peak commute hours to avoid congestion.

Truck-hauled freight is expected to grow rapidly during the next few years, including as a percentage of freight moved through the region, from 67 percent of total freight moved in 2000 to 75 percent in 2035. The current total freight value moved across the bridge is approximately

\$40 billion, expected to increase to \$72 billion by 2030.

Limited public transportation operation, connectivity and reliability: Transit between Portland and Vancouver is currently conducted by bus and express bus service. Congestion reduces bus travel speeds and reliability; southbound bus service is up to three times longer during parts of the morning commute than during off-peak hours. Transit service times are expected to increase significantly by 2030 as congestion worsens.

Safety and vulnerability to accidents: There are approximately 400 vehicle crashes per year in the CRC project area, making it one of the most accident-intensive sections of the corridor. This is due to several design features of the current facility:

- There are seven interchanges spaced approximately one-half mile apart, insufficient for cars to enter and exit the highway and fully merge with traffic before the next interchange. Short on-ramps and off-ramps provide insufficient space to accelerate or decelerate, creating congestion and collision risk, especially for large trucks.
- Vertical grade changes due to the large “hump” in each of the existing bridge spans blocks view of conditions ahead.
- Narrow lanes and shoulders; the bridges themselves have no shoulders, and the northbound span has lanes one foot narrower than minimum standards, putting vehicles too close to physical barriers and other vehicles.
- Hazardous river navigation, particularly during peak traffic when bridge lifts are not allowed, and exacerbated when river levels are high and clearance under the I-5 and downriver rail bridge is low.

Substandard bicycle and pedestrian facilities: Existing bicycle and pedestrian paths are very narrow and extremely close to traffic and steel trusses; some do not comply with accessibility standards under the Americans with Disabilities Act.

Seismic vulnerability: The foundations of both bridges rest in soils that could liquefy during a major earthquake, and neither was built to current earthquake safety standards.

Record of Decision

In December 2011, the Federal Highway Administration and Federal Transit Administration issued a Record of Decision (**ROD**) for a preferred alternative, which validated the technical and public process and concluded the formal environmental planning process.

The process of development began in 2005 with identification of 70 potential components by the public, Task Force and from earlier studies of the bridge influence area (**BIA**). The components were divided into six categories: crossings (such as replacement bridges, supplemental bridges, tunnels, arterial crossings and entirely new corridors); transportation demand/system management (lane striping, increased park and ride capacity, and signal systems); freight (freight bypass lanes, peak period truck restrictions and enhanced highway design); transit (express bus, high speed rail, ferry service and light rail); bicycle/pedestrian (enhanced existing pathway, enhanced in-city connectivity and a new pathway-only bridge); and roadways north and south. These 70 components were narrowed to 31 using evaluation criteria developed by the Task Force and then combined into 12 representative corridor alternatives in three categories:

- Existing bridges only (two alternatives)
- Existing and supplemental bridges (five alternatives)
- Replacement bridge(s) only (five alternatives)

From these 12 alternatives, five were selected to be analyzed for the Draft Environmental Impact Statement from which a Locally Preferred Alternative (**LPA**) was eventually selected after a public comment period.

The CRC Task Force recommended a replacement bridge with added vehicle capacity,

light rail, use of TDM and TSM, and improved bicycle and pedestrian facilities.

In 2008, the Oregon and Washington governors appointed a 10-member CRC Project Sponsors Council (PSC). The PSC was supported by an integrated project staff from both state departments of transportation, as well as local governments and agencies. The CRC Project Sponsors Council recommendations included the features of the CRC project design, as outlined below.

The key features of the LPA include two new double-deck spans that would replace the existing two spans, to include:

- Light rail extension from the Portland Expo Center into Vancouver to Clark College on the lower southbound deck
- Bicycle and pedestrian paths on the lower northbound deck
- Three through lanes and two add/drop lanes in each direction
- Tolling, including higher rates during peak travel periods
- Improvements to interchanges in Portland and Vancouver

Cost and Financing

In 2009, the project reduced the scope and cost of the project by postponing improvements to the Victory Boulevard and SR 500 interchanges. The cost for the replacement of the existing I-5 bridges and improvements to five interchanges outlined in the Record of Decision is currently estimated between \$3.1 billion and \$3.5 billion. Those costs break down roughly as follows:

- \$1.2 billion for replacing the river bridges and approaches \$850 million for light rail transit extension
- \$435 million for roadway and interchanges in Washington
- \$595 million for roadway and interchanges in Oregon

ODOT and WSDOT have developed plans to further reduce the cost of the project, at least initially, by phasing construction of the project and deferring work on some non-highway elements on the Oregon side. These options

would reduce the cost of the project by approximately \$145 million.

Funding for the project would be split roughly evenly between the federal government, the combined contributions of Oregon and Washington, and revenues generated by tolls on the new facility. The federal New Starts program is expected to provide the cost of the light rail portion of the project (\$850 million), and other federal funding could provide as much as \$400 million in grants from the Federal Highway Administration. Tolling is expected to provide revenues sufficient to finance between \$900 million and \$1.3 billion, and will be the subject of an intergovernmental agreement to govern toll setting, administration, debt allocation and other issues.

Finally, each state would be responsible for contributing approximately \$450 million to the project. Early projections have indicated some of the options that may be available to the State of Oregon to cover its share; a funding package could include one or more of the following options:

- *Gas tax* – a one-cent per gallon tax statewide generates \$26.7 million per year
- *Vehicle registration fee* – a \$1 annual fee generates \$5.19 million per year
- *Title fee* – a \$1 fee generates \$1.22 million per year

Therefore, one possible package could include a one-cent per gallon gas tax, \$1 annual vehicle registration fee, and \$3 title fee – this package would raise an estimated \$35.5 million per year, sufficient to finance a 25-year bond for \$450 million. A legislative funding package is expected to be introduced for consideration in the Legislative Assembly during the 2013 Session.

Timeline and Governance

Planning and design are ongoing in preparation for an anticipated start date for construction. Construction is contingent upon funding from the federal government and both Oregon and Washington. Assuming that funding is forthcoming, limited project construction could begin as early as 2013 with major bridge

construction beginning in late 2014. Under that timeline, the new southbound bridge would open in 2018, followed by light rail service in 2019 and the opening of the northbound bridge in 2020, when demolition of the existing bridges would occur.

A number of outstanding issues besides funding remain to be settled prior to beginning construction. Although the Final Environmental Impact Statement (**FEIS**) and record of decision have been issued, a number of other permits and approvals are required. Most notably, the United States Coast Guard (**USCG**) has expressed concern regarding the proposed height of the new bridges on the CRC, which, while higher than the existing bridges, are significantly lower than the existing bridges when the bridge lift is up. USCG has indicated that this lower height may result in river navigation issues for some river users, and one shipper has initiated legal action. The project maintains that the mid-level bridge height recommendation contained in the ROD was developed over a decade of work with local communities on both sides of the river, the Federal Transit Administration, the Federal Aviation Administration, and the Federal Highway Administration, while also meeting the needs of most river users. Several analyses necessary for issuing the bridge permit are to be conducted during the remainder of 2012, and the project management team is planning to apply for the USCG permit late 2012 or early 2013. Permit approval is needed prior to beginning construction.

Other issues to be completed prior to construction include completion of Tier 2 and Tier 3 traffic and revenue (**T&R**) studies and an investment grade analysis of the financing plan, which includes tolling revenue estimates.

There are also a number of issues related to bi-state tolling and governance that remain to be worked out between Oregon and Washington. Both states are reviewing their respective authorities and work will commence in developing proposals and options for creating a governing structure for toll setting and administration, as well as debt allocation. Both

states have each also appointed legislative oversight committees to continue reviewing project planning and development.

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