The IBR project: Too much money for too many interchanges

By Joe Cortright ⁝ 9-11 minutes ⁝ 12/18/2022

The real expense of the $5 billion I-5 bridge replacement project isn't actually building a new bridge over the Columbia River: It's widening miles of freeway and rebuilding every intersection north and south of the river. A decade ago, an independent panel of experts convened by OR and WA governor's strongly recommended to ODOR and WSDOT that they eliminate one or more intersections.

The panel concluded that 70 percent of the cost of the project was rebuilding 7 interchanges in five miles.

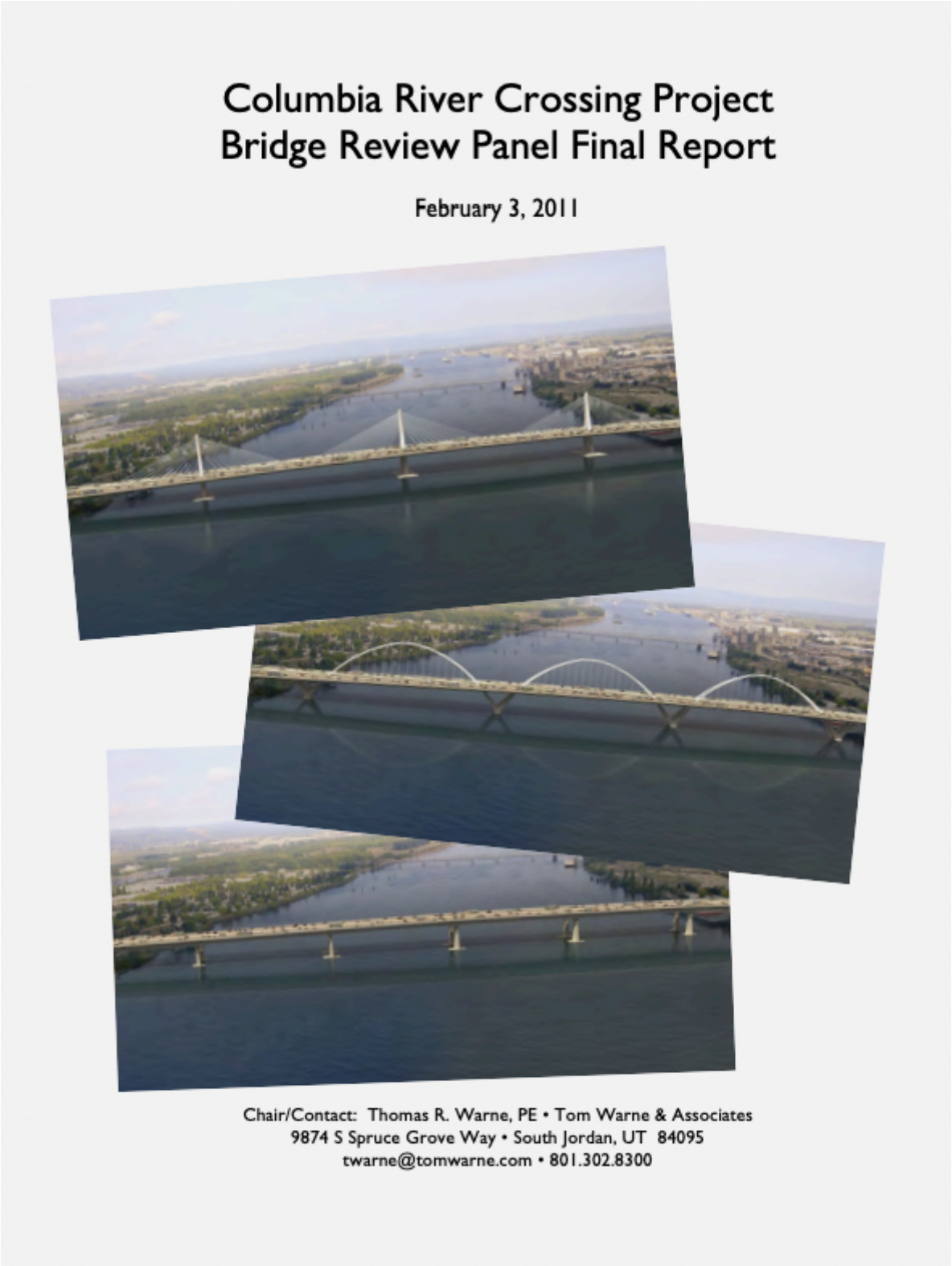
The experts told ODOT and WSDOT that project interchange spacing violates both federal and state design standards.

The expert panel concluded that eliminating interchanges would reduce project cost, improve safety, and improve traffic flow.

Failing to look at removing or simplifying intersections after getting this expert advice is arbitrary and capricious; ODOT and WSDOT are violating the National Environmental Policy Act's requirement that they take a hard look at reasonable alternatives

Bridge Review Panel: A totally new bridge design; eliminate interchanges

Today's "Interstate Bridge Replacement" project is a warmed-over version of the failed Columbia River Crossing of a decade ago. Like the current effort, the CRC was controversial and highly criticized. The Governors of Oregon and Washington intervened and appointed to special, independent review panels of national experts, both of which spotted errors in project. The first, a 2010 Independent Review Panel, determined that ODOT and WSDOT's proposed "open-web" design for the river crossing was "unbuildable." That led the two governors to appoint another panel, the bridge review panel, to come up with an alternative design. That panel, also chaired by Tom Warne, issued its 146-page report in 2011.



In addition, to coming up with a buildable bridge design, the Bridge Review Panel recommended that reducing and simplifying the number of interchanges in the project area, rather than repeating and expanding each of the existing interchanges would reduce costs, and make the project function better. Their comments are worth quoting at length:

> The panel concluded that improvements to the functionality of the overall roadway network in the project limits should address urban design issues. The use of a collector/distributor system was

found to be unworkable, but **reducing and simplifying the number of interchanges would significantly improve both functionality and cost.**

Substandard Interchange Spacing and Project Impacts

In the project corridor, seven interchanges in less than five miles results in **interchange spacing that does not meet state or federal minimum requirements** of one mile for interstates in urban areas. In some circumstances, interchange spacing is half the minimum required. It is not unusual in urban areas to have substandard interchange spacing. However, it is unprecedented that all seven interchanges on a project corridor have less than minimum spacing. Not only are safety and operations an issue, **more than 70 percent of the project budget is associated with these interchanges.** Minimum interchange spacing is necessary for operational efficiency and user safety. Substandard interchange spacing in the project corridor can be expected to negatively impact both. Interchanges adjacent to the Columbia River and North Portland Harbor also increase environmental impacts and detract from the visual quality of the shoreline and the character of a signature bridge.

It is the view of the panel that some consolidation of the interchanges on the project corridor is warranted. This consolidation would have the following direct benefits to the project:

- Improved safety and operations.
- Significant reduction in capital costs.
- Reduced environmental impacts.
- Enhanced viewsheds along the Columbia River.
- Improved opportunities for a signature span, from budgetary, logistical, and performance perspectives.

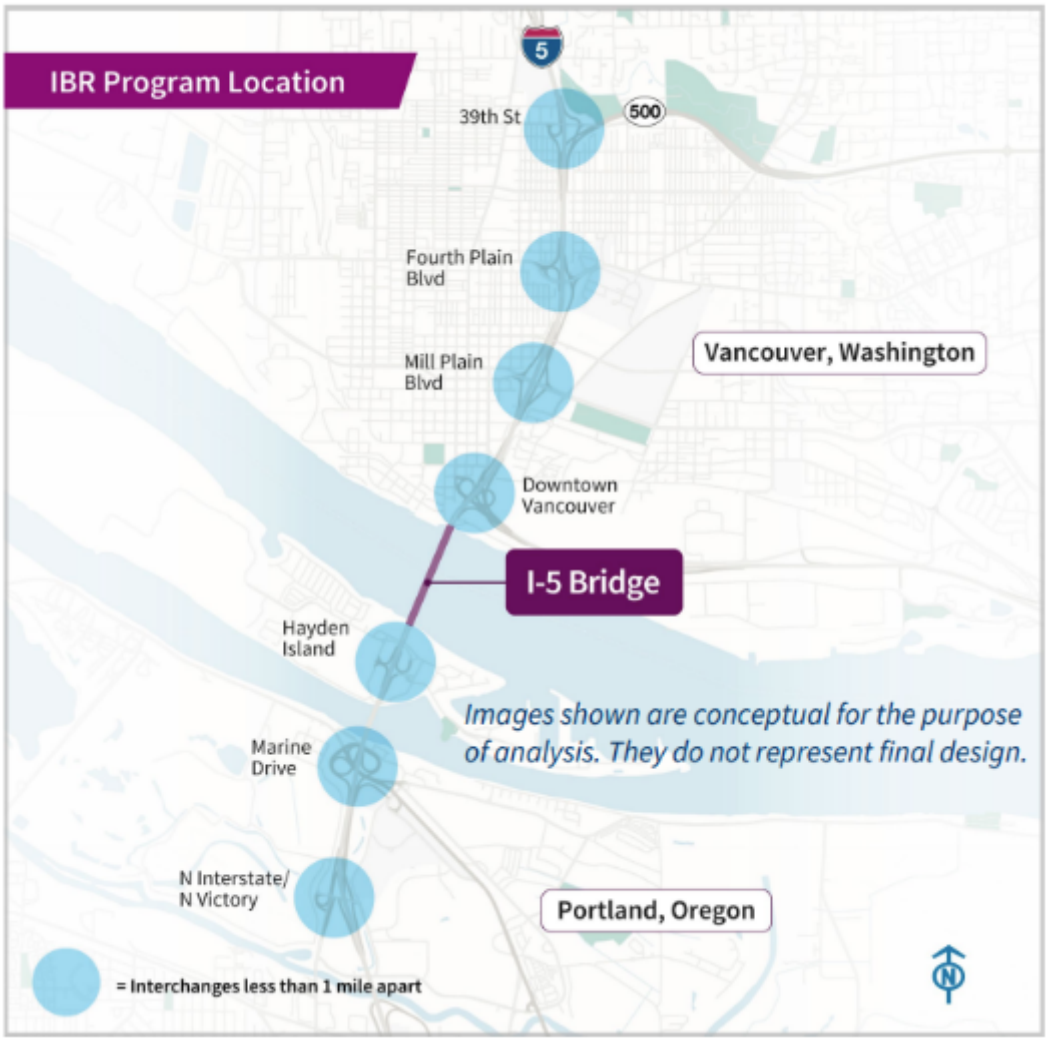
With respect to interchange spacing, the panel offers the following secondary recommendation:

Review all interchanges, ramps and other geometric features to simplify the overall corridor design for substantial cost savings and to improve safety and corridor operations.

The panel reiterated this point in its conclusion, indicating that they felt strongly that much more work needed to be done, and that contrary to what most states are doing (removing closely spaced interchanges), that Oregon and Washington are simply perpetuating a bad design at huge cost.

. . . the panel does feel strongly that **much work remains to be done** to improve the ramps and interchanges throughout the project and that simplification of these elements will bring about a better and more functional solution. In fact, the panel is struck by the fact that **most states are working to remove congested interchanges and ramps rather than building their way towards such a condition: as is occurring here**. In addition, the volume of interchange access is not in harmony with state or Federal guidelines. The BRP recommends further study to address interchange geometrics and operations. In addition, the whole corridor would benefit from a more comprehensive urban design review

In spite of this clear advice, ODOT and WSDOT are doing just the opposite: planning for elaborate and expensive reconstructions of each of the seven interchanges in the project area.



IBR project director Greg Johnson testified that the complex Marine Drive interchange would be the second most costly pat of the project after the river crossing itself; Bike Portland reported that the vast majority of the project price tag is due to multi-lane interchanges. And it's likely that the cost of these interchange could escalate dramatically, because the current crossing is designed only with a 116 foot clearance, far less than the 178 clearance called for by the US Coast Guard. Raising the bridge and the intersections would make the project even more costly.

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Not just forgetful: Arbitrary, capricious and a violation of the National Environmental Policy Act

As far as ODOT and WSDOT are concerned, the work of the Bridge Review Panel has simply gone down a memory hole. A decade ago, Oregon and Washington spent about $1.5 million on these independent, expert, outside reviews of the Columbia River Crossing Project. Their own hand-picked national experts, looking at the proposed project with fresh eyes, said: If you're problem is too much weaving because of too many interchanges in too short a distance, then the obvious—and preferred—solution is to eliminate some of those interchanges. The experts went further, saying that eliminating interchanges would make the project safer, perform better, look better, have fewer environmental impacts, and even be cheaper. But here we are, a decade later, and the IBR project hasn't seriously considered these recommendations. They've completely ignored them.

Why? We can't know for sure. But there's strong evidence that the real reason ODOT and WSDOT want this project is not so much to replace the bridge, as to gin up support for spending billions to widen the freeway on either side of the river. They know that freeway widening, if called out as a separate project, wouldn't generate any public support. By tying the intersection rebuilds and freeway widening to the "bridge replacement" they avoid any serious public scrutiny of that decision. And make no mistake: the wider roadway and rebuilt intersections are nearly twice as expensive as the bridge itself.

Table 6. Costs of CRC Components at 90% Confidence Level

Project Component	Component Costs with $3.490 Billion Project (90% Confidence Level)	
Oregon Interchanges	$	889,216,907
Interstate Bridge	$	796,499,975
Washington Interchanges	$	883,442,157
Transit (Light Rail)	$	920,840,960
Totals	**$**	**3,490,000,000**

This also explains why the two states are wedded to a high fixed span as a replacement for the existing low level crossing. If they have to rebuild the bridge with a 116 foot (or if the Coast Guard's guidance prevails, a 178 foot) vertical navigation clearance, the project will require building long elevated approaches on both the North and South of the River. Interchanges will have to be lifted high into the air to reach the elevated approaches. Downtown Vancouver and Hayden Island will both have half mile long elevated roadways towering over their communities. This likely why the DOTs so adamantly oppose either a tunnel or a lower-level crossing with a moveable span: those designs wouldn't require rebuilding every intersection, and would demolish their case for wrapping the freeway widening costs into the bridge project.

The failure to consider eliminating or consolidating some intersections is a plain violation of the National Environmental Policy Act. NEPA requires that sponsoring agencies take a hard look at reasonable alternatives that could potentially meet the project's purpose and need with fewer environmental impacts. That's exactly what this expert review panel—hired by the DOTs—said should be done a decade ago. Willfully ignoring this information, and not including a serious appraisal of such alternatives in the project's Environmental Impact

Statement rises to the level of an “arbitrary and capricious” decision by the DOTs. Ordinarily, and for good reason, courts have been loathe to second guess agencies on technical matters. But this is the kind of egregious and willful disdain for the facts that it rises to a violation of the law.