PUBLIC COMMENTS FOR IBR PROGRAM EXECUTIVE STEERING GROUP – MAY 20TH, 2021 MEETING

Received between April 27 – May 18, 2021

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

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 9not 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'

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/

You may find these materials helpful in your deliberations.

Respectfully submitted,

Robert Liberty

Attachment included

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

David Rowe

4/28/21

I am sending a PowerPoint and script for a better design than the 2012 CRC design. I hope the committee will review the merits to this alternative. Dave Rowe

Attachment included

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

Bob Ortblad

5/16/21

Executive Steering Group

Please accept the attached ESG Public Comment.

Bob Ortblad

Vancouver IBR

Attachment included

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

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:

From the IBR website:

Frequently Asked Questions

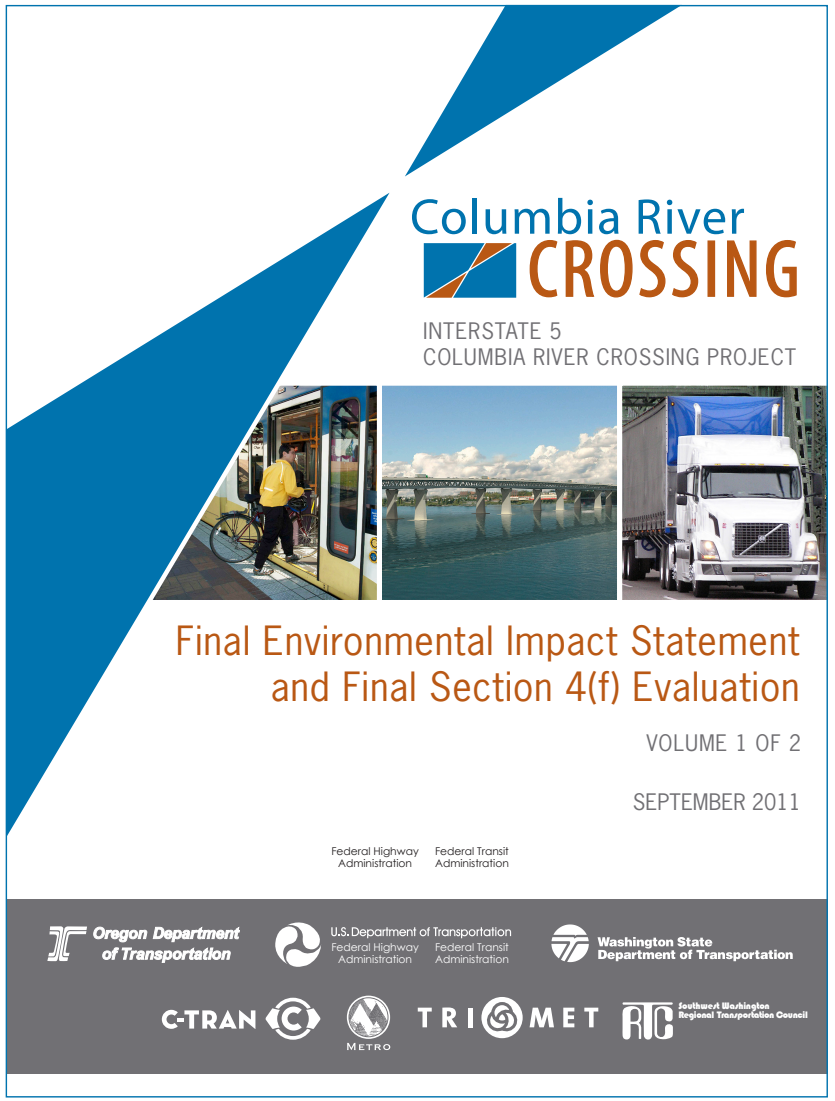
- Why do we need to replace the Interstate Bridge across the Columbia River?
- What are the current plans for replacing the old bridge?
- How will the new bridge be funded, and will it involve tolls?

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 $900 million

Columbia River bridges subtotal *$990 million*

- Oregon I-5 freeway investments $1 billion

  Hayden Island rebuild and ramps, Marine Drive interchange

- Extend light rail to Vancouver $850 million
- Washington I-5 freeway investments $770 million

  widening, interchanges at SR 500, Fourth Plain, Mill Plain, SR 14

TOTAL $3.6 billion

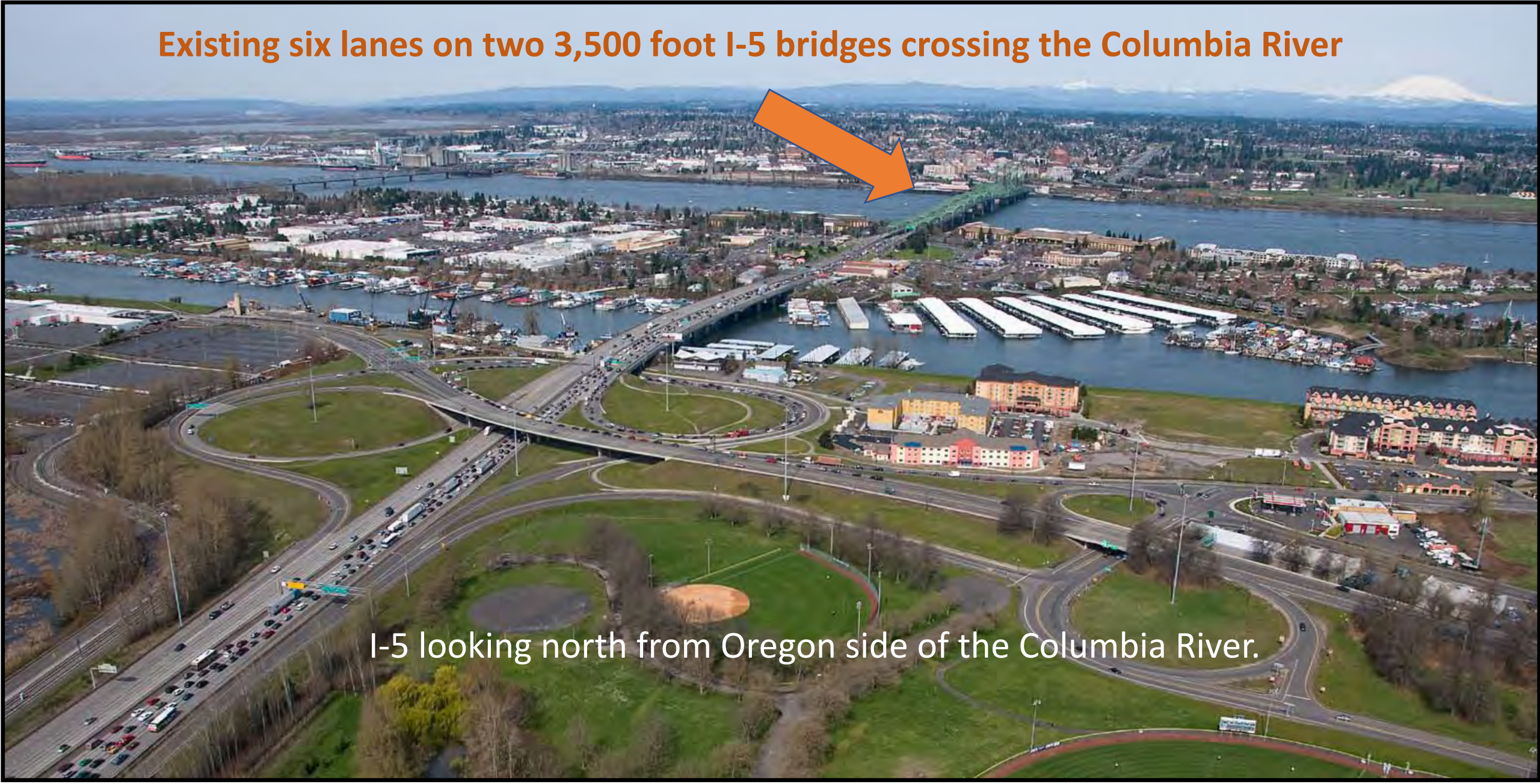
Out of the $3.6 billion project cost, only **27.5%** would be spent on demolishing and replacing the existing I-5 bridges crossing the Columbia River.

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.

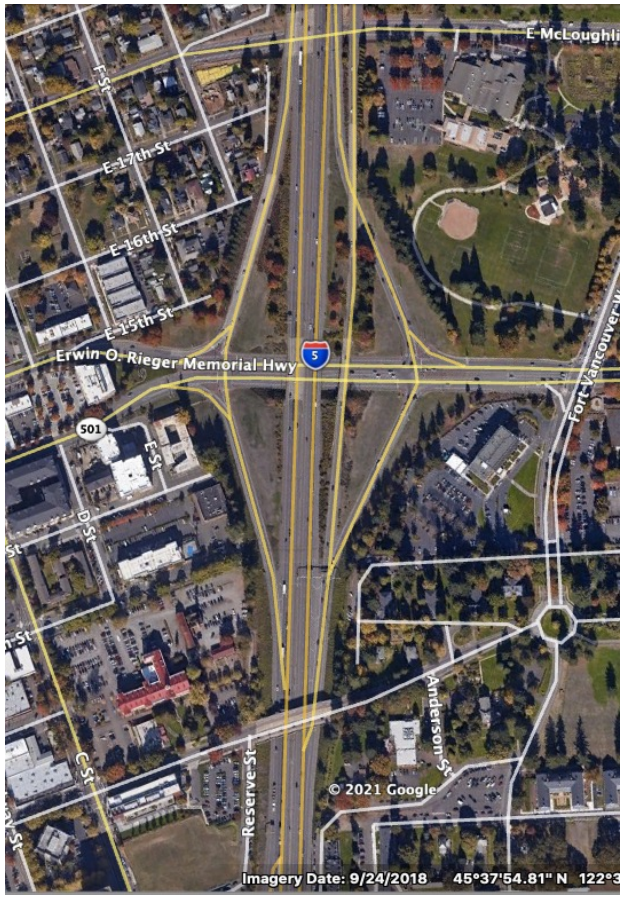
Rendering is for discussion purposes only and is subject to change. –08/04/08

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"?

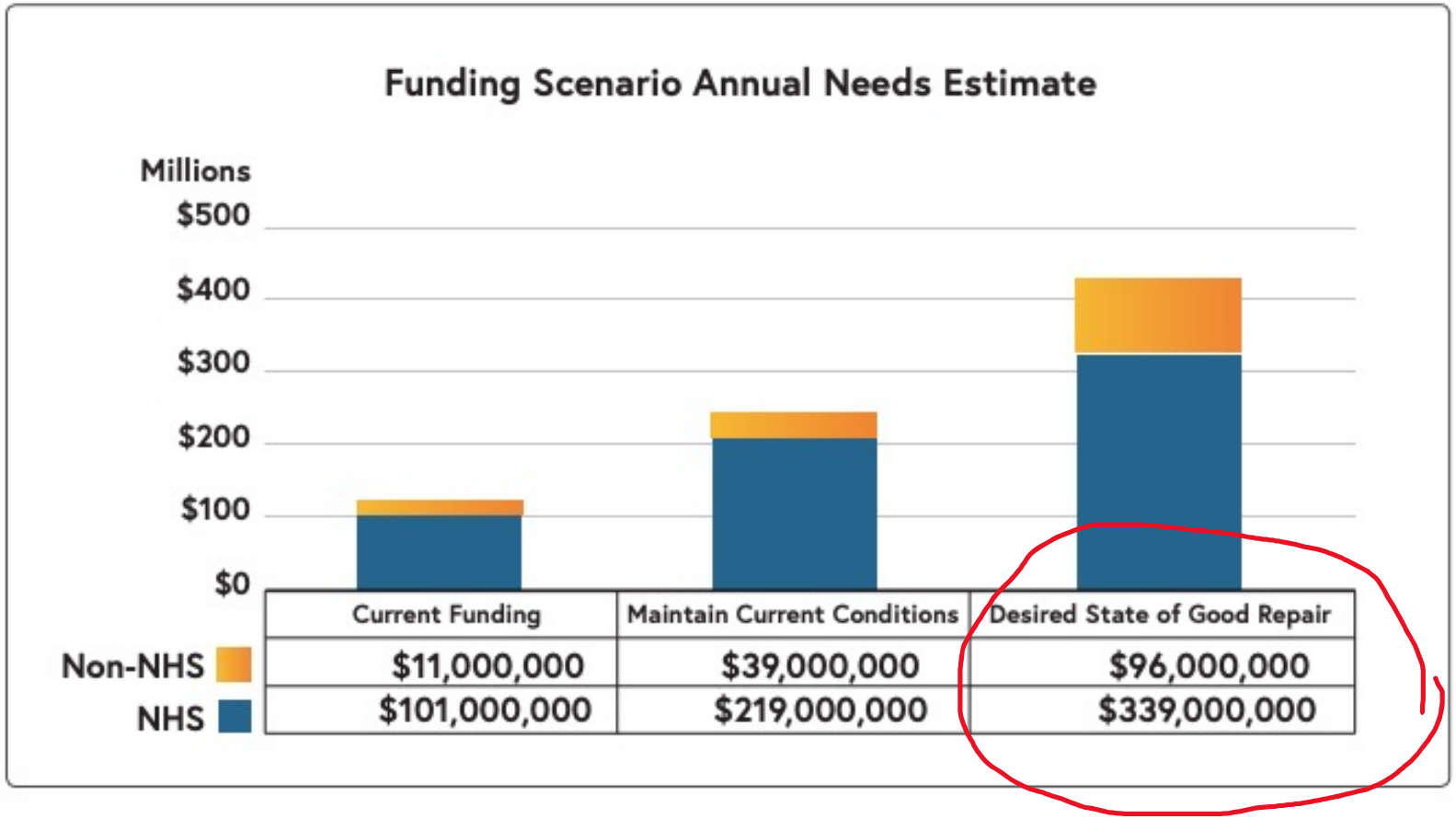
The $1 billion proposed to be spent on interchange rebuilding, new freeway ramps and adding lanes to I-5 for the CRC (now the IBR) in Oregon, is about three times the amount of money needed to bring all National Highway System bridges in the entire state of Oregon into a "state of good repair." See following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

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.

Oregon Department of Transportation 2020 Bridge Condition Report Page 46



	Current Funding	Maintain Current Conditions	Desired State of Good Repair
Non-NHS	$11,000,000	$39,000,000	$96,000,000
NHS	$101,000,000	$219,000,000	$339,000,000

Compare the $339 million to bring <u>all NHS bridges in Oregon</u> 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.)

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.

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%.

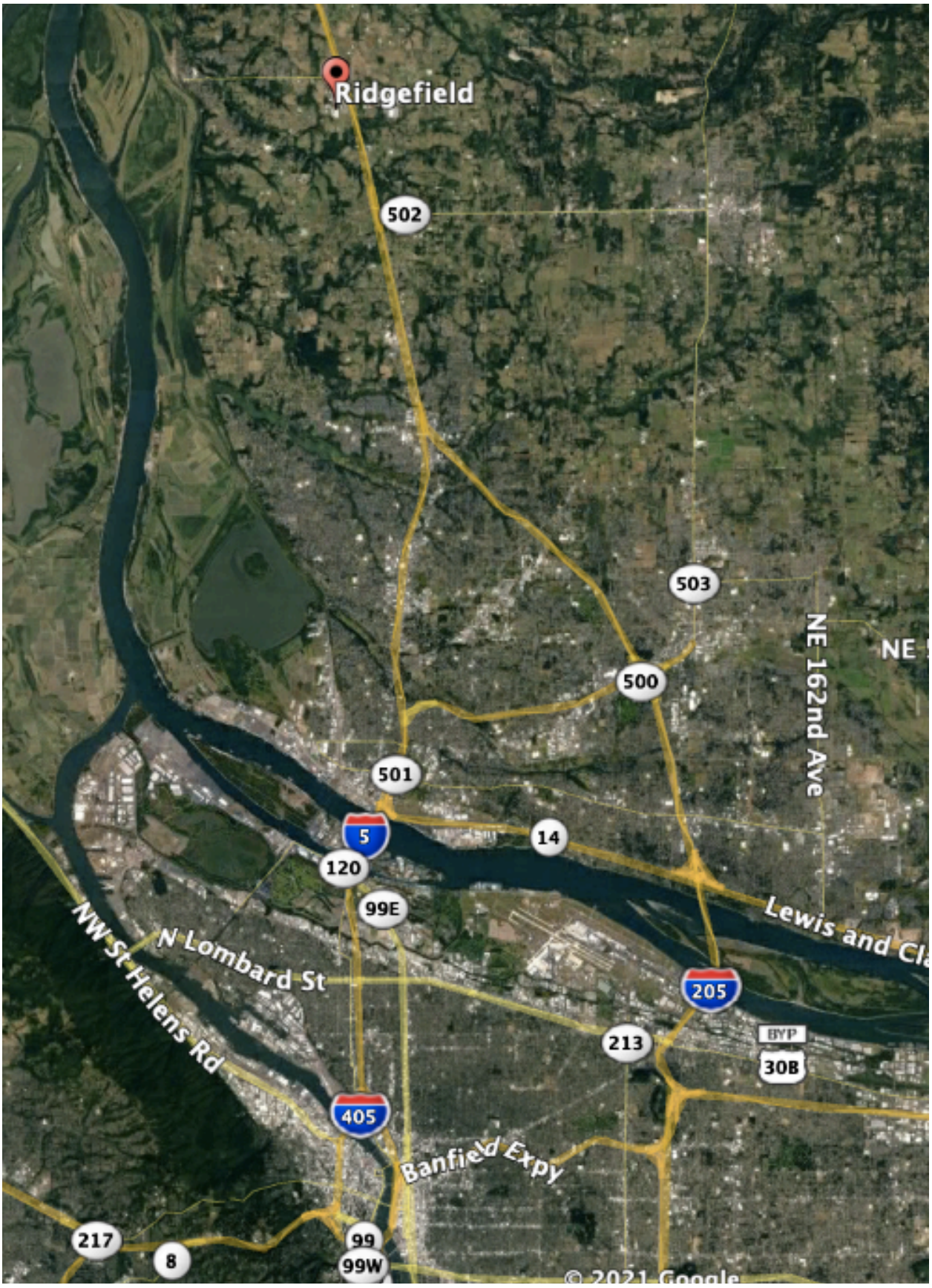
b) improve connectivity, reliability, and reduce travel times by 10%, and increase transportation options in the BIA;

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.


Ridgefield
502
503
NE 162nd Ave
NE
500
501
5
14
120
99E
Lewis and Cl
N Lombard St
NW St Helens Rd
205
213
BYP
30B
405
Banfield Expy
217
8
99
99W
© 2021 Google

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.

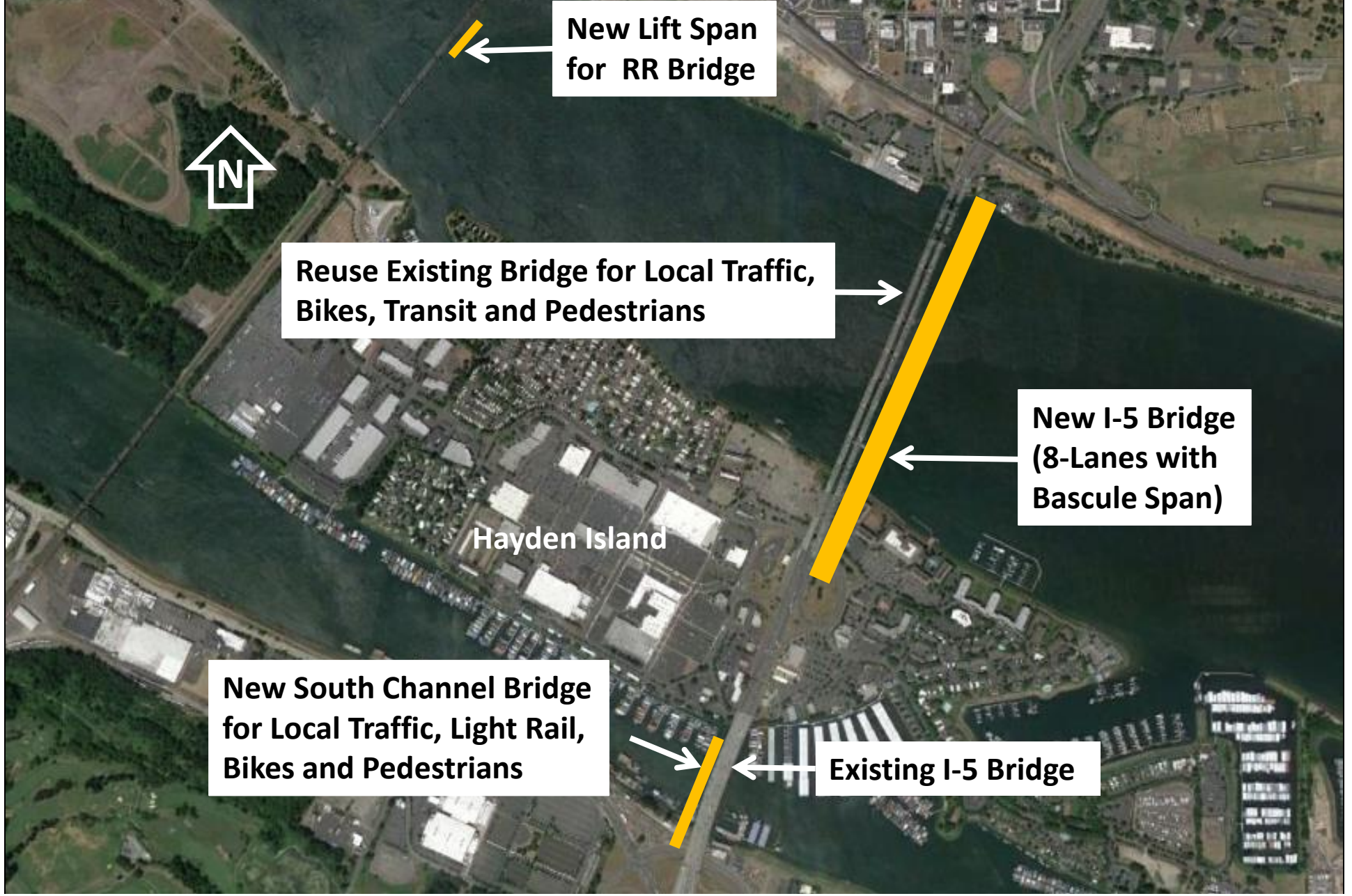
• Seismic vulnerability: The existing I-5 and the bridge structures on and over I-5 and accessing I-5 in the BIA are located in a seismically active zone. They do not meet current seismic standards and may be vulnerable to damage or collapse in an earthquake, as analyzed in ODOT's 2009 seismic vulnerability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

Common Sense Alternative II (CSA)

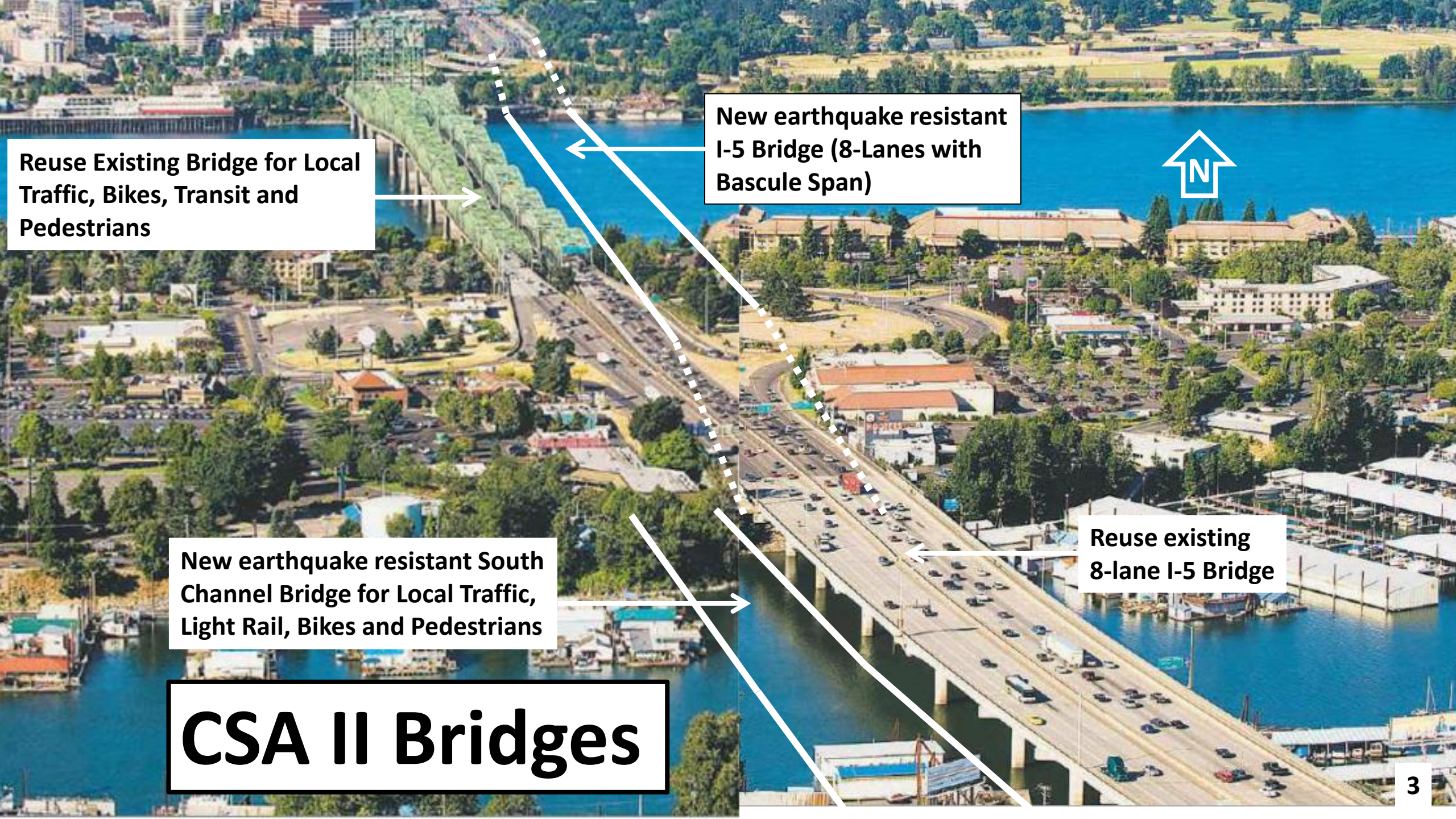
Includes Reusing the Existing Bridge

David Rowe Public Comment

for Local Traffic, Buses & Bikes

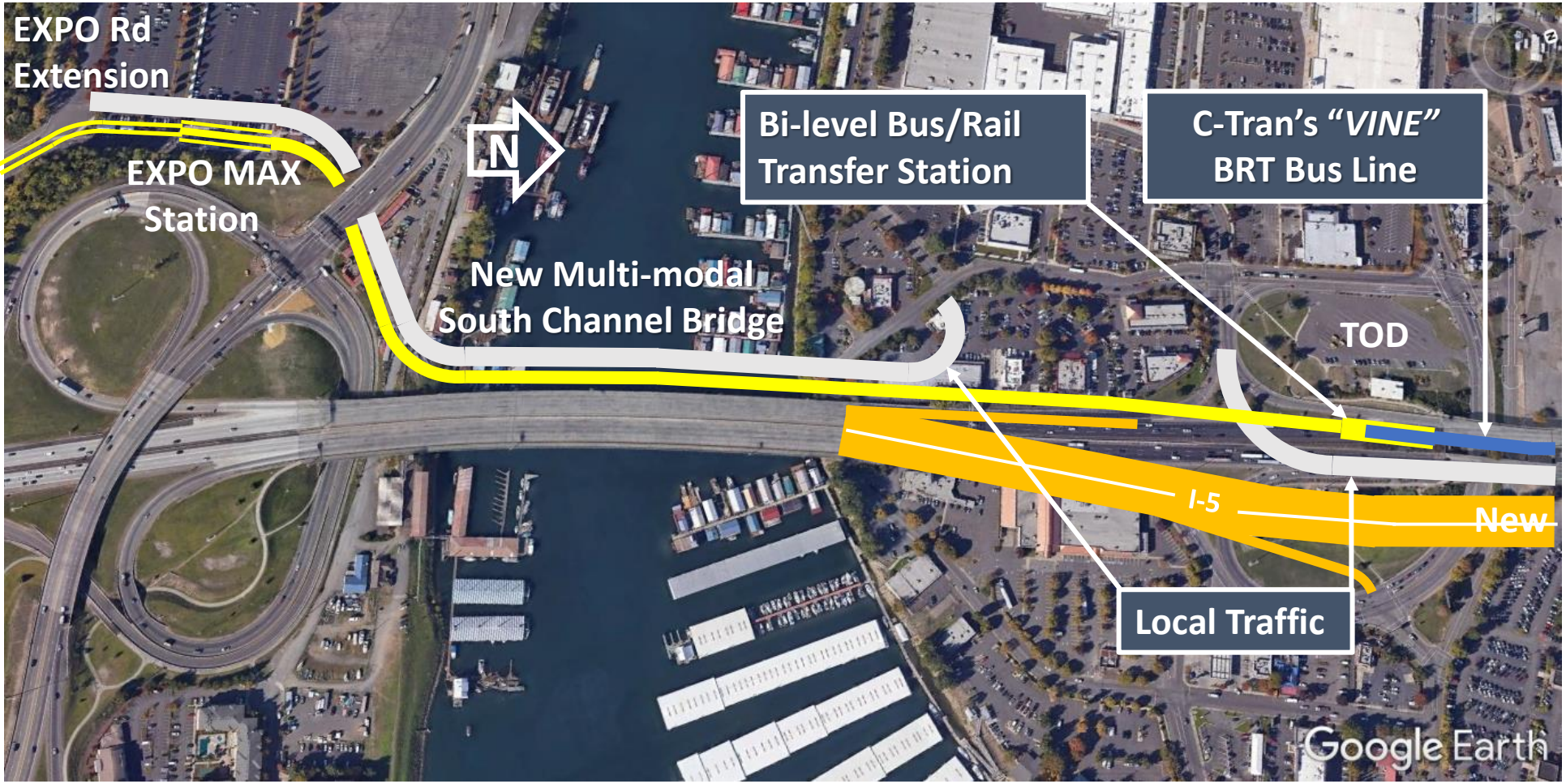


Common Sense Alternative II

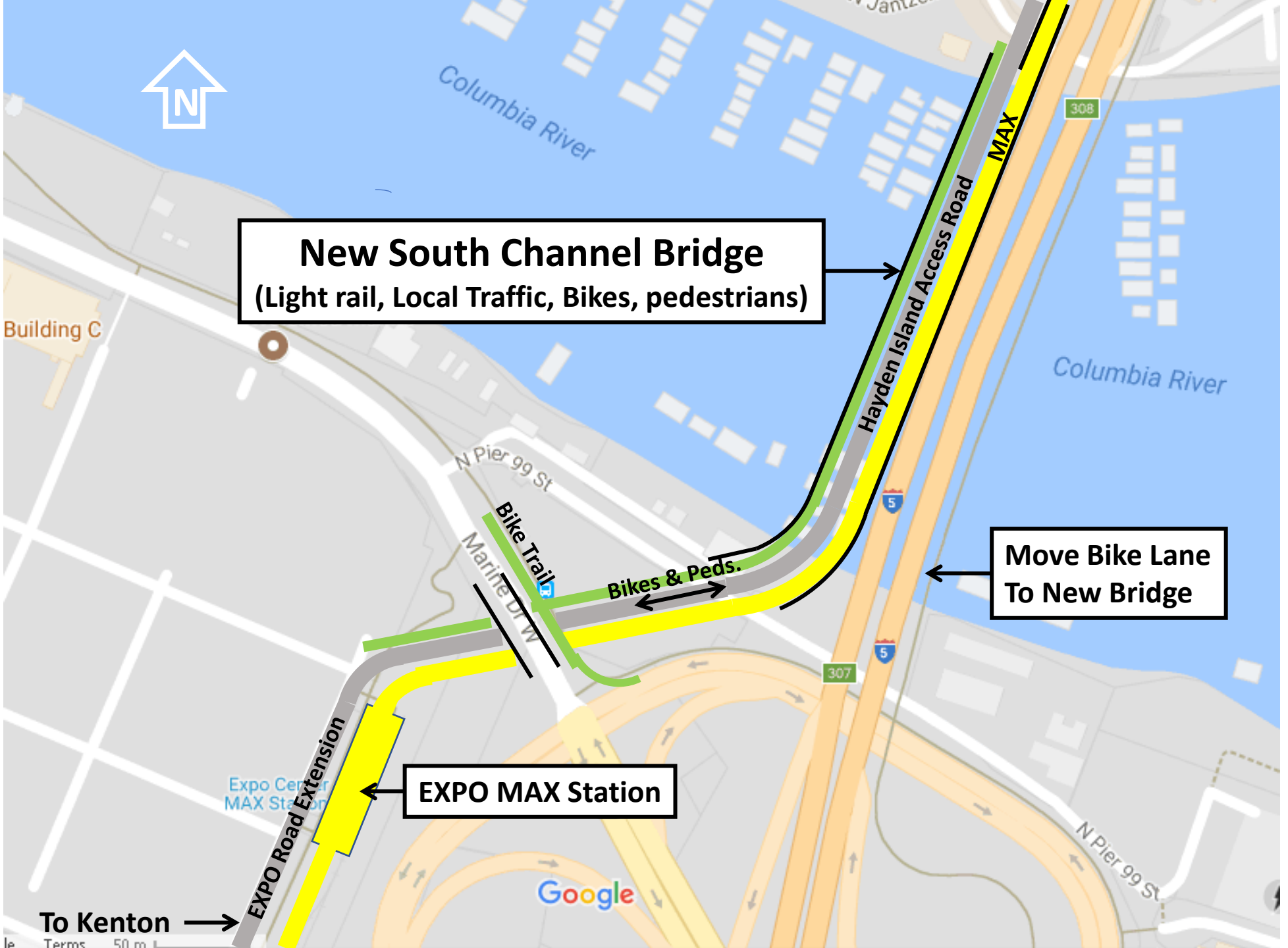


CSA II Bridges

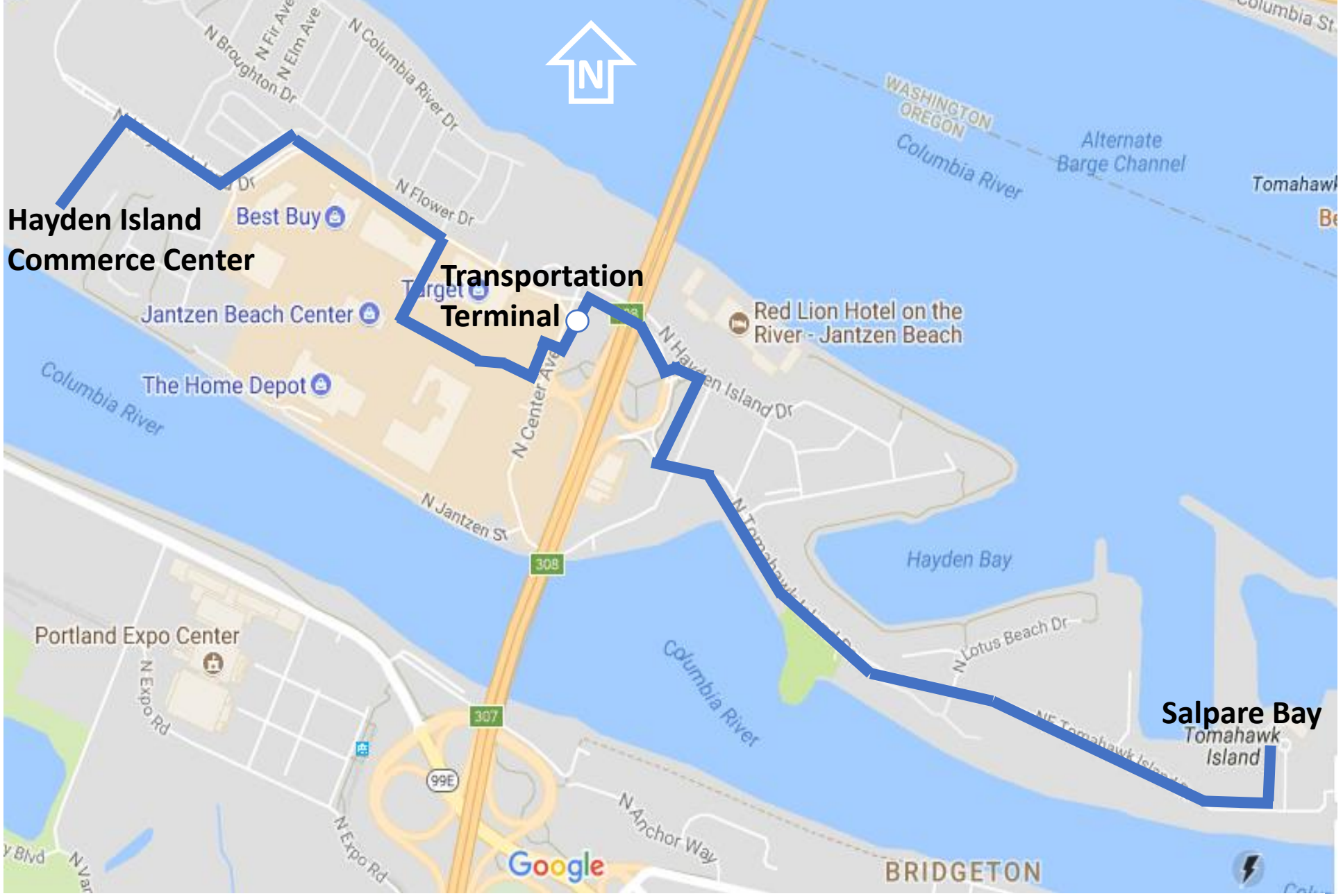

Hayden Island
New RR Lift Span
N
To Kenton via Expo Rd. and Denver Ave
New South Channel Bridge
N. Center Av
I-5
on
MAX/C-Tran Exchange
Vancouver
Repurposed Existing Bridge(s) for local traffic, buses & bikes
off
BNSF RR
Columbia St
I-5
New 8-Lane I-5 Bridge
SR-14
Tomahawk Is. Dr
Bascule Draw Spans
Proposed Freeway Traffic
Proposed Local Traffic
Proposed Light rail (MAX)
Proposed Busway (C-Tran)
I-5
SR-14
Common Sense Alternative II
AORTA 9/19



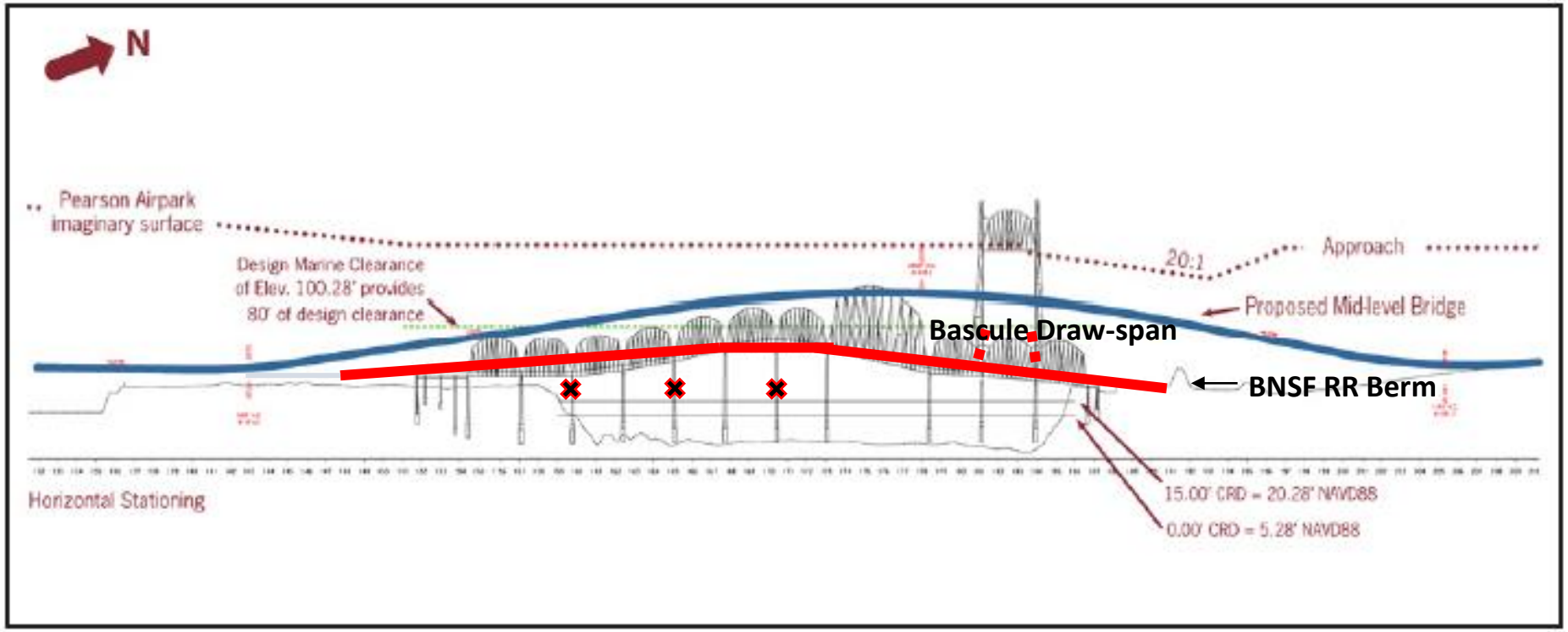
Existing I-5/Marine Drive Interchange with no I-5/Hayden Island Interchange


New South Channel Bridge
(Light rail, Local Traffic, Bikes, pedestrians)
Hayden Island Access Road
MAX
Move Bike Lane
To New Bridge
Bike Trail
Bikes & Peds.
EXPO MAX Station
EXPO Road Extension
To Kenton
Columbia River
Columbia River
Building C
N Pier 99 St
N Pier 99 St
Marine Dr W
Expo Center
MAX Station
308
307
5
5
Google
N

At-Grade Vancouver Interchange



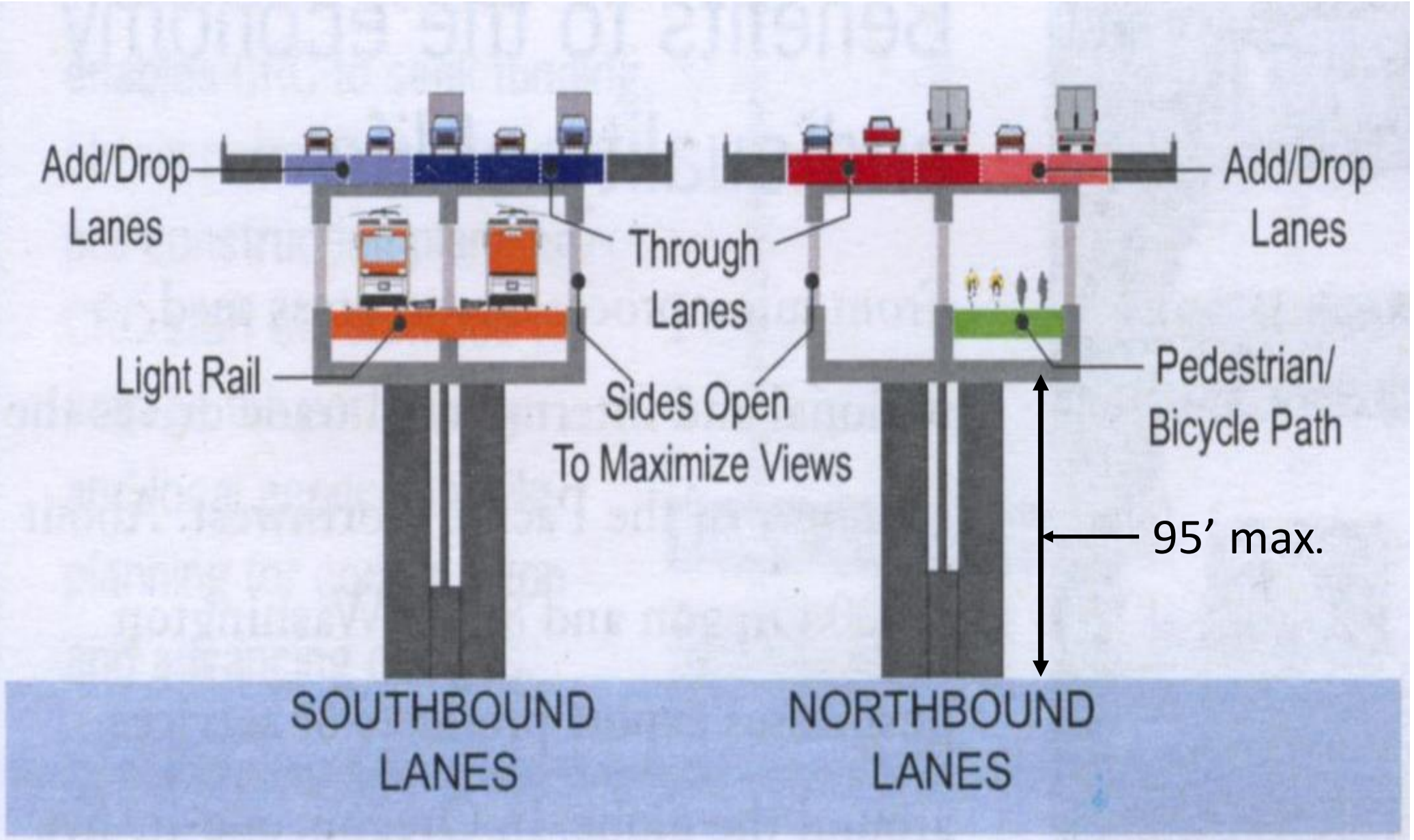
Hayden Island Shuttle Bus



ODOT's Preferred Alternative (95')

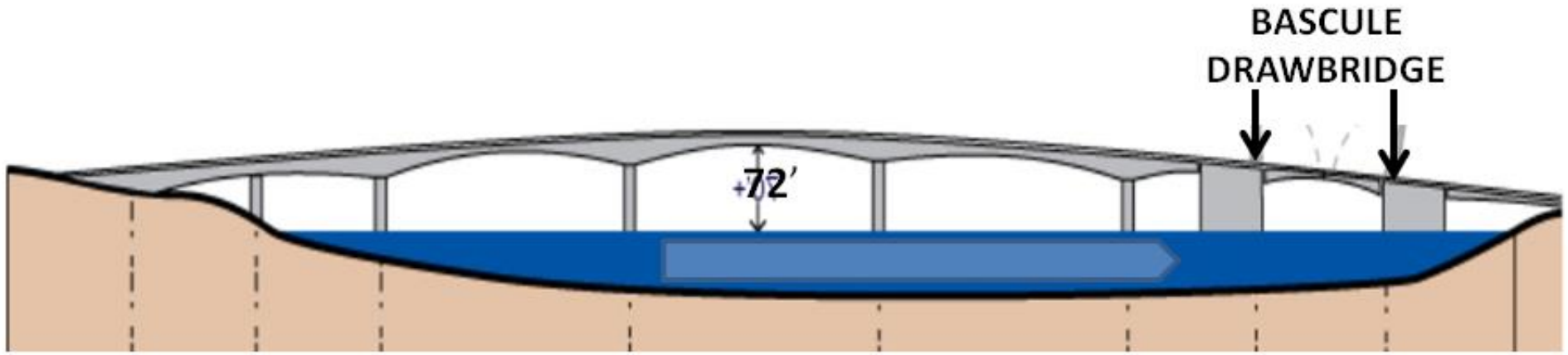
Common Sense Alternative II (72')

Profiles

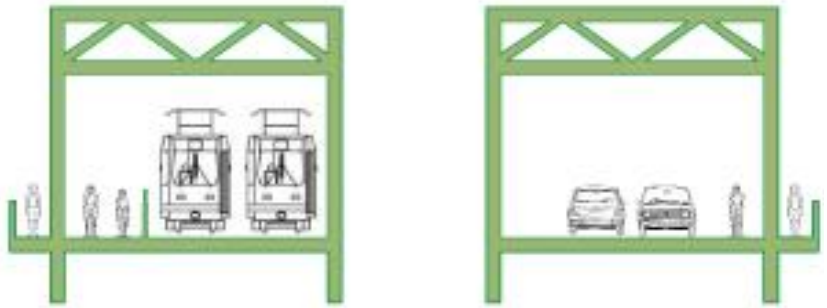


Design calls for two structures with a total of 10 lanes and full safety shoulders.

(ODOT’s Proposal)



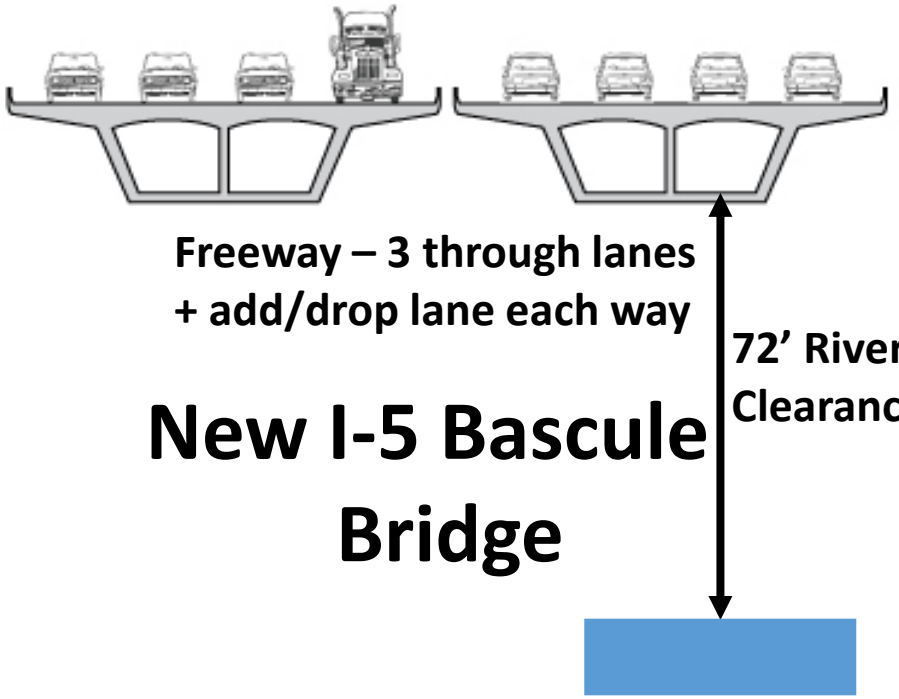
CSA II Bridge Looking West



Transit (Buses/LRT)
Cycle-Track & Ped.

Local traffic
& Pedestrians

Existing I-5 Lift Span Bridges

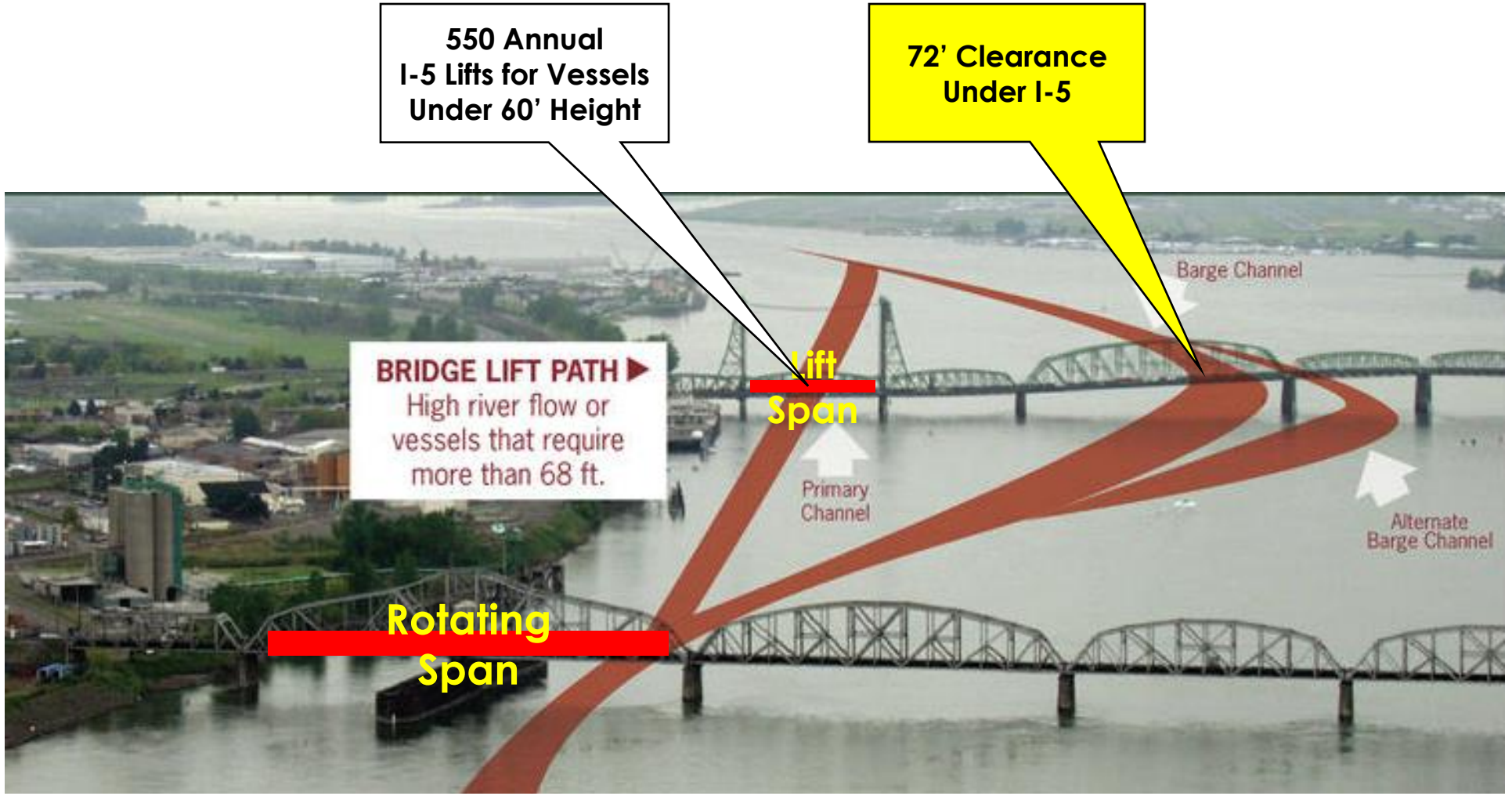


New I-5 Bascule Bridge

(Cross-Section looking North toward Vancouver)

Common Sense Alternative II

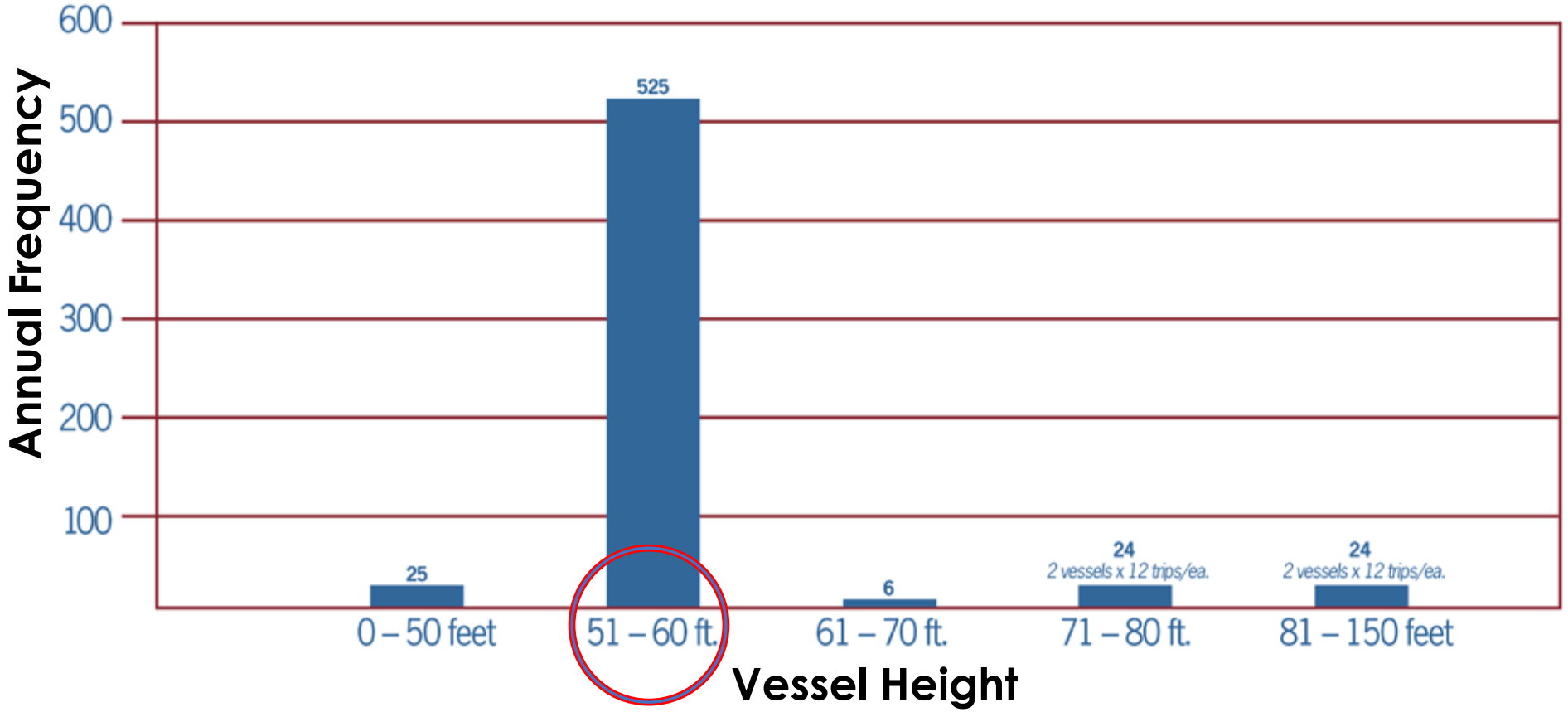
CSA PROPOSAL - Bascule draw span similar to this new Woodrow Wilson I-95 Bridge near Washington DC



Existing Barge Traffic

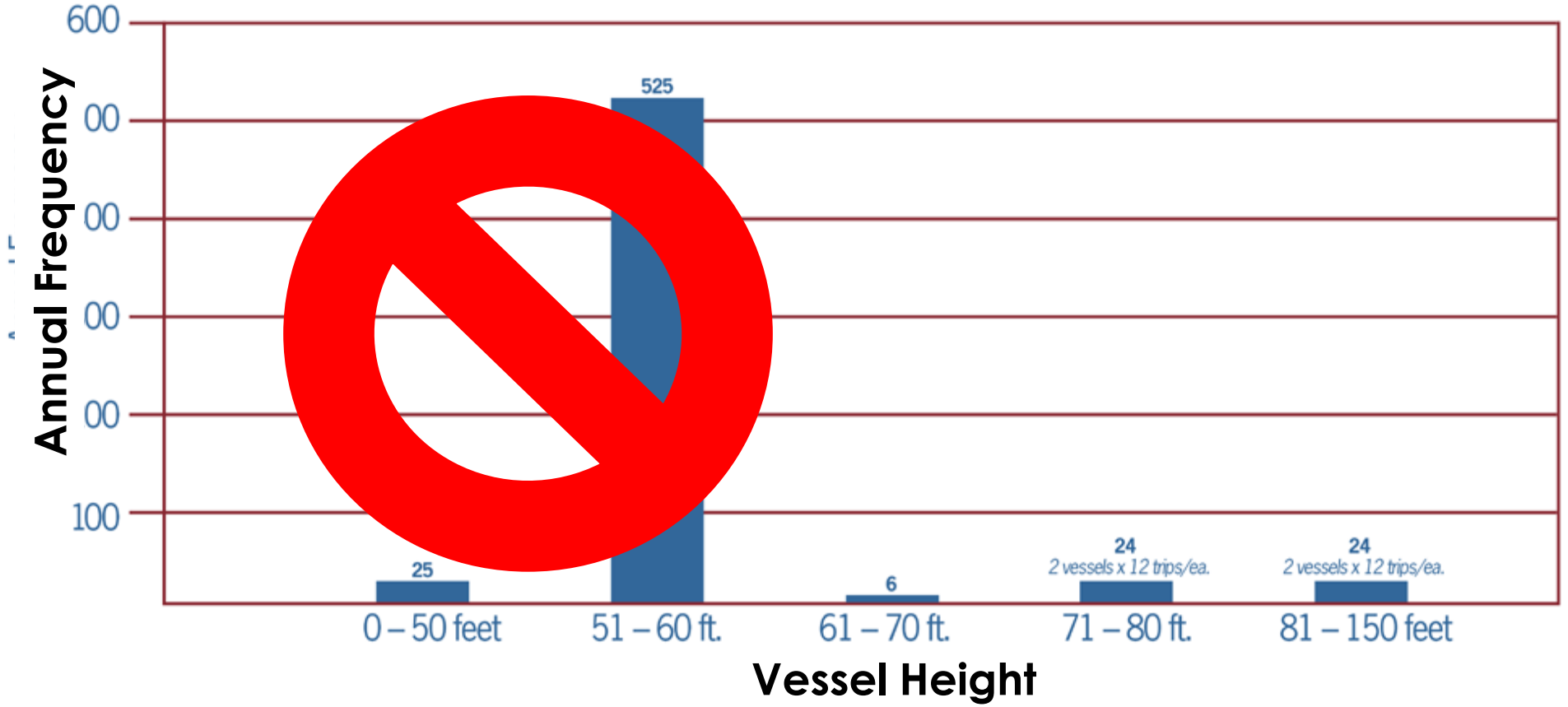
BNSF Railroad New Lift Span

604 Total I-5 Lifts

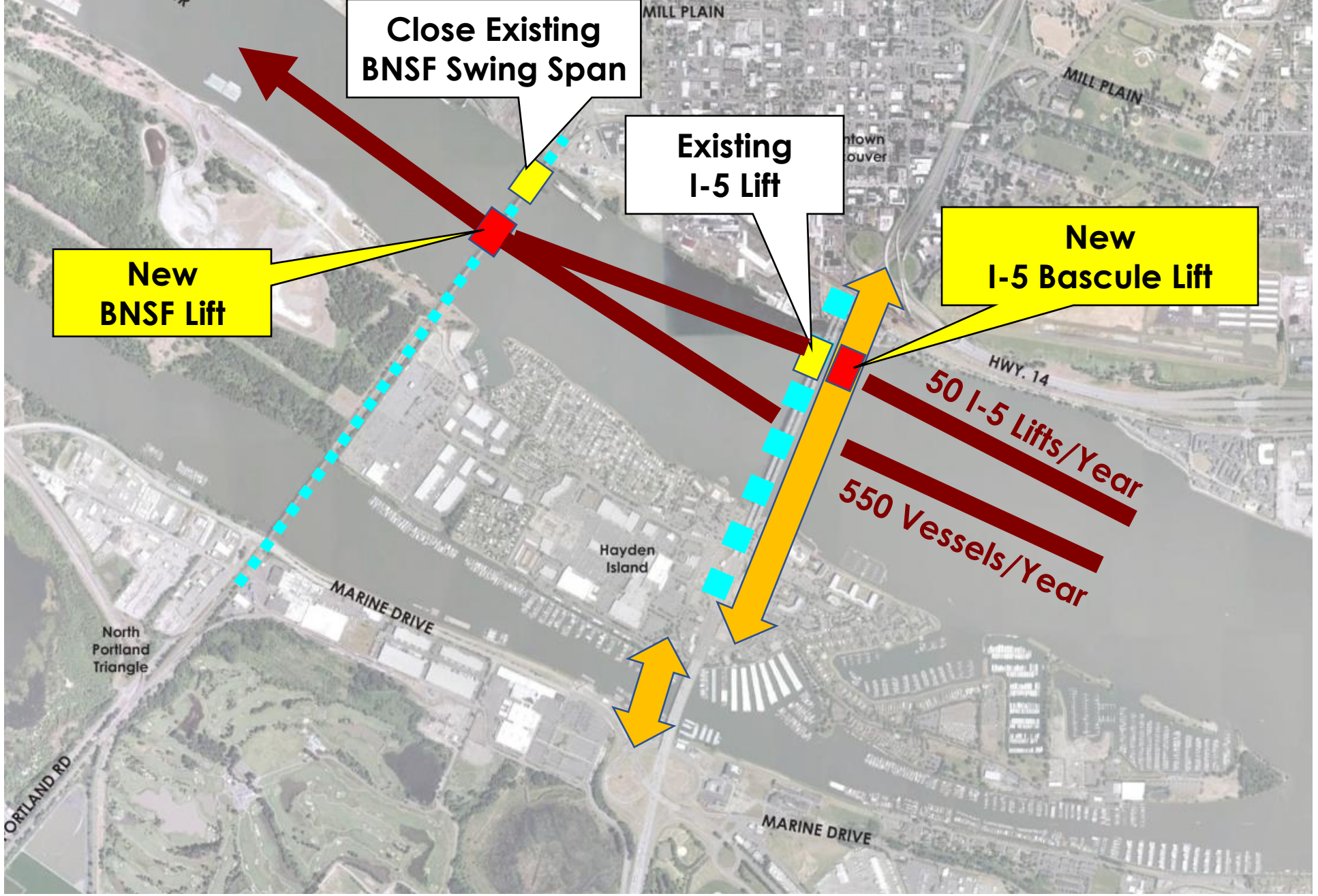


I-5 Bridge Lift Frequency (2004 Averages)

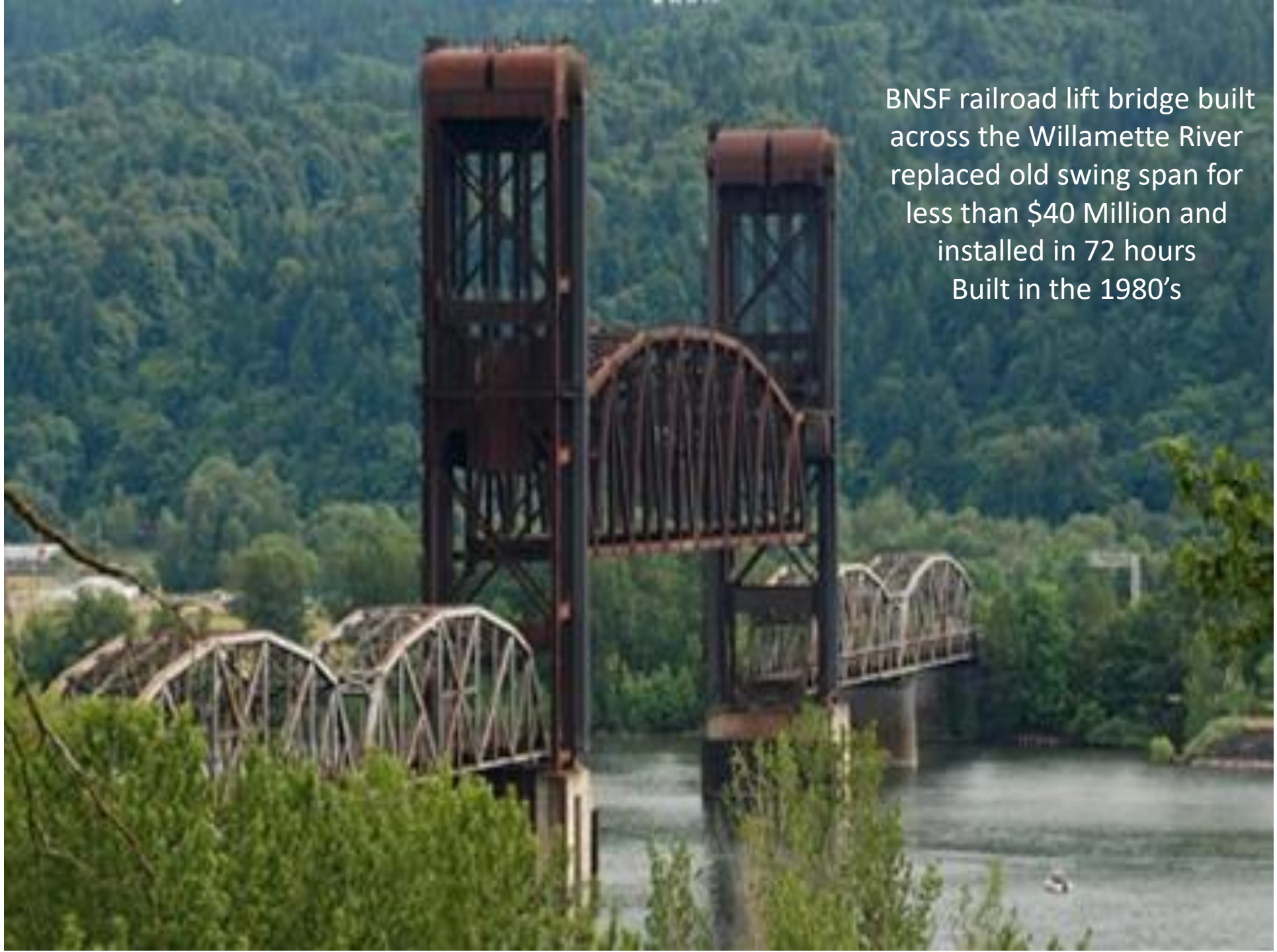
550 Lifts Eliminated



I-5 Bridge Lift Frequency (2004 Averages)



Barge Traffic With New Bridge



BNSF railroad lift bridge built across the Willamette River replaced old swing span for less than $40 Million and installed in 72 hours
Built in the 1980’s

Purpose and Needs

1. Growing travel demand and congestion
2. Impaired freight movement
3. Limited public transportation operation, connectivity, reliability and equity
4. Safety and vulnerability to incidents
5. Substandard bicycle and pedestrian facilities
6. Seismic vulnerability
7. Addresses GHG emissions and climate change

Common Sense Alternative II

The Common Sense Alternative II is a workable crossing of the Columbia between Portland and Vancouver. It would eliminate the need for a full interchange on Hayden island.

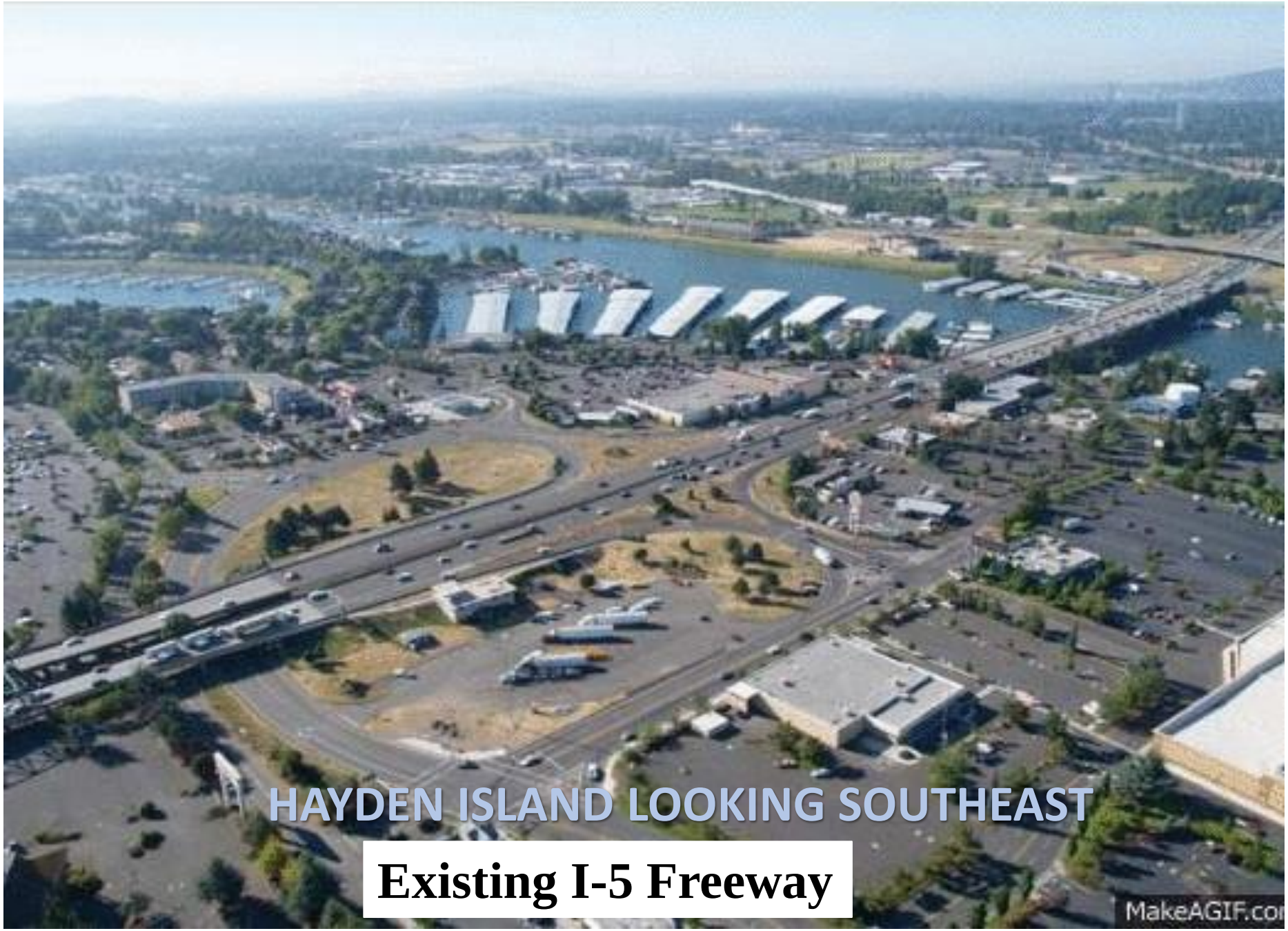
- Install a lift span in the railroad bridge downriver from the existing Interstate Bridges. This would allow all commodity barge traffic to navigate under the high spans of the existing Interstate Bridges and reduce the number of lifts by 90 percent.

- Construct a new eight-lane freeway bridge with a bascule opening that aligns with the lift span of the existing bridges. This bridge would accommodate river traffic of any height and align exceptionally well with existing Interstate-5 approaches. I-5 can continue to cross beneath the BNSF railroad. Its low profile solves many of the engineering challenges of the CRC. This opening span is not unprecedented on a major Interstate Highway. (I-95 Bridge recently built near Washington, DC.)

- Repurpose the existing Interstate Bridge for local traffic, public transit, bikes and pedestrians. Seismic retrofitting would be an option, not a requirement.

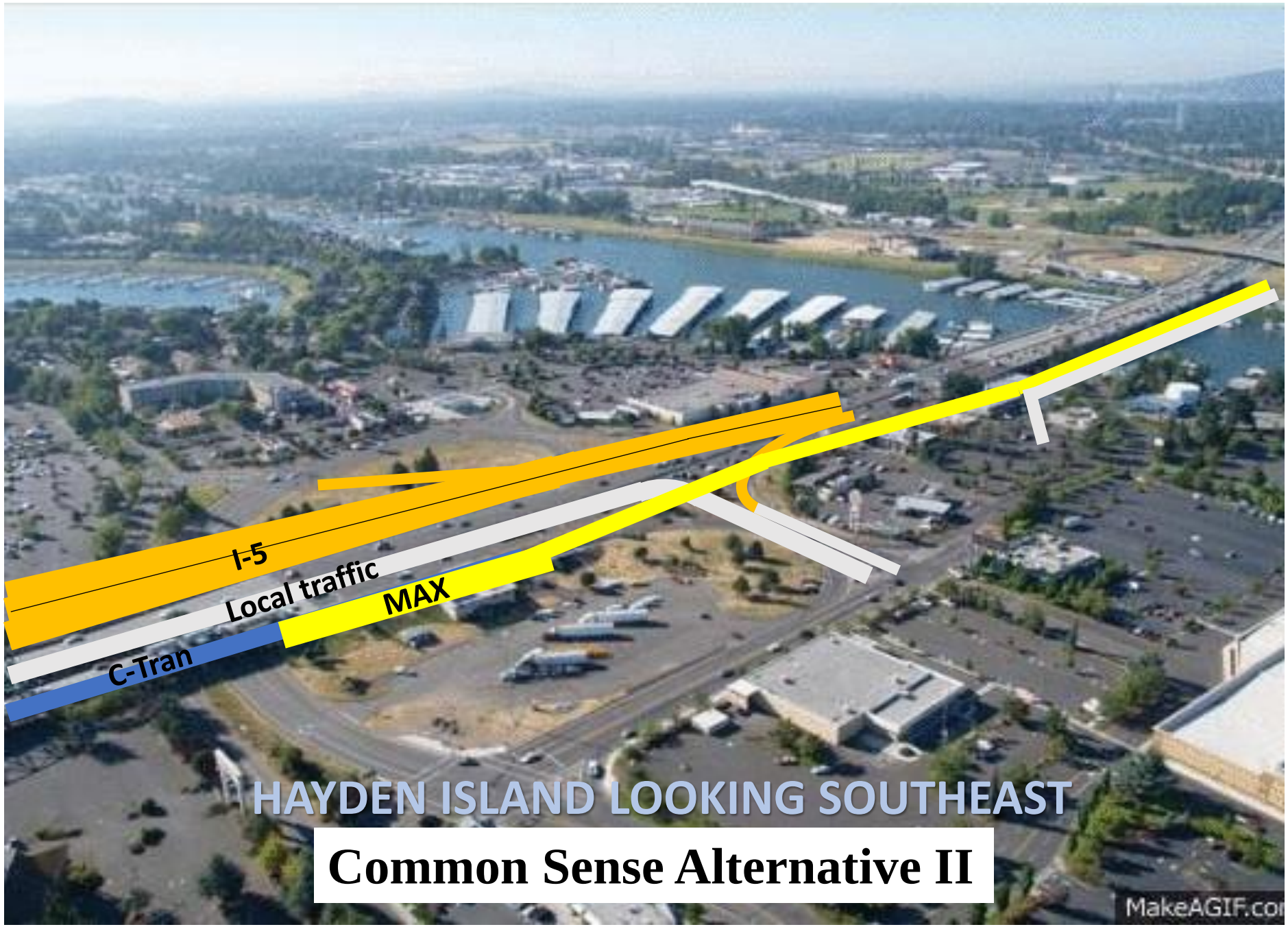
- Build a new bridge over the South Channel for local traffic, light rail, bikes and pedestrians that allows non-freeway vehicle access between North Portland and Hayden Island.

The Next Slides Compare the Common Sense Alternative II To the CRC Preferred Alternative


HAYDEN ISLAND LOOKING SOUTHEAST
Existing I-5 Freeway
MakeAGIF.com

ODOT's Columbia River Crossing Concept

Columbia River Crossing conceptual drawing, looking south, showing the new bridge with light rail access along the west (lower right in drawing) side.


I-5
Local traffic
MAX
C-Tran
HAYDEN ISLAND LOOKING SOUTHEAST
Common Sense Alternative II
MakeAGIF.com

Columbia River CROSSING

Current I-5 Bridge Existing Conditions

Looking South from Vancouver

Columbia River CROSSING

Replacement Bridge Draft Concept

with high capacity transit inside southbound bridge (Stacked Transit/Highway Bridge)

ODOT's Preferred Alternative

Rendering is for discussion purposes only and is subject to change. Transit alignment could be used for bus rapid transit or light rail. –11/27/07

Columbia River CROSSING

Current I-5 Bridge + 8-Lane Bascule Freeway Bridge

Common Sense Alternative II

As SLIDE	Narrative	Notes
1	We have a traffic bottleneck on the Interstate 5 highway corridor, as it crosses the Columbia River between Oregon and Washington, and it must be addressed. Common Sense Alternative, Version II, is a cost-effective environmentally friendly solution for this bottleneck. This presentation is brought to you by ***AORTA***, the Association of Oregon Rail and Transit Advocates. The proposal was primarily developed by Jim Howell, ***AORTA*** Director and Strategic Planner. Note that all of the maps in this presentation include an arrow indicating which direction is north. The "locally preferred alternative" for the Columbia River Crossing proposed in 2012 was not only destructive to the local environment, but also failed to address **serious** problems with the existing infrastructure. AORTA's Common Sense Alternative, or CSA, does address these problems, offering far more effective and environmentally friendly solutions. First, the CSA repurposes the existing I-5 bridge for local traffic between Hayden Island and Vancouver Washington, using the upstream span for autos and trucks and the downstream span for transit and bicycles. Both spans could also accommodate pedestrians. Retaining this existing bridge would avoid a costly demolition, as proposed in the 2012 "locally preferred alternative".	Music intro
2	This slide shows an overhead view of the proposed bridge configuration, including both the repurposed existing bridge and two new bridges. Yes, the CSA does call for a **new** I-5 freeway bridge, ***in addition to*** the existing bridge. This new bridge would be just upstream from the current bridge, and it would have 8 lanes for auto and truck traffic, a 72-foot river clearance and a bascule lift span. The CSA II also includes a new, relatively short bridge over the South Channel, to accommodate MAX light rail and local traffic between Hayden Island and Expo Road in North Portland. MAX trains would cross this new bridge and connect with C-Tran buses from Vancouver at a new Hayden Island Transit Center. Finally, the CSA envisions changes to the BNSF railway bridge, farther downstream (near the center top of this photo). The 100-plus year-old swing span on this bridge would be replaced with a lift span that would be aligned with the high point of the current and new I-5 highway bridges. This alignment would eliminate 95% of the lift events on the current bridge, as explained later in this presentation.	
3	This slide shows a ground-level view of the bridges shown in the previous slide. Note that the new freeway bridge would diverge northbound from the current south channel bridge at it crosses Hayden Island. This new bridge is designed to carry primarily long-distance interstate traffic between Oregon and Washington, including most of the freight traffic.	
4	This is an aerial view of the proposed CSA solution for the full river crossing. The wide gold line depicts the new 8-lane bridge that would carry interstate traffic between Portland and Vancouver. The alignment here is	

	actually **straighter** than the **existing** I-5 alignment. The white line depicts the route for local traffic, including pedestrians and bicyclists, that would be traveling between Portland and Hayden Island, over the new South Channel Bridge, and between Hayden Island and Vancouver, over the existing bridge. Note that the new South Channel Bridge provides two lanes for emergency vehicles to travel between Portland and Hayden Island. The short yellow line on the left, between Portland and Hayden Island, denotes the extension of the MAX light-rail line. This also runs over the new South Channel Bridge. The blue line connects to this line at the new Hayden Island Transit Center. It carries C-Tran buses to and from Vancouver, over the existing I-5 bridge.	
5	This a more detailed aerial view of the new South Channel Bridge, showing its connections both on the Portland side of the channel and on Hayden Island. The yellow line is the new extension of the MAX line, the short blue line on the far right is the C-Tran bus route, and the curved pale gray lines denote the routes for auto, truck and bicycle traffic that would be traveling to and from Hayden Island.	
6	This diagram shows the new South Channel Bridge in even more detail. The yellow line shows the MAX route, the gray line shows the auto and truck route and the green line shows a bike path, including access to the Marine Drive bicycle path.	
7	This illustrates the CSA interchange in Vancouver. Compared to the "Locally Preferred Alternative", the CSA has a much lower elevation and a modest footprint. The gold lines here depict the landing for the new CSA eight-lane I-5 bridge, which would carry only interstate traffic. The curving pale gray line on the left indicates the on and off ramps for the upstream span of the existing bridge, which would carry local auto and truck traffic, with provision for bicycles and pedestrians as well. The blue line depicts the on and off ramps for the downstream span of the existing bridge, which would carry transit vehicles—C-Tran buses for now, but with an option to add light rail later. Bicycles and pedestrians could also use this section of the bridge. Note that the CSA utilizes much of the existing infrastructure, with moderate, safe grades. The wider radius of the curve of the on ramp from West Fifth Street and SR-14 provides easy, safe merges with interstate traffic. Local traffic moving between Hayden Island and Vancouver does not intermix with interstate traffic, avoiding many of the lane and speed changes required for merging and exiting, allowing interstate traffic to flow more freely. And C-Tran buses, as represented by the blue line, also reach Hayden Island without steep grades or intermixing with interstate traffic. Also, if the interstate freeway is temporarily out of service for any reason, emergency vehicles and other traffic can still reach Hayden Island from Vancouver, utilizing the existing bridge. And what is it that caused the "Locally Preferred Alternative" to propose massive, high-elevation, unsafe, noisy interchanges on the Vancouver side of the river? The BNSF railway line, adjacent to the north bank of the Columbia, shown here as a dark gray line sloping from left to right. In order to go ***over*** the railway, as the "Locally Preferred Alternative"	

	proposed, I-5 would have to clear the rail line by a minimum of 23 and a half feet. But going ***over*** the railway is ***not*** necessary! The current freeway alignment goes ***under*** the railway. Keeping the I-5 alignment under the railway avoids the high costs as well as many of the problems with the proposed new Vancouver interchanges.	
8	The blue line here shows a new Hayden Island shuttle bus route. This shuttle could connect residents, employees and businesses with transit to and from Oregon and Washington, and also help revitalize businesses on the island. The shuttle would connect with Portland's MAX light rail and Vancouver's Vine bus service at the Hayden Island Transit Center. The "Locally Preferred Alternative," by contrast, would seriously degrade island livability.	
9	This side profile contrasts the relative height of the CSA (in red) with the previously adopted "Locally Preferred Alternative" depicted by the blue line. Note that the high point of the CSA is near the river's center channel, whereas the "Locally Preferred Alternative" shifted the high point north, closer to the location of the existing lift span. Let's take a look at the bridge height targets proposed in the 2012 plan. The first draft proposal in 2006 was 116 feet at the highest point of the bridge. But the final "Locally Preferred Alternative" was only 95 feet high, eliminating the ability of upriver businesses to continue navigating the river, and essentially forcing expensive taxpayer payouts for compensation of damages to those businesses. While the CSA has only a 72-foot highest point, it compensates for this lower height with its bascule draw span, which imposes no new restriction on the height of river traffic, greatly reducing these problems as well as the cost of the project. And since the CSA's bascule drawspan is lined up with the existing lift spans, with their 178-foot clearance, that will be height limitation as long as the existing bridge remains in place. Finally, since the CSA has a lower height than the proposed "Locally Preferred Alternative", it does **not** interfere with aviation from Pearson Field, and does **not** require distortion of the I-5 pathway. The "Locally Preferred Alternative," in a convoluted attempt to avoid conflict with Pearson Airfield, required ***increased*** curvature and increased project expense.	
10	This ODOT slide illustrates a cross section of the "Locally Preferred Alternative" new 10-lane I-5 bridge far above the river, mixing local traffic with interstate traffic. There is no alternative route available here, should there be a serious traffic issue on the interstate. Imagine the noisy, dark environment for pedestrians and bicyclists, after they have struggled up a long corkscrew ramp to attain the height of an 8-to-10-story building in order to reach the bridge deck. Light rail has also had to negotiate steep grades and a forward-view-blocking curve, increasing operational costs and transit time, ***and*** decreasing ridership because of those longer transit times. ***All*** these problems are avoided with the Common Sense Alternative.	

11	This side profile of the new CSA 8-lane bridge shows the location of the new drawspan, which will be aligned with the lift spans on the current bridges. It also shows that the 72-foot high point of the new bridge is close	

	to the center of the river channel, at its deepest point.	
12	This is a cross section of the existing and new I-5 bridges proposed by the CSA. The green span on the left is for buses or light rail. The other green span has one lane in each direction for local traffic. These bridges also provide space for bicycles and pedestrians. The CSA **avoids** the **excessively** long, steep inclines, and the unnecessary curvature, envisioned in the 2012 "locally preferred alternative." Note that the new freeway bridge, shown here on the right, has eight lanes—four in each direction.	
13	Early in the CRC planning process there was some testimony that lift spans were no longer allowed in the interstate system. In fact there are multiple bridges with movable spans on that system. This is a photograph of the Woodrow Wilson double-leaf bascule drawspan completed in 2006 and 2008. This bridge has a high point of 70 feet. This relatively new bridge carries traffic on I-95, the North-South interstate on the East Coast. It also carries Capitol Beltway traffic which circles Washington D.C. The traffic on this bridge, and on the river, far exceeds the demands we encounter on our Columbia River crossing.	
14	Let's turn our attention now to the BNSF railroad bridge, downriver from I-5, completed in 1908. Early in the original CRC process ODOT carefully and purposefully identified the scope of the process by drawing arbitrary borders to exclude the railway. But … are a railway line and river traffic corridor components of a transportation system? Absolutely, and these modes of transport have significant relevance to the I-5 freeway river crossing. A department of ***transportation*** should most certainly give consideration to all modes of transport. Viewed from downriver with the railway bridge in the foreground, this photo illustrates the difficult right-turn maneuver heavy barge traffic would have to negotiate in order to go under the high point of the existing I-5 bridge. Note that passage through the narrow opening in the swing span of the railway bridge includes negotiating a long concrete barrier on one side, complicating the maneuver even further. It is particularly difficult when water levels are high. The straight brown line shown on the left here provides a safe, relatively easy path between the railroad bridge and the I-5 bridge. **BUT** it requires a bridge lift on the existing I-5 bridge, and this is the reason tugboat operators must frequently request bridge lifts on I-5, during all hours of the day. Swinging over to the 72-foot high point of the existing I-5 bridge is too difficult a maneuver for these large ships. This configuration, in other words, forces river traffic to request I-5 bridge lifts, even though over 90% of the river traffic could easily fit under the high point of the existing I-5 bridge, if it were not for the sharp turn required to do so.	
15	This picture shows a barge being pushed downriver after passing under the I-5 lift span. Traffic is no doubt still backing up in Oregon and Washington, waiting for the lift span to lower into place and for the gates to be raised. Maneuvering a heavy barge downriver is no easy task. Guiding it through the long narrow swing-span opening in the railway bridge, with concrete	

	piers on the left, is difficult and dangerous. ***AORTA***'s proposed new lift span, south of the swing span and located near the central channel of the river, would provide a much safer course for tugboat operators.	
16	This chart identifies I-5 bridge lifts in 2004. It shows how vessels between 51 and 60 feet above water level resulted in 525 bridge lifts in 2004.	

17	This chart shows the number of I-5 bridge lifts that could be eliminated with the replacement of the swing span on the railroad bridge with a better-placed lift span: 54 lifts versus 604 lifts, in 2004—a 91% reduction.	
18	This diagram shows how a new swing span on the BNSF Bridge would provide a much easier-to-negotiate path for barges and other large ships, allowing them to pass under the 72-foot high points of both the existing bridge and the new CSA bridge. Note that the new opening on the railroad bridge is much wider and closer to the center of the river channel, and no longer has the long concrete wall on one side of the opening. This new lift span on the railroad bridge would eliminate about 90% of the bridge lifts that tie up I-5 traffic today. It would benefit interstate road traffic, river traffic and railway traffic. It is truly a ***transportation*** project. This project could be completed in a relatively short time. The cost could possibly be covered in part, or in whole, by funds allocated through the 1940 Truman-Hobbs Act. Oregon is powerfully positioned to leverage federal funds for such a project. Keep in mind that the BNSF railroad bridges over both the Willamette and the Columbia are a decade older than the oldest Columbia River I-5 freeway bridge, yet these railroad bridges continue to safely carry heavier loads than the two I-5 bridges, every day.	
19	This photo shows another BNSF railroad bridge on the same rail corridor, crossing the Willamette River just upstream from St. Johns. This 1908 bridge originally had a swing span similar to that on the rail bridge over the Columbia. That old swing span was replaced with a lift span in 1989. When this lift span was installed, rail traffic was disrupted for a mere 72 hours. The 1989 cost was about $40M ($87M in 2021 dollars), less than half (in 2021 dollars) of what has already been wasted on the 2006-2012 CRC design.	
20	When ODOT initiated this project, six statements of purpose and needs were identified: • Growing travel demand and congestion • Impaired freight movement • Limited public transportation operation, connectivity and reliability • Safety and vulnerability to incidents • Substandard bicycle and pedestrian facilities, … and • Seismic vulnerability. We have updated this list to add 'equity' to the third bullet point and a seventh statement: addressing GHG emissions and climate change, which are finally receiving enough public attention to be included. The Common Sense Alternative, or CSA, meets ***all seven of these purpose statements***.	
21	The Common Sense Alternative II is a workable crossing of the Columbia River between Portland and Vancouver. It would eliminate the need for a full	

	interchange on Hayden Island and be over a billion dollars less expensive than the formally approved "locally preferred alternative". The CSA II proposes the following steps: 1. Install a lift span in the railroad bridge downriver from the existing interstate bridges. This would allow barge traffic to navigate under the high spans of the existing interstate bridges and reduce the number of lifts by 90 percent. 2. Construct a new eight-lane freeway bridge with a bascule opening that aligns with the lift span of the existing bridges. This bridge would accommodate river traffic of any height and align exceptionally well with the existing Interstate-5 bridge approaches. I-5 can continue to cross ***beneath*** the BNSF railroad along the Vancouver side of the river, and its low profile solves many of the engineering challenges of 2012's "locally preferred alternative". The proposed bascule lift span is not unprecedented on a major interstate highway (note the I-95 bridge recently built near Washington, D.C.) 3. Repurpose the existing interstate bridges for local auto and truck traffic, public transit, bikes and pedestrians. Seismic retrofitting would be an option, not a requirement. 4. Build a new bridge over the South Channel for local traffic, light rail, bikes and pedestrians, that allows non-freeway access to and from Hayden Island.	

22	This concludes Part I of the Common Sense Alternative presentation: the proposed solution. The following slides present a more detailed comparison of the CSA to the "locally preferred alternative" proposed in 2012.	
23	This illustration shows Hayden Island, looking southeast toward the Portland side of the river, as it exists today. The I-5 freeway does not cast an enormous, towering and noisy shadow over Hayden Island, as it would in the "Locally Preferred Alternative". There is no concrete cloud blocking the sun here.	
24	This ODOT illustration shows the "Locally Preferred Alternative" towering over Hayden Island. The opportunity for transit-oriented development on the island would be destroyed by these towering, multiple, massive overhead concrete structures. Imagine the view from below as this enormous dark, noisy shadow towers high above the island. The view is gone.	
25	This illustration depicts the CSA II on Hayden Island, with the North Portland landing at the far right. Note there is ***no*** need for an expensive, high-level concrete platform towering above the Island, as seen in the previous slide. The gold lines here represent the new 8-lane I-5 bridge, that would carry interstate traffic between Hayden Island and Vancouver. The yellow line depicts the extended MAX light rail line on the new South Channel Bridge. The broad yellow band shows the location of the new Hayden Island Transit Center, where MAX would connect with C-Tran buses serving Vancouver, shown by the blue line representing the downstream span of the existing bridge. The white L-shaped lines are the existing bridges, ramps and overpasses	

	that would carry local auto and truck traffic between North Portland and Hayden Island, and between Hayden Island and Vancouver. Extending MAX from the current Expo Center station, connecting to businesses and residential areas on Hayden Island, will dramatically increase ridership on the MAX Yellow Line **seven** days a week. Note also that local traffic no longer intermixes with interstate traffic, avoiding the traffic turbulence and safety issues that such mixing would entail. That violation of fundamental traffic planning was essentially ignored by highway department planners in 2012.	
26	This is a view of the bridges as they exist today, looking south from Vancouver. It shows the investment taxpayers have already paid for. Demolishing these bridges is a wasteful, unnecessary, and completely avoidable expense. Should we claim that the existing bridges, completed in 1917 and 1958, need to be demolished simply because they are older and not seismically sound? If we were to apply that standard to all bridges in Oregon, we would find **very** few bridges remaining. In fact, applying that standard would leave very few bridges remaining anywhere in the world. We cannot afford to employ that standard, nor is there any need to.	

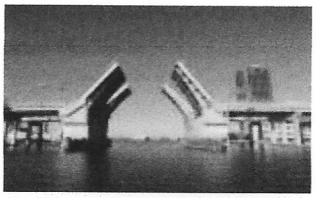
27	This is ODOT's illustration of the "Locally Preferred Alternative" looking south from Vancouver, showing the high-level approach to the bridge from Vancouver, and steep, high-level on-ramps and off-ramps, towering above local buildings. Imagine the heavy shadows, the sounds of traffic and heavy trucks struggling to ascend and descend the steep grades as you sit in the nearby office buildings or walk along the riverfront or even on a more distant sidewalk. Imagine the carbon footprint left behind as these steep grades are negotiated. Furthermore, this interchange, along with the one on Hayden Island, adds over a billion dollars to the cost of the project—a totally unnecessary expense.	
28	Here we view the CSA from the Washington side. Note the new, straight freeway bridge on the left, completely free of local traffic. (Local traffic would travel over the new South Channel Bridge and the existing I-5 bridge.) Problems associated with traffic turbulence, speed variance, capacity constraints and safety are gone. These problems were ***not*** resolved with the far more expensive "locally preferred alternative." Also note that the CSA does ***not*** tower high above the Vancouver office buildings shown here. It does ***not*** cast dark shadows over the buildings and living space in the foreground. The CSA does ***not*** interfere with aircraft using nearby Pearson Field. Costs for demolition of old ramps, and construction of new ramps, are dramatically reduced. The long, steep grades envisioned by the rejected 2012 proposal are avoided. It is clear from these comparisons that the CSA offers a far better solution to the Oregon-Washington I-5 river crossing, than the "Locally Preferred Alternative" proposed in 2012. It is safer, more esthetically pleasing and better for the environment, while still fulfilling all the purposes and needs identified for the project.	

	Thank you for viewing this presentation. AORTA appreciates your attention, and we hope you will support and advocate for this sensible option for the interstate highway crossing of the Columbia River.	

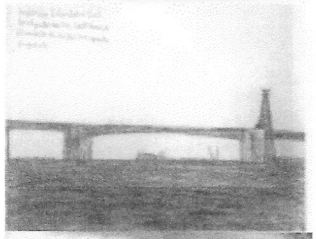
Movable Bridges on the Interstate Highway System

View Exhibit map

Berkley Bridge (Norfolk, Virginia)
Built 1952; rehabilitated 1991
Bascule bridge over East Branch Elizabeth River on Westbound I-264 in Norfolk
Open to traffic

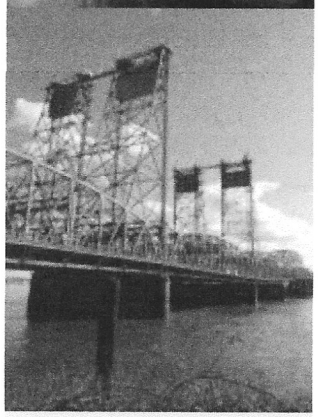


High Rise Bridge (Chesapeake, Virginia)
Built 1969
Bridge over South Branch Elizabeth River & VA-166 on Interstate 64/US 17
Open to traffic



I-5 - Interstate Bridge (Northbound) (Multnomah County, Oregon)
Built 1917; Main span modification 1958
Vertical lift Parker through truss bridge over the Columbia River on northbound I-5 between Vancouver and Portland
Open to traffic

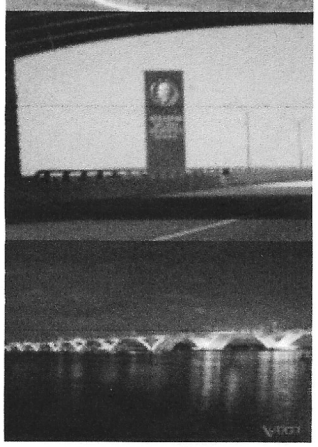
I-5 - Interstate Bridge (Southbound) (Multnomah County, Oregon)
Built 1958
Vertical lift Parker through truss bridge over Columbia River on Southbound I-5
Open to traffic



William A. Stickel Memorial Bridge (Essex County, New Jersey)
Built 1948; rehabilitated 1973
Vertical lift bridge over Passiac River on I-280 in Newark
Open to traffic

Woodrow Wilson Memorial Bridge (1961) (Prince George's County, Maryland)
Built 1961; rehabilitated 1984, Replaced 2008
Lost bascule bridge over Potomac River on the Capital Beltway (I-95/I-495) in Fort Washington
Replaced by the 2008 Woodrow Wilson Memorial Bridge

Woodrow Wilson Memorial Bridge (2008) (Prince George's County, Maryland)
Built 2006-2008
Bascule bridge over Potomac River on the Capital Beltway (I-95/I-495) in Fort Washington



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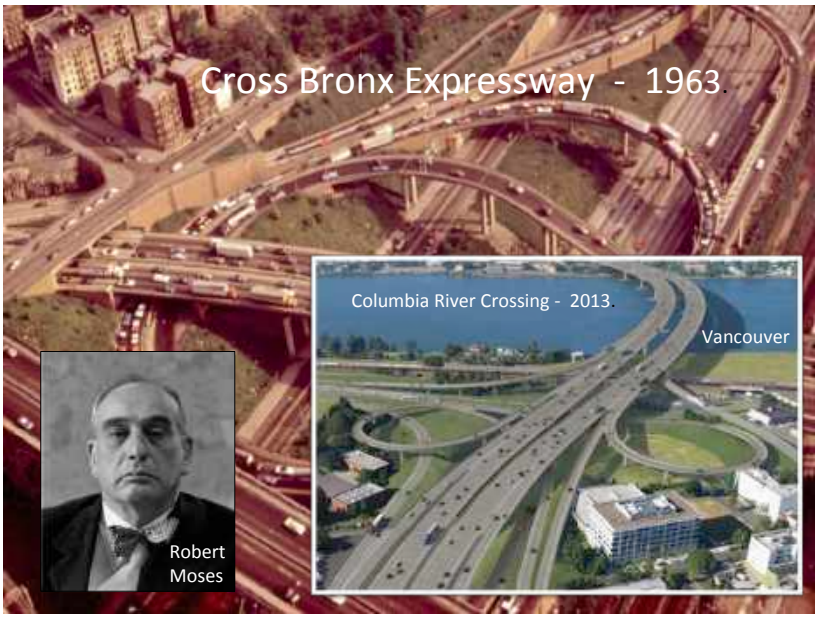
Vancouver City Council

Bob Ortblad Public Comment

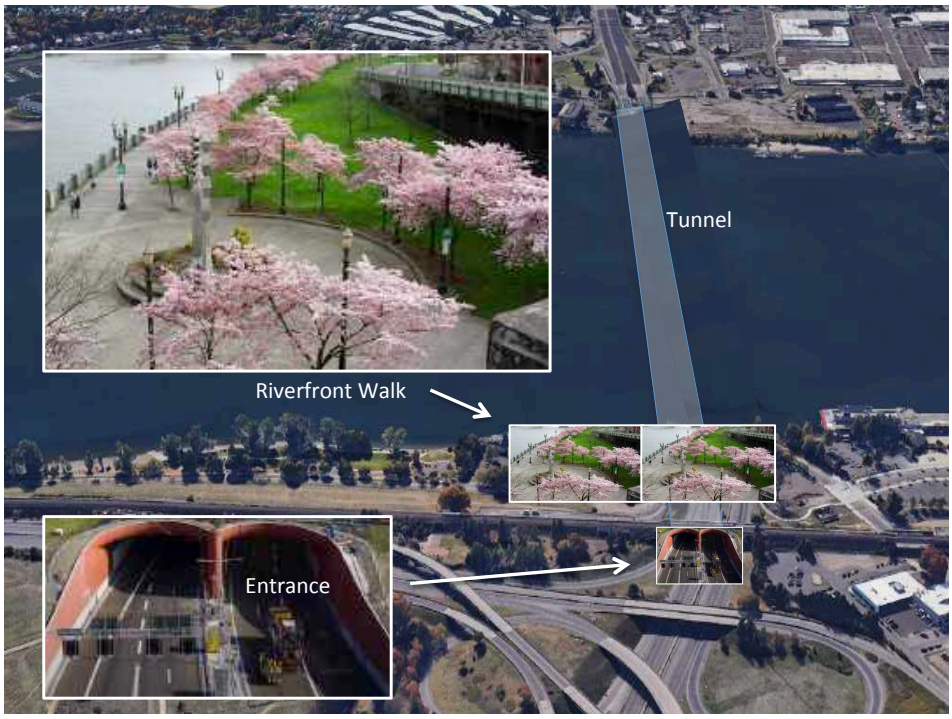
Interstate Bridge Replacement

The 2013 “Columbia River Crossing” bridge design should be scrapped. It’s a Robert Moses design from the 1950s. The following graphics show a disturbing similarity to the Cross Bronx Expressway. This expressway ripped through the heart of the Bronx and lead to extreme urban decay. The expressway split the Bronx into North and South, creating a better side and a worse. Over 40% of the South Bronx was burned or abandoned in the 1970s. I-5 already divides Vancouver, the “Columbia River Crossing” bridge design would make the East and West divide much worst.



A Columbia River “Immersed Tube Tunnel” (ITT) similar to the Gothenburg Sweden’s 1968 Tingstad Tunnel and recently completed 2020 Marieholm Tunnel would reduce the environmental impacts of I-5 on Vancouver.

Respectfully
Bob Ortblad MSCE, MBA



Trelleborg - How to build an immersed tunnel
https://www.youtube.com/watch?v=2Xkyyc9PlQA

Trip through Tingstad Tunnel, Gothenburg
https://www.youtube.com/watch?v=KoEBbmecd88

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=JC4mRIgwXU0

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