

## COMMENTS FOR THE IBR ESG 4/29/2021 MEETING RECEIVED BETWEEN 3/15 AND 4/27

Bob Ortblad

4/25/21

### **An Immersed Tube Tunnel UNDER is better than a Bridge OVER the Columbia River.**

The United States Coast Guard will require a new vertical and horizontal bridge clearance permit. An immersed tube tunnel (ITT) has no clearance problems.

Sixty-two years ago, British Columbia built an ITT under the 38-foot deep ship-channel of the Fraser River. A Columbia River ITT will be less difficult to build with a barge-channel of only 17-foot deep.

British Columbia is planning a new ITT that will include Vancouver's light rail SkyTrain. Light rail will be necessary for any new Columbia River crossing.

An ITT can be half as long as a bridge. An ITT needs to go downing only 50 feet, a bridge needs to go up over 125 feet. This will allow flatter and shorter ITT grades that are better for light rail, truck traffic, bicycles, and pedestrians.

An ITT will create more "Safe Local Jobs" than a steel truss bridge. The Northwest is famous for casting large concrete pontoons for Lake Washington and Hood Canal.

Bob Ortblad MSCE, MBA

Washington Business Alliance

Attachment included

*\* ADA compliant versions of the attachments can be made available upon request*

Comments Received Between 3/15/2021 and 4/27/2021

Robert Liberty

4/26/21

FYI

OPINION BY KEN VANCE IN *CLARK COUNTY TODAY* (APRIL 21, 2021): ‘IF ELECTED OFFICIALS INSIST ON LIGHT RAIL AS A COMPONENT OF THE I-5 BRIDGE REPLACEMENT, THIS LATEST PROJECT COULD BE THE SAME SPECTACULAR FAILURE THAT THE CRC WAS’

<https://www.clarkcountytoday.com/opinion/opinion-if-elected-officials-insist-on-light-rail-as-a-component-of-the-i-5-bridge-replacement-this-latest-project-could-be-the-same-spectacular-failure-that-the-crc-was/>

Excerpts:

**Congresswoman Jaime Herrera Beutler's views:**

“This same stubborn, top-down attitude effectively killed the last I-5 bridge replacement effort,” Herrera Beutler stated on Facebook. “We need agreement on both sides of the river for this project to succeed and truly serve our region.”

Herrera Beutler’s Communications Director Craig Wheeler also reminded me that “whenever Clark County residents have been given a say on whether they support light rail as part of the project – they’ve rejected it.”

Here’s a breakdown of those votes:

- 2012 ( [Prop 1](#)): Clark County rejected a 0.1 percent sales tax increase to pay for light rail, the only opportunity they’d had to date to weigh in on the concept (57 percent-43 percent).
- 2013 ( [Advisory vote No. 1](#)): Clark County told county commissioners to reject light rail unless first approved by a county-wide vote (68 percent-32 percent).

**State Senators Wilson and Rivers' views:**

Washington state Senators Lynda Wilson (Republican, 17th District) and Ann Rivers (Republican, 18th District) were also kind enough to respond to my request for comment about Blumenauer’s thoughts on light rail and the I-5 Bridge replacement.

Wilson said Blumenauer’s claim to have DeFazio in his pocket might not be the case.

“No offense to Rep. Blumenauer, but I haven’t heard his colleague, Rep. DeFazio, make the same claim – or demand – about light rail, and I also haven’t heard it explicitly from Governor Inslee, or our state

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transportation commission,” Wilson stated in an email response to me. “I agree that light rail can be a deal breaker, but not in the way Rep. Blumenauer means it – we know what happened the last time there was an effort to force light rail across the Columbia to Clark County. That’s why Washington and Oregon created a joint Interstate Bridge committee in 2017, so legislators from both states are involved at the ground floor.

“Not once have I heard from my Oregon counterparts on the bi-state committee that it’s a no-go without light rail,” Wilson said. “I wonder what they would think of what the congressman said. Maybe Rep. Blumenauer should reach out to those legislators directly to see how this process has been working. We’ve worked in good faith these past several years and for someone from outside the committee to insist on light rail now risks blowing up the entire process.

“I also noticed Rep. Blumenauer didn’t talk about the obvious traffic congestion issues on his side of the river, meaning I-5 from Jantzen Beach or Delta Park through downtown and the Rose Quarter, and how those contribute to carbon emissions,” Wilson said. “Does he think light rail across the Columbia will fix that?”

In her response to my request for comment on Blumenauer’s statements, Sen. Rivers offered similar thoughts to my comment above. If elected officials insist on light rail as a component of the I-5 Bridge replacement, this latest project could be the same spectacular failure that the CRC was.

“This is a flashback to 2013, when the prospect of federal funding was used like a carrot – or a stick – to push for light rail, even though light rail didn’t make sense for Clark County,” Rivers said. “Congressman Blumenauer is entitled to his view, but as someone who opposed the failed Columbia River Crossing project because it became more about extending light rail and less about reducing freeway congestion and increasing freight mobility, I believe it would be foolish to go down that road again.

**Robert Liberty**

4/27/21

Executive Steering Group Members

Attached are the following documents which I understand will be distributed to you prior to your meeting Thursday morning:

1. "What's in a name?"
2. An alternative Purpose and Need Statement for the project, derived from the predecessor project, the Columbia River Crossing. It addresses the same purposes and needs but calls for quantification of benefits and burdens, adjusting the project area to reflect the actual project impact area (including I-205) and other improvements

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3. Another alternative Purpose and Need Statement of only 207 words, which would conform the purpose and need to the actual name of the project, replacement of the Interstate Bridges.

4. A copy of a proposed definition of equity and measures of the equity of the project, focused on actual impacts (not procedures.) It identifies some of the benefits and burdens to be considered in the equity analysis and requires taking into past injustices caused by the construction of I-5.

At the EAG meeting last week, Greg Johnson announced that he has sole authority over whether to accept, reject or modify the definition of equity and related performance measure based on the drafts prepared by the Equity Advisory Committee. If so, then any definitions of "equity" will not be part of your deliberations at this or any other meeting.

5. A link to an editorial identifying serious disagreements between Washington's Federal and state elected officials and Congressman Blumenauer over whether light rail must be a part of the project and suggesting this disagreement could lead to a repetition of the political failure of the CRC project.

OPINION OF KEN VANCE, EDITOR OF CLARK COUNTY TODAY (APRIL 21, 2021): 'IF ELECTED OFFICIALS INSIST ON LIGHT RAIL AS A COMPONENT OF THE I-5 BRIDGE REPLACEMENT, THIS LATEST PROJECT COULD BE THE SAME SPECTACULAR FAILURE THAT THE CRC WAS'

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You may find these materials helpful in your deliberations.

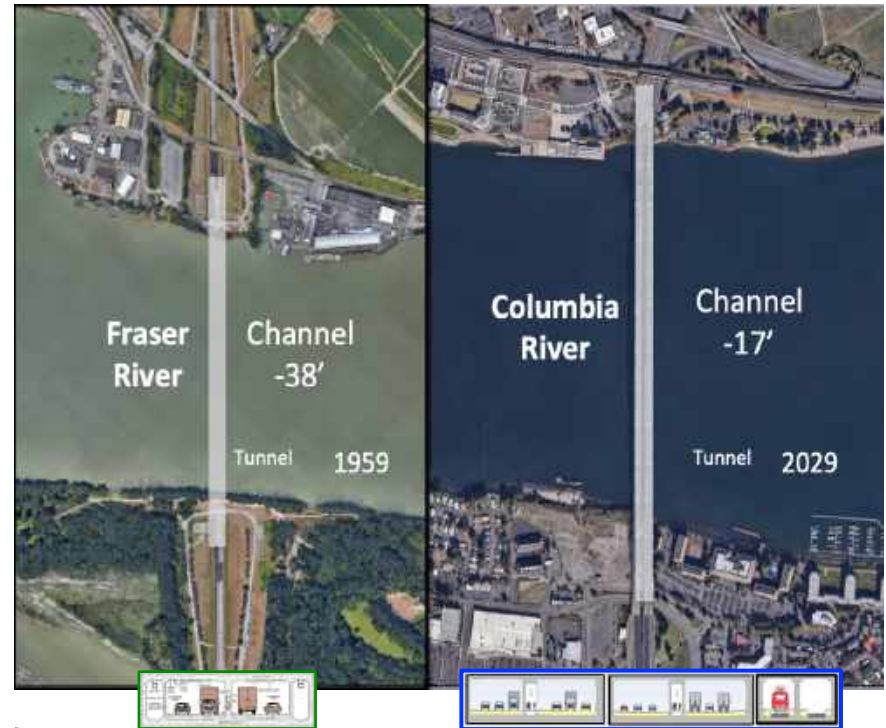
Respectfully submitted,

Robert Liberty

Attachment included

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# Safe Local Jobs

on land construction is twice as safe as over water construction

Fraser River – 38 foot channel

George Massey Tunnel - 1958





Trelleborg - How to build an immersed tunnel  
<https://www.youtube.com/watch?v=2Xkyyc9PIQA>

Trip through Tingstad Tunnel, Gothenburg  
<https://www.youtube.com/watch?v=KoEBbmeecd88>

Trip through Marieholm Tunnel before its Dec. 16 opening, Gothenburg  
<https://www.youtube.com/watch?v=BT9s2Pf9Wms&feature=youtu.be>

Construction of the Marieholm Tunnel, Gothenburg  
<https://www.youtube.com/watch?v=2kcAIBFCz8w&feature=youtu.be>

Launch of the Marieholm Tunnel elements, Gothenburg  
<https://www.youtube.com/watch?v=JC4mRlgwXU0>

Elizabeth River Tunnel, Norfolk, VA.  
<https://www.youtube.com/watch?v=NsNBdPFMuQY>

George Massey Crossing Tunnel Concept, Vancouver, Canada  
<https://www.youtube.com/watch?v=8At88ti-yFA>

Immersion Tunnel Coatzacoalcos by Volker Construction International, Mexico  
<https://www.youtube.com/watch?v=VFWkoZMja0k>

DERSA - Santos Guarujá Immersed Tunnel Project, Brazil  
<https://www.youtube.com/watch?v=du8KZob7Pkw>

Busan-Geoje Fixed Link in South Korea  
<https://www.youtube.com/watch?v=-aykpUulHJo>



**Immersed Tube Tunnel  
better than a  
New High Bridge**

# What's in a name?

The “Interstate Bridge Replacement” Project:  
The reality contradicts the name.

Testimony submitted by Robert Liberty, former Metro Council Member.

If you were trying to sell a used school bus to someone who was only interested in buying a bicycle, would you call the school bus a “mountain bike”?

Using a misleading name might make the sale, but would it be honest?

From the IBR website:



Interstate  
**BRIDGE**  
*Replacement Program*



From the IBR website:

# Frequently Asked Questions

✓ Why do we need to replace the Interstate Bridge across the Columbia River?

> What are the current plans for replacing the old bridge?

> How will the new bridge be funded, and will it involve tolls?



Does this look like the “replacement” of the Interstate Bridges?

I-5 Bridges

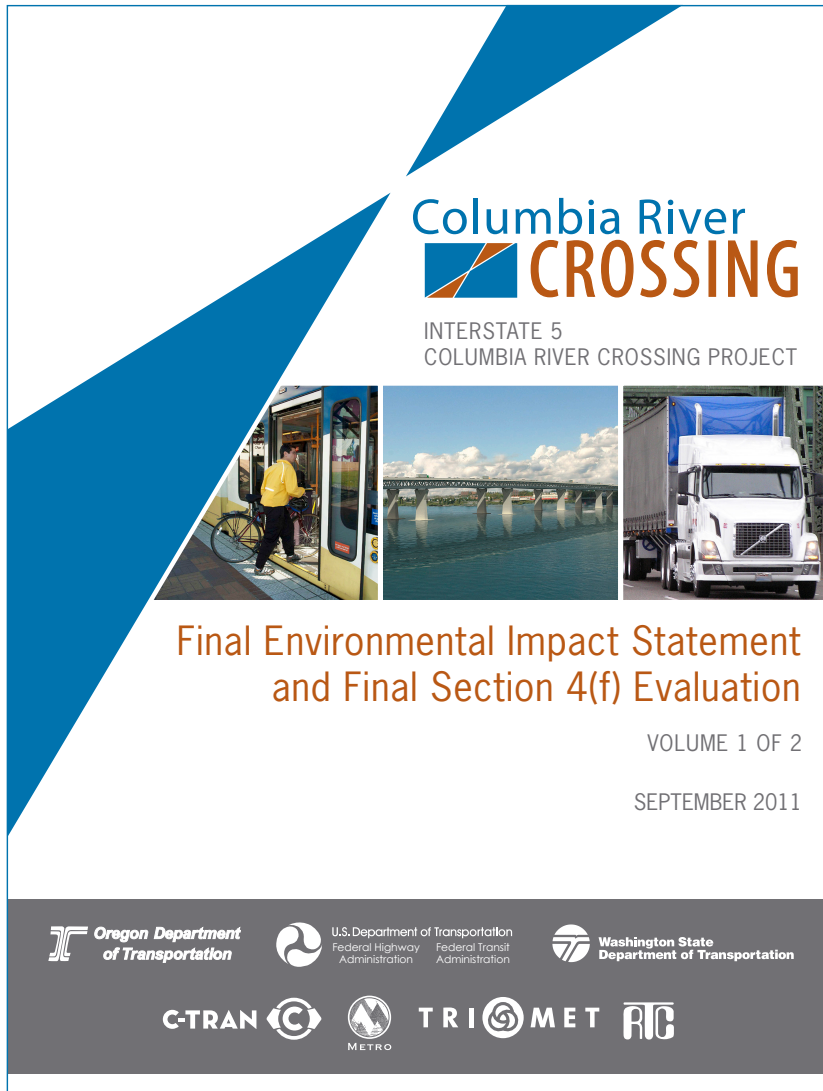


I-5 Bridges



Hayden Island





The “Interstate Bridge Replacement” project leadership is insisting that local officials use the same 2011 “Record of Decision” as the Columbia River Crossing project and the same or very similar statement of purpose of need.

Why?

To prevent anything more than minor design changes to the approved CRC alternative while telling people the project is just about replacing two bridges.

# Initial Version of CRC Preferred Alternative

• Demolish existing bridges	\$90 million
• New bridge over Columbia River	<u>\$900 million</u>
<i>Columbia River bridges subtotal</i>	<i>\$990 million</i>
• <b>Oregon I-5 freeway investments</b> Hayden Island rebuild and ramps, Marine Drive interchange	<b>\$1 billion</b>
• Extend light rail to Vancouver	\$850 million
• <b>Washington I-5 freeway investments</b> widening, interchanges at SR 500, Fourth Plain, Mill Plain, SR 14	<b>\$770 million</b>
<b>TOTAL</b>	<b>\$3.6 billion</b>

Out of the \$3.6 billion project cost, only **27.5%** would be spent on demolishing and replacing the existing I-5 bridges crossing the Columbia River.

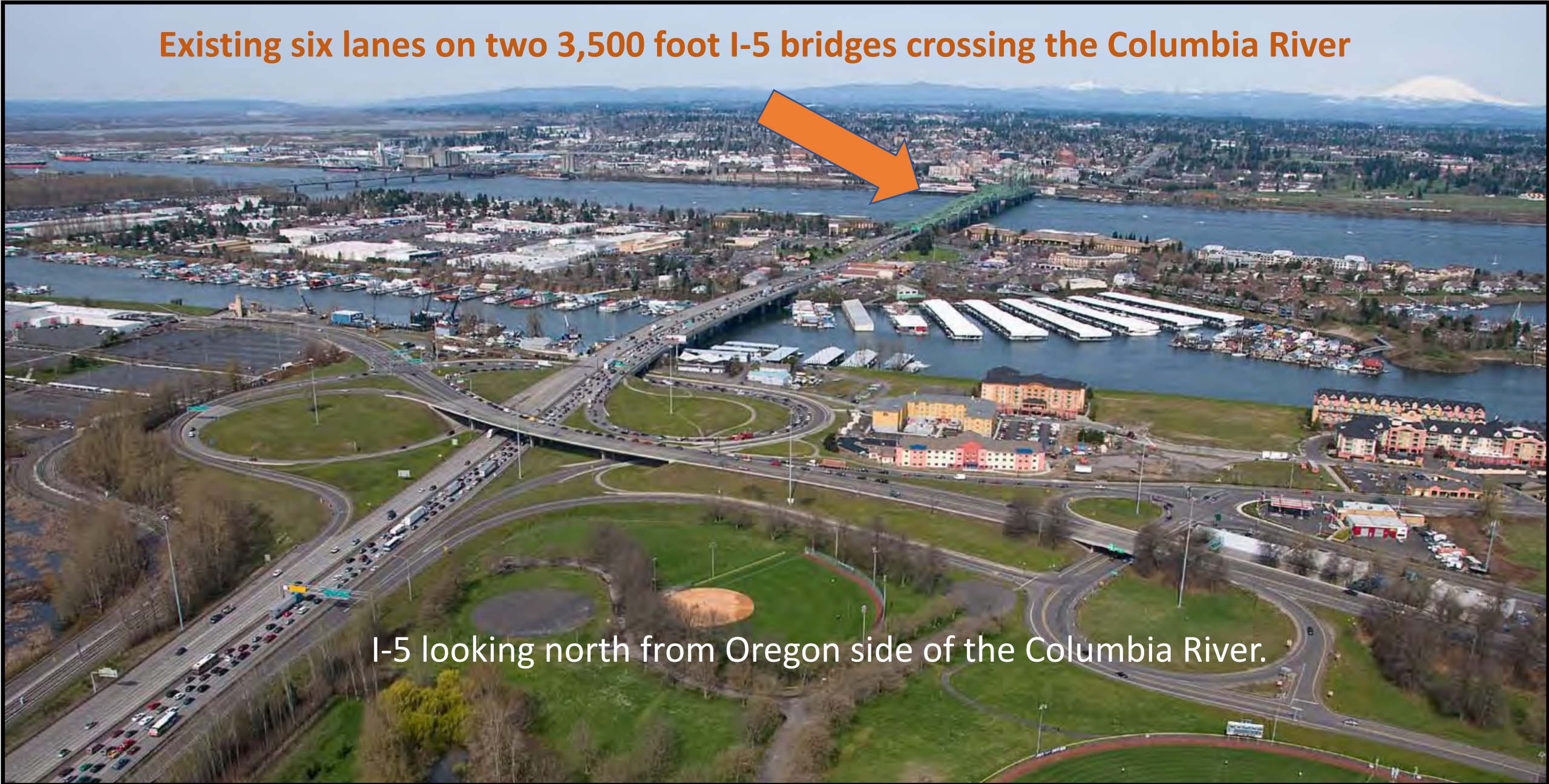
About **49%** of the CRC project cost would have been spent on widening the freeway, building merge lanes and rebuilding freeway interchanges.

The I-5 bridges are about 3,500 feet long. The total CRC project length was about 5 miles (about 26,000 feet).

The maximum budget estimate for the new version of the CRC, the “Interstate Bridge Replacement” (IBR) is almost \$5 billion.



Existing six lanes on two 3,500 foot I-5 bridges crossing the Columbia River



I-5 looking north from Oregon side of the Columbia River.



**16-lanes south and north of two new bridges (ten lanes total) over the Columbia River.**



*Rendering is for discussion purposes only and is subject to change. -08/04/08*



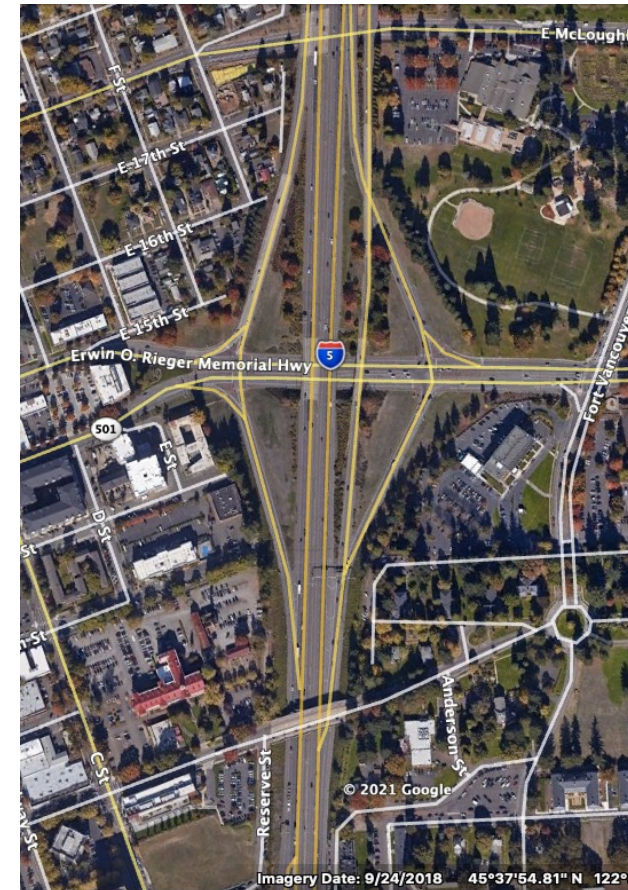
# Does widening I-5 to 16-lanes at Evergreen Boulevard in Vancouver look like the “replacement” of the Interstate bridges?

Exhibit 2.2-13

## Mill Plain Boulevard Interchange Improvements



Dimensions are approximate.



Today (2018)

## **What happened to “fixing our crumbling infrastructure”?**

The \$1 billion proposed to be spent on interchange rebuilding, new freeway ramps and adding lanes to I-5 for the CRC (now the IBR) in Oregon, is about three times the amount of money needed to bring all National Highway System bridges in the entire state of Oregon into a “state of good repair.” See following documents.



**2020**

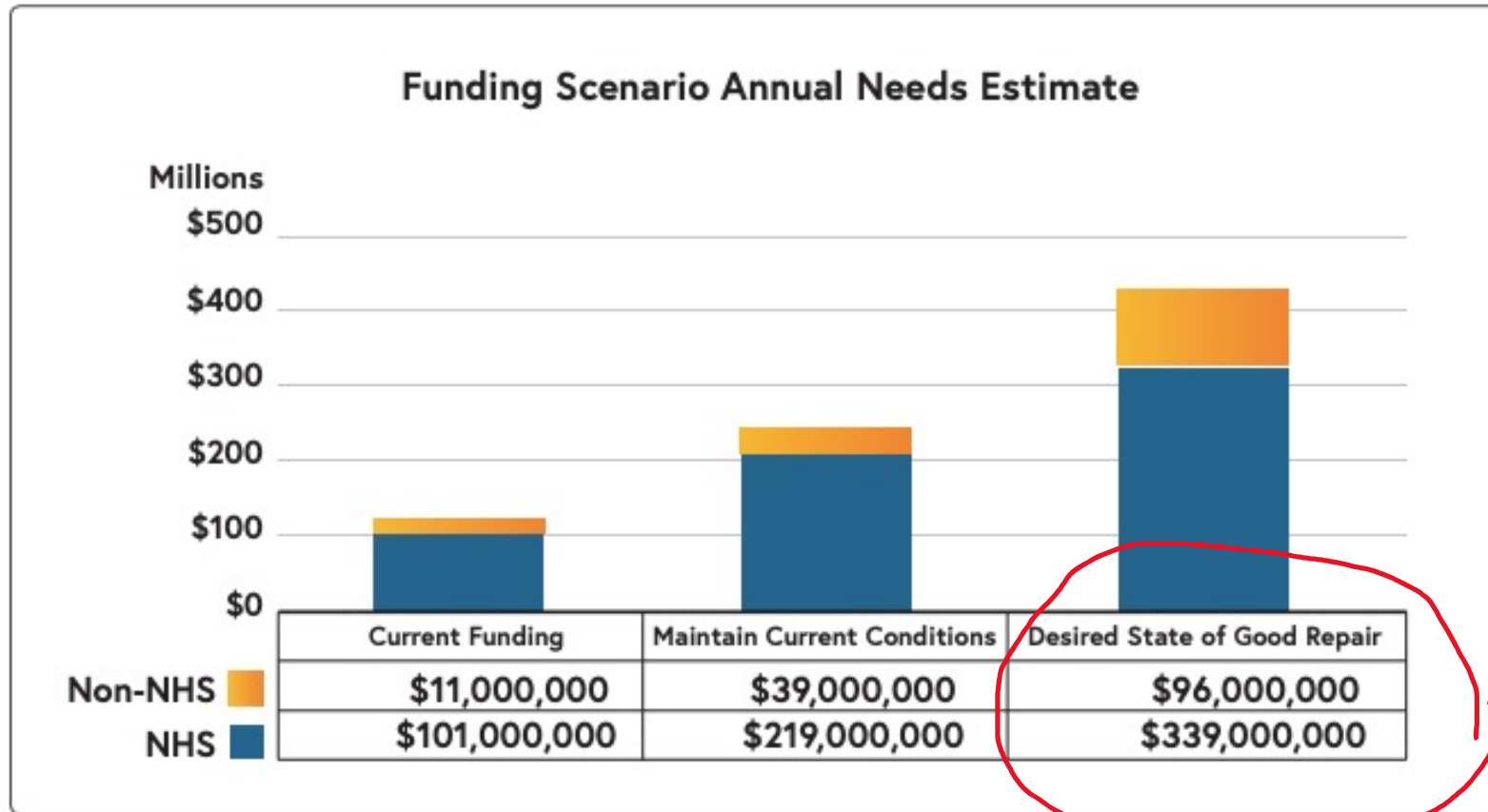
**Bridge Condition Report  
& Tunnel Data**

[https://www.oregon.gov/odot/Bridge/Documents/Final\\_2020BridgeConditionReport.pdf](https://www.oregon.gov/odot/Bridge/Documents/Final_2020BridgeConditionReport.pdf)



## Bridge Funding Gap Analysis

Using 2018 data, an analysis was done to determine the funding needed to maintain current bridge conditions and to reach a Desired State of Good Repair (DSOGR) based upon the Oregon Transportation Commission Investment Strategy available at [OTC\\_Investment\\_Strategy](#). The results shown in the figure on the next page compare current funding with the funding needed to maintain or improve conditions.



Compare the \$339 million to bring all NHS bridges in Oregon into a state of good repair with the (2011) cost of \$1 billion for non-bridge freeway improvements in the CRC project area in Oregon and the \$990 million for demolishing and replacing the I-5 Bridges over the Columbia River, bridges which are **not** structurally deficient. (See next image.)

Proposed IBR Purpose and Need Statement  
Draft of April 14, 2021

1.3.1 Project Purpose The purpose of the proposed action is to improve mobility and access, safety, equity and sustainability in the impact area of the bridges over the Columbia River (the Bridge Impact Area shown in Figure 1) by addressing present and future travel demand and mobility needs, taking into account racial justice, climate change, land use patterns and cost effectiveness.

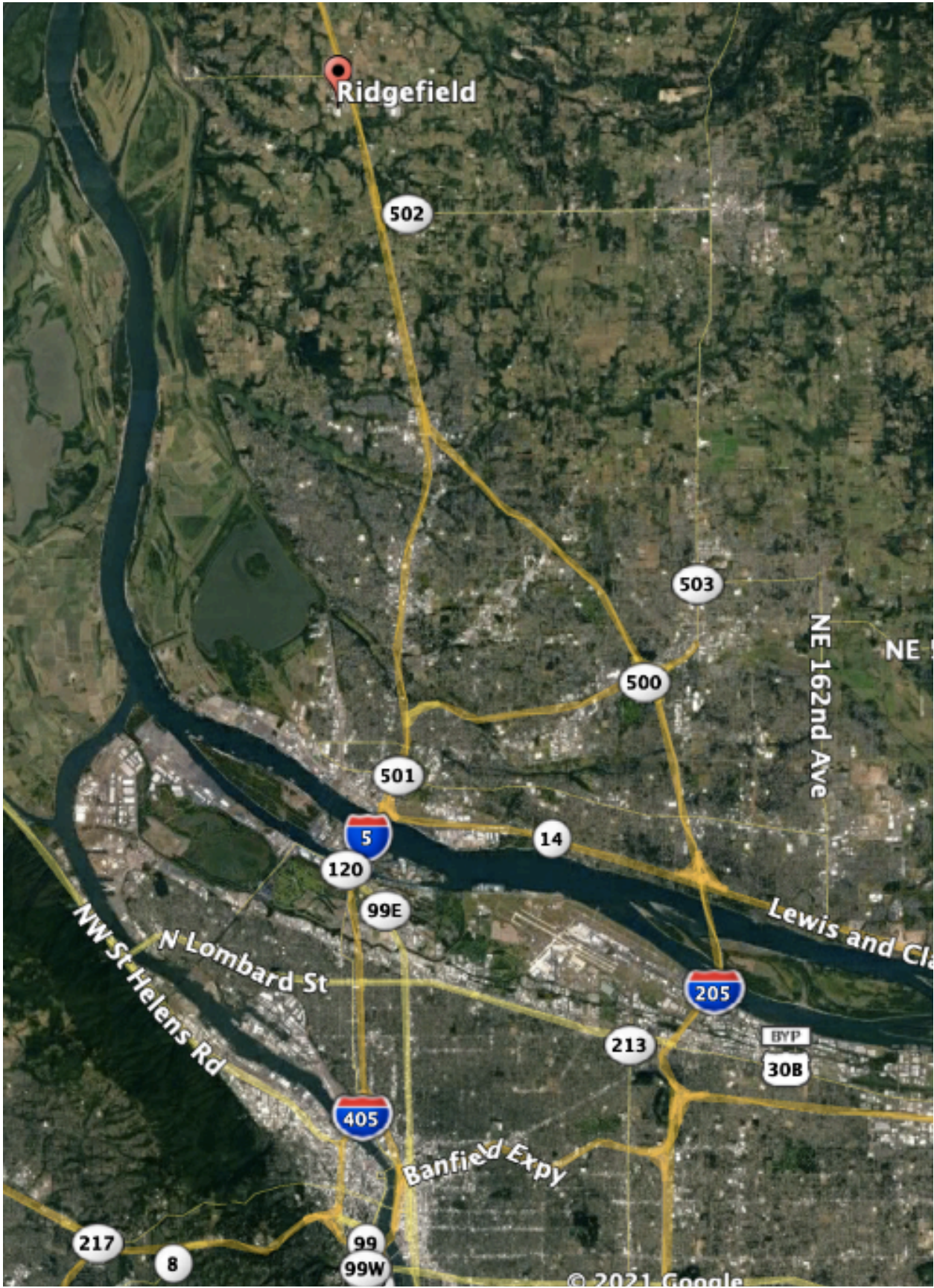
Relative to the No-Build Alternative, the proposed action is intended to achieve the following objectives:

- a) Decrease serious deaths and injuries from vehicle collisions in the Columbia BIA by 50%.
- b) improve connectivity, reliability, and reduce travel times by 10%, and increase transportation options in the BIA;
- c) improve freight mobility and address interstate travel and commerce needs in the BIA; and
- d) improve seismic resilience of I-5 water crossings and other bridge structures in the BIA.

Figure 1: Bridge Impact Area

The image below shows the approximate area over which potential freeway and interchange expansions, transit and freight rail improvements and related projects and programs (including tolls) would have measurable effects (potential benefits and detriments) on congestion, safety, access, land values and development patterns, exposure to pollutants, the finances of persons paying tolls several times per week, and other factors.





### 1.3.2 Project Need The specific needs to be addressed by the proposed action include:

- Growing travel demand and congestion: Existing travel demand resulting in part from current development patterns results in congestion on the I-5 and throughout the BIA leading to congestion on the I-5 Columbia River crossing, associated interchanges, feeder arterials and other parts of the road network in the BIA. This corridor experiences heavy congestion and delay lasting 4 to 6 hours daily during the morning and afternoon peak travel periods and when traffic accidents, vehicle breakdowns, or bridge lifts occur. Due to excess travel demand and congestion in the I-5 bridge corridor, many trips take the longer, alternative I-205 route across the river. Spillover traffic from I-5 onto parallel arterials such as Martin Luther King Jr. Boulevard and Interstate Avenue increases local congestion. In 2005, the two crossings carried 280,000 vehicle trips across the Columbia River daily. Daily traffic demand over the I-5 crossing is projected to increase by more than 35 percent during the next 20 years, with stop-and-go conditions increasing to approximately 15 hours daily if no improvements are made.
- Impaired freight movement: I-5 and the mainline rail line is part of an important freight transport system on the West Coast, linking international, national and regional markets in Canada, Mexico and the Pacific Rim with destinations throughout the western United States. In the center of the project area, I-5 intersects with the Columbia River's deep-water shipping and barging as well as two river-level, transcontinental rail lines. The I-5 crossing and the rail line provides direct and important highway connections to the Port of Vancouver and Port of Portland facilities located on the Columbia River as well as the majority of the area's freight consolidation facilities and distribution terminals. Freight volumes moved by rail and truck to and from the area are projected to increase. Freight transport delay in the Portland-Vancouver area may increase significantly in the next 20 years. Growing congestion may harm freight-dependent businesses working in the BIA, that could be avoided or offset.
- Limited public transportation options, connectivity, and reliability: Due to limited public transportation options, residents of the region lack good choices for access to employment, education, services and recreation. Current congestion in the BIA increases travel time and reduces public transportation service reliability on public transit.
- Safety and vulnerability to incidents causing congestion: The I-5 river crossing and its approach sections experience crash rates more than 2 times higher than statewide averages for comparable facilities although with fewer deaths and serious injuries because of slower speeds. Incident evaluations generally attribute these crashes to traffic congestion and weaving movements associated with closely spaced interchanges and short merge distances. Without breakdown lanes or shoulders, even minor traffic accidents or stalls cause severe delay or more serious accidents (Exhibit 1.3-2).
- Substandard bicycle and pedestrian facilities: The bike/pedestrian lanes on the I-5 Columbia River bridges are about 3.5 to 4 feet wide, narrower than the 10-foot standard, and are located extremely close to traffic lanes, thus impacting safety for pedestrians and bicyclists (Exhibit 1.3-3). Direct pedestrian and bicycle connectivity are poor in the BIA.

- Seismic vulnerability: The existing I-5 and the bridge structures on and over I-5 and accessing I-5 in the BIA are located in a seismically active zone. They do not meet current seismic standards and may be vulnerable to damage or collapse in an earthquake, as analyzed in ODOT's 2009 seismic vulnerability study.

## **Propose Purpose and Need Statement for the Interstate Bridge Replacement Project**

### **Purpose**

To replace the Interstate 5 bridges over the Columbia River.

### **Need**

- **Aging infrastructure:** The existing two Interstate 5 bridges over the Columbia River were built in 1916 and 1958. Although their structural condition is rated “fair” they will require continuing and expensive investments given their age.
- **Automobile congestion:** The bridges are narrower than the freeway north and south of them and have a lift span, contributing to vehicle and freight delays.
- **Impeding marine traffic:** The orientation of the lift span relative to the downstream mainline rail bridge can require dangerous navigation during high water on the river and impedes some marine traffic.
- **Seismic vulnerability:** The bridges are rated as vulnerable to moderate to severe damage in the event of an earthquake. (See the November 2009 Oregon Department of Transportation’s Bridge Engineering Section’s report “Seismic Risk to Oregon State Highway Bridges: Mitigation Strategies to Reduce Major Mobility Risks.” )
- **Poor bike and pedestrian facilities:** The bridges have very narrow bicycle and pedestrian paths. These facilities that do not meet modern standards and demand.
- **The bridges do not provide and will not carry high-capacity transit.**

Replacing the two existing bridges with new bridges would address these needs.

Testimony to the Equity Advisory Group  
Of the Interstate Bridge Replacement (sic) Project  
Presented orally by Robert Liberty on April 19, 2021

I am Robert Liberty of 3431 SE Tibbetts Street, Portland, Oregon.

I offer the following outcome-oriented definition of equity and a framework for measuring equity impacts from the project:

Equity means that the burdens and benefits of the project are distributed fairly between social and economic groups, taking into account the need to rectify past injustices imposed on marginalized communities.

Potential benefits of the project include:

- Reduced travel times for car drivers and passengers.
- Decreased freight travel times.
- Decreased deaths, injuries and property damage for persons using the new facilities including as a result of earthquake resilience.
- Increases in land values.
- Increased access to jobs within the same travel time.
- Decreased delays and increased safety for marine traffic of different types.
- Increased transportation options for users of transit, cyclists and pedestrians.

Potential burdens (harms) from the project include:

- Taxes and tolls for construction, operation and maintenance.
- Health impacts from increased air pollution.
- Increases in traffic deaths, injuries and property damage attributable to higher speeds travel speeds.
- Additional or offsetting congestion resulting from construction delays, induced demand and displacement of congestion to other routes caused by tolling.
- Decreased land values.
- Increases in climate-changing pollution.
- Adverse impacts on water quality and fish populations from construction and operation of the project.



In order to carry out an equity analysis, both the estimated benefits and estimated burdens in the full project impact area [and not the tiny program study are shown in the slides] must be quantified and allocated to different groups of people, businesses and institutions.

The analysis must consider how this project addresses past inequities and impacts on the tribal treaty rights.