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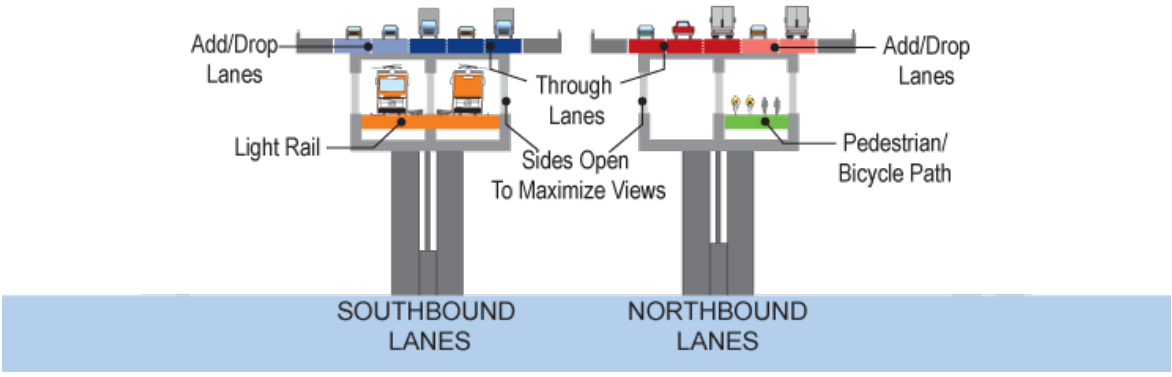
Columbia River Bridge Design

A new river crossing will replace the existing Interstate Bridge structures to carry I-5 traffic, light rail, pedestrians and bicyclists. Once the new structures are built, the existing bridges will be removed. Additional engineering work is currently underway. Community input will continue to be important as bridge aesthetics and architecture are developed.

The replacement crossing will have two bridge structures to carry a total of five vehicle lanes in each travel direction (three lanes of through traffic and two lanes for merging/diverging traffic) and full safety shoulders. Each structure will use a deck truss bridge type which takes advantage of the otherwise inactive underdeck space of this bridge type. The southbound bridge will carry light rail traffic under the highway; the lower deck of the northbound bridge will carry a wide bicycle and pedestrian pathway. The replacement bridge design does not include a lift span.



Navigation and aviation clearances affect bridge design

The replacement bridge design must balance the other transportation needs in the corridor, including the movement of freight and transit vehicles, as well as boat traffic on the Columbia River, and flight paths destined to/from nearby Pearson Field and Portland International Airport.

The construction of the replacement I-5 bridge requires a general bridge permit from the U.S. Coast Guard, an agency primarily focused on the needs of navigation. The states are interested in protecting a clear path for both river navigation and freight movement. CRC staff completed a Navigation Impact Report that documents the results of a comprehensive analysis conducted in 2012 to inform decisions related to the height and navigational clearance for the replacement Interstate 5 bridge. The report contains findings on river use, vessel impacts, freight mobility, highway safety and efficiency, landside impacts, air safety, economic impact and cost. The findings were used to inform a balanced decision by the states of Oregon and Washington on a proposed height of the bridge. A general bridge permit application for a bridge with 116 feet of clearance was submitted to the U.S. Coast Guard in January 2013.

Urban Design Advisory Group helps guide bridge design

The CRC's Urban Design Advisory Group developed design guidelines that are being used in continuing design efforts. The goal of the guidelines is to create structures that are of exceptional design and are sensitive to the natural and built environments. The guidelines establish that the bridge should "celebrate passage over a mighty river between two states," and be an "apt and iconic" presence in the landscape.

Bridge history

The Interstate Bridge has a rich history in the Portland-Vancouver region. Find out more about the construction and operation of the bridge over its decades of service.

Related Links

Design Guidelines

General bridge permit work plan

Navigation Impact Report

CRC General Bridge Permit Application with cover letter and attachments