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# Project Information Worksheet for MTIP Amendment: K21570 I-5: Columbia River (Interstate) Bridge

September 2021

Attachment 1 includes the following Items:

1. Project Information Worksheet for MTIP Amendment Key 21570
2. ODOT Key 21570 STIP Summary Report Programming Request (Identified as Attachment A in the Worksheet materials)
3. ODOT TPAC Memo
4. Addendum of Supplemental Project Information



# Project Information Worksheet for MTIP Amendment: K21570 I-5: Columbia River (Interstate) Bridge

Prepared for:



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A ODOT STIP Amendment Project Summary



## 1. PROJECT OVERVIEW

*A short history about why/how the project emerged and its importance to the region.*

The Interstate 5 (I-5) Bridge is a critical connection linking Oregon and Washington across the Columbia River as part of a vital regional, national and international trade route. With one span now 104 years old, it is at risk for collapse in the event of a major earthquake and no longer satisfies the needs of modern commerce and travel. Replacing the aging Interstate Bridge across the Columbia River with a modern, seismically resilient, multimodal structure that provides improved mobility for people, goods and services is a high priority for Oregon and Washington. As of May 2021, leaders from both states have dedicated a combined \$80 million to the Interstate Bridge Replacement (IBR) program, which centers equity and follows a transparent, data-driven process that includes collaboration with local, state, federal, and tribal partners.

As the only continuous north-south interstate on the West Coast connecting the Canadian and Mexican borders, I-5 is vital to the local, regional, and national economies. At the Columbia River, I-5 provides a critical economic connection to two major ports, deepwater shipping, upriver barging, two transcontinental rail lines, and much of the region's industrial land. Trade and transportation issues in the I-5 corridor through the Portland and Vancouver metropolitan areas have over two decades of history and study, bi-state leadership, and public participation. Precursors to the Columbia River Crossing (CRC) project included recommendations of a bi-state leadership committee in 1999, as well as a strategic plan developed by a task force appointed by the Governors of Washington and Oregon in 2001 and 2002.

While the program continues working with stakeholders and the public to identify what has changed, we know that all six of the transportation problems identified by previous planning work remain as current issues that have not been addressed. These six transportation problems include:

- Congestion
- Earthquake Vulnerability
- Safety
- Impaired Freight Movement
- Inadequate Bike & Pedestrian Paths
- Limited Public Transportation



## 2. PROJECT HISTORY

*A brief history of past actions and work that has been accomplished that has led to the proposed amendment (purpose and need description).*

Regional leaders identified the need to address the I-5 corridor, including the Interstate Bridge, through previous bi-state, long-range planning studies. In 2004, the Washington and Oregon Departments of Transportation formed the joint CRC project. The intent of this project was to improve safety, reduce congestion, and increase mobility of motorists, freight traffic, transit riders, bicyclists, and pedestrians. This project was active between 2005 and 2014 and successfully received a federal Record of Decision in December 2011. However, the CRC project did not secure adequate state funding to advance to construction and was discontinued in 2014.

The IBR program team is working in collaboration with local, state, federal and tribal partners, and the community to complete the following work over the next four years.

- Complete the federal environmental review process
- Obtain necessary state and federal permits
- Finalize project design
- Develop a finance plan
- Secure adequate funding
- Complete right of way acquisition
- Advertise for construction

Based on previous planning activities, the IBR program estimates it will take three to five years to complete the environmental review process and obtain federal approval before beginning construction. The environmental review process began in 2021.

As of March 2021, Oregon and Washington have committed a combined \$80 million to the IBR program planning efforts. The Washington State 2019–2021 Transportation Budget (ESHB 1160) included \$35 million. The Oregon Transportation Commission allocated a total of \$45 million:

- March 2021 – \$30 million
- September 2020 – \$6 million
- August 2019 – \$9 million

Additional funding will be needed from each state to advance to construction as part of a comprehensive funding package that is anticipated to include a diverse range of sources, including federal funds, tolling, and state funds from both Oregon and Washington. Each state will need to determine the appropriate timing and avenue for discussions regarding potential state investment to occur. Based on the current IBR program workplan, the schedule to identify changes and complete federal environmental documentation is anticipated to take several years before funding would be needed to move into right-of-way acquisition and construction.



### 3. PROJECT GOALS AND OBJECTIVES

*An overview of the main goals and objectives for the scope or project phase being amended into the TIP and its major work elements and milestones. Include a short description of any major project challenges expected to be addressed by the work elements and milestones.*

The IBR program is working with Federal and local partners, the bi-state legislative committee, the program's advisory groups and the community to develop a multimodal design solution that will prioritize equitable, safe, and efficient movement of people and goods in alignment with climate goals for our region. In order to achieve this design solution, the program is advancing a transparent, data-driven process to inform program work, along with direction from our federal partners.

Key objectives for the program's planned work includes:

- Evaluating high-capacity transit modes, including both light rail and bus rapid transit, to determine the mode that best meets the region's needs today and into the future, and fits within the operating plans of the two partner transit agencies, C-TRAN and TriMet.
- Leveraging past work to maximize previous investments and support efficient decision-making. This will include analyzing changes that have occurred since the previous planning process. The intent is to identify a solution that meets current and future community needs, values and priorities.
- Developing screening criteria and performance measures that reflect the program values. We are committed to identifying a design solution that prioritizes equity and climate concerns.
- Engaging the community in a meaningful and authentic way while centering equity and elevating voices from communities of concern.

The federal government is interested in investing in nationally significant infrastructure projects. Ensuring the program is ready for investment requires our local and regional partners to work together to advance one multimodal design solution by May 2022. The replacement of the Interstate Bridge cannot wait any longer to address critical safety issues.

- The Interstate Bridge is built on wood piles in sandy soil, making them vulnerable to failure in the event of an earthquake and it is not practically feasible to retrofit them to current seismic standards.
- The program area experiences crash rates over three times higher than statewide averages for comparable facilities.
- Closely spaced interchanges, narrow lanes, limited sight distance, lack of safety shoulders and bridge lifts that occur up to 350 times a year on average all contribute to an increase in vehicle crashes that result in injuries, fatalities, vehicles and infrastructure damage and increased traffic congestion.



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- The shared use paths on the bridges do not provide adequate safety or space for travelers who walk, bike, or roll, and are not compliant with the Americans with Disabilities Act.

## 4. PROJECT AREA

*A map and clear description of project extent and all known modal and topical elements to be considered, or if known, to be included.*

The project area spans 5 miles of I-5 between State Route 500 in Vancouver, Washington, and Columbia Boulevard in Portland, Oregon. Figure 1 shows the bulk of the modal and topical elements being reviewed for the IBR solution.

## 5. PROJECT DESIGN ELEMENTS

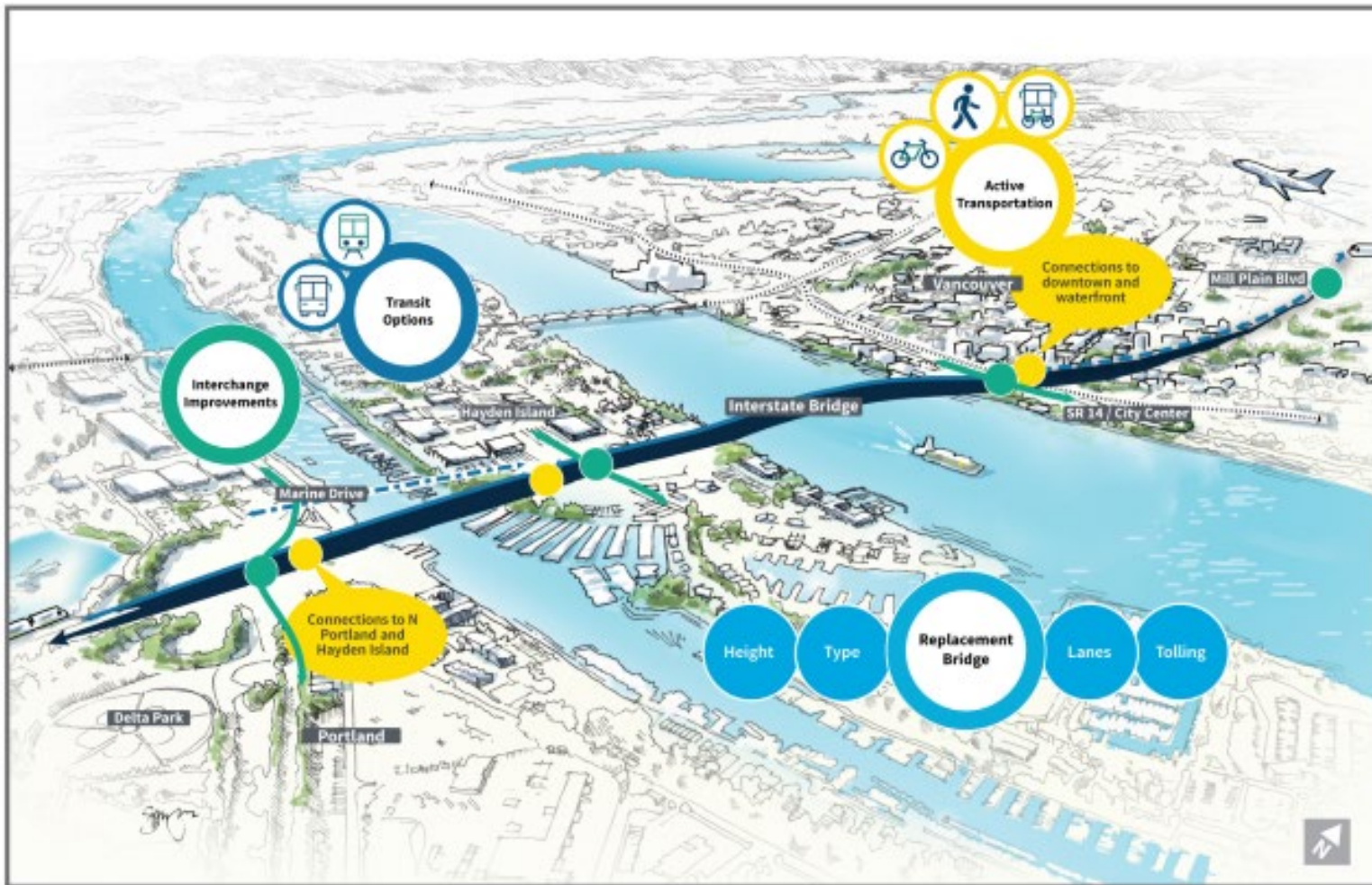
*If known, a description of project design elements with a cross-section illustration of before and after project conditions.*

The program is using past work from the previous project that remains valid to maximize past investment and ensure efficient decision-making, while also taking into consideration changes since the previous planning effort. While the program is utilizing past work as a starting point, that does not mean we are locked into the former solution. The program is continuing to work with partners to identify design options that address both the changes that have occurred since the previous planning effort, as well as new priorities around climate and equity considerations in the IBR solution that is identified with program partners in the community.

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Figure 1. Modal and Topical Elements







## 6. AMENDMENT PHASE PROJECT COSTS

*Discussion of the amendment phase costs. Example: Does the additional \$30 million for the I-5 IBR project cover the entire PE phase? Will more funding to complete PE be needed? What is the estimated total cost for PE?*

This amendment adds \$71 million to the preliminary engineering (PE) phase of the IBR Program. With this change, the total available budget will change to \$80 million (\$45M from Oregon and \$35M from Washington). The estimated PE cost to complete NEPA for the IBR program is approximately \$135 million based on a completion of a supplemental environmental impact statement (SEIS) in mid-2024. Following NEPA completion, the IBR program will develop a program delivery plan and progress with right-of-way acquisitions and final design to prepare for the start construction in late 2025. The estimated PE cost for progressing final design to start the first phase of construction is estimated at approximately \$70 million. In summary, the total estimate of PE to begin the first phase of construction is estimated to be approximately \$205 million. This estimate is contingent on the scope of the IBR solution, as agreed to by program partners, that will be evaluated through the SEIS along with the scope of the program's first construction phase. Right-of-way costs and construction costs are not included in this budget estimate.

## 7. PRELIMINARY TOTAL PROJECT COST ESTIMATE

*A preliminary estimate/cost range for the total project cost through construction.*

As directed by the Washington State 2019–2021 Transportation Budget (ESHB 1160), a draft Conceptual Finance Plan has also been delivered to the governors and the legislative transportation committees of each state on December 1, 2020. The conceptual IBR program cost estimates comprise both highway and transit capital investments. A high-level summary of the IBR program conceptual cost estimate ranges are shown in the table below.

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Table 1. Preliminary Capital Cost Estimate Ranges

Scope of Work Options	Updated CRC Cost (2012 \$)	Risk Range Adjustments (2012 \$)	IBR Program Conceptual Cost (2012 \$)	IBR Program Conceptual Cost (2020 \$)	IBR Program Conceptual Cost (YOE \$)	Modal Shares of Total Costs
<b>Option 1A:</b> <b>Bridge + LRT Project   Low</b>	<b>+ \$2.71 B</b>	<b>- \$0.36 B</b>	<b>+ \$2.35 B</b>	<b>+ \$2.74 B</b>	<b>+ \$3.32 B</b>	
Transit Project Share	+ \$0.63 B	- \$0.08 B	+ \$0.54 B	+ \$0.63 B	+ \$0.77 B	23%
Highway Project Share	+ \$2.08 B	- \$0.28 B	+ \$1.80 B	+ \$2.11 B	+ \$2.55 B	77%
<b>Option 1B:</b> <b>Bridge + LRT Project   High</b>	<b>+ \$2.96 B</b>	<b>+ \$0.37 B</b>	<b>+ \$3.33 B</b>	<b>+ \$3.96 B</b>	<b>+ \$4.81 B</b>	
Transit Project Share	+ \$0.80 B	+ \$0.10 B	+ \$0.90 B	+ \$1.07 B	+ \$1.30 B	27%
Highway Project Share	+ \$2.16 B	+ \$0.27 B	+ \$2.43 B	+ \$2.89 B	+ \$3.51 B	73%
<b>Option 2A:</b> <b>Bridge + BRT Project   Low</b>	<b>+ \$2.59 B</b>	<b>- \$0.35 B</b>	<b>+ \$2.24 B</b>	<b>+ \$2.62 B</b>	<b>+ \$3.17 B</b>	
Transit Project Share	+ \$0.52 B	- \$0.70 B	+ \$0.45 B	+ \$0.53 B	+ \$0.64 B	20%
Highway Project Share	+ \$2.07 B	- \$0.28 B	+ \$1.79 B	+ \$2.09 B	+ \$2.53 B	80%
<b>Option 2B:</b> <b>Bridge + BRT Project   High</b>	<b>+ \$2.67 B</b>	<b>+ \$0.33 B</b>	<b>+ \$3.00 B</b>	<b>+ \$3.51 B</b>	<b>+ \$4.25 B</b>	
Transit Project Share	+ \$0.64 B	+ \$0.08 B	+ \$0.72 B	+ \$0.84 B	+ \$1.01 B	24%
Highway Project Share	+ \$2.03 B	+ \$0.25 B	+ \$2.29 B	+ \$2.67 B	+ \$3.24 B	76%

Source: Conceptual Finance Plan. <https://www.interstatebridge.org/library>

## 8. FUNDING STRATEGY

*A general description or strategy for funding sources to be considered and/or secured for the project.*

### Federal Funding Sources for the IBR Program

The IBR Program will seek federal funding sources to supplement state, local, and tolling funding and revenue. Funding programs from the federal government require matching funds from non-federal sources (i.e., local, regional, state, or private contributions), and the application process to compete for such funding typically prioritize projects based upon justification, financial commitment at the state and/or regional level, readiness and other factors.

Oregon and Washington each receive annual apportionments of federal formula funds from FHWA. C-TRAN and TriMet each receive annual apportionments of FTA formula funds. These funds, together with federal formula funds allocated to the regional transportation planning agencies, help fund a wide variety of transportation capital projects and operational programs in the metropolitan region. Although the IBR program may be eligible for some of these funds, most, if not all, of these funds are already programmed for other projects, and not available for the IBR program in the near and medium terms.

FHWA and FTA also administer several discretionary grant programs, which are very competitive and require, as part of a rigorous application process, the applicant to demonstrate that the non-federal matching funds are fully committed. If sufficient non-federal funds are approved for the IBR program,

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it could be well positioned to obtain one or more funding awards from these federal programs, particularly the following programs (or their successors in forthcoming legislation):

- FTA CIG New Starts program
- U.S. Department of Transportation (USDOT) BUILD grant program
- USDOT INFRA grant program

### State Funding Sources for the IBR Program

Large and transformative transportation infrastructure projects like the IBR program require funding from a variety of sources. Securing timely commitments at the state and regional levels will be essential for competing for the federal funding programs described above.

### Tolling

Tolling the I-5 crossing would yield significant future revenues that can be leveraged to fund construction of the IBR program, as well as cover ongoing bridge O&M costs. Future toll revenues can be pledged for various types of debt financing, including standalone toll revenue bonds, toll revenue bonds backed by one or both states, and/or a USDOT TIFIA loan. It is anticipated that the toll funding available to construct the IBR Program would be at least equivalent to the range reported for the CRC project in 2013 due to factors that will likely offset any long-term changes in bridge traffic patterns as a result of the current economic conditions.

## 9. AGENCY AND STAKEHOLDER INVOLVEMENT

*A short description if there are other agencies or stakeholders involved in the project and their basic roles and responsibilities.*

The Oregon and Washington Departments of Transportation are jointly leading the IBR program work in collaboration with eight other bi-state partner agencies. This program work will be shaped by the direction and timelines established by the governors, legislatures, and transportation commissions, and will work closely with federal partners, permitting agencies, state and local elected officials, tribal governments, community stakeholders and the public.

Comprehensive and equitable community engagement is at the foundation of decision making for the IBR program. Through engagement we will pursue a solution that prioritizes safety, reflects community values, addresses community concern, and fosters broad regional support. Ongoing, extensive and inclusive public dialogue is critical to developing a bridge solution that best serves the complex needs of communities in Washington and Oregon.

A bi-state legislative committee, composed of 16 Oregon and Washington lawmakers, provides additional guidance and oversight for the program. To provide coordinated regional leadership, the Oregon and Washington Departments of Transportation are jointly leading the IBR program work in collaboration with eight other bi-state public agencies. The eight agencies are:



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- TriMet
- C-TRAN
- Oregon Metro
- Southwest Washington Regional Transportation Council
- Cities of Portland and Vancouver
- Ports of Portland and Vancouver

To support the community engagement goals the program formed three advisory groups to provide feedback and recommendations: Executive Steering Group, Equity Advisory Group, and Community Advisory Group.

The Executive Steering Group provides regional leadership recommendations on key program issues of importance to the community. Members of the ESG include representatives from the 10 bi-state partner agencies with a direct delivery or operational role in the integrated, multimodal transportation system around the Interstate Bridge, as well as a community representative from each state. The two community representatives serve as the co-chairs of the Community Advisory Group.

Members of the ESG include the following representatives:

- Oregon Department of Transportation: Kris Strickler, Director
- Washington State Department of Transportation: Roger Millar, Secretary
- TriMet: Steve Witter (Interim), Engineering and Construction Director
- C-TRAN: Shawn Donaghy, CEO
- Oregon Metro: Lynn Peterson, Council President
- Southwest Washington Regional Transportation Council: Scott Hughes, Board Chair
- City of Portland: Jo Ann Hardesty, Commissioner
- City of Vancouver: Anne McEnery-Ogle, Mayor
- Port of Portland: Kristen Leonard, Chief Public Affairs Officer
- Port of Vancouver USA: Julianna Marler, CEO
- Community Advisory Group Co-chair (WA): Lynn Valenter
- Community Advisory Group Co-chair (OR): Ed Washington

The Equity Advisory Group (EAG) will help ensure that the IBR program remains centered on equity. The group will make recommendations to IBR program leadership regarding processes, policies and decisions that have the potential to affect historically underrepresented and underserved communities. Members of the Equity Advisory Group include partner agency representatives, community based organizations and community members.

The Community Advisory Group (CAG) will be representative of the community members with balanced membership from both Portland, Oregon and Vancouver, WA. The community advisory group will provide input and feedback on the IBR program. The CAG will develop recommendations to

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help ensure the program outcomes reflect community needs, issues and concerns. CAG members and the program team will engage in an on-going community dialogue with a commitment to meaningful, two-way feedback. Two co-chairs, one representing each state, will lead the group's diverse and inclusive membership, with balanced representation from both Washington and Oregon. Members of the Community Advisory Group reflect community-based organizations and at-large community members.

In addition to the bi-state legislative committee and the program advisory groups, the IBR program is working with numerous Federal regulatory agencies including US Army Corps of Engineers, US Coast Guard, US Environmental Protection Agency, US Fish and Wildlife Service, US General Services Administration, National Marine Fisheries Service, National Park Service.

## 10. SUPPORTING MATERIALS

*If support materials (past feasibility plan, project study reports, etc.) exist, a description of how they can they be accessed. Where can the public find the materials?*

The IBR website contains both current and historical project information. In addition, WSDOT's accountability page has documents from the CRC project. A few key documents include:

- Interstate Bridge Replacement Progress Report - <https://www.interstatebridge.org/media/xawnefwf/ibrp-legislative-progress-report-dec-2020.pdf>
- Conceptual Finance Plan - <https://www.interstatebridge.org/media/zaqk3x3a/ibrp-conceptual-financial-plan-dec-2020.pdf>
- Memorandum of Intent on Replacing the I-5 - <https://www.governor.wa.gov/sites/default/files/FINAL%20OR%20WA%20Memorandum%20of%20Intent%2011.18.2019.pdf>
- Columbia River I-5 Bridge Planning Inventory - [https://www.wsdot.wa.gov/accountability/ssb5806/docs/WSDOT\\_I5\\_Bridge\\_Inventory\\_Report.pdf](https://www.wsdot.wa.gov/accountability/ssb5806/docs/WSDOT_I5_Bridge_Inventory_Report.pdf)

## 11. SCHEDULE

*Assuming funding will be secured and no major obstacles emerge, a target schedule for future project phases.*

The fall 2020 program launch is complete, and the planning phase will continue through the end of 2021 (see Figure 2). Mid-2021, the environmental phase started by updating the program's Purpose

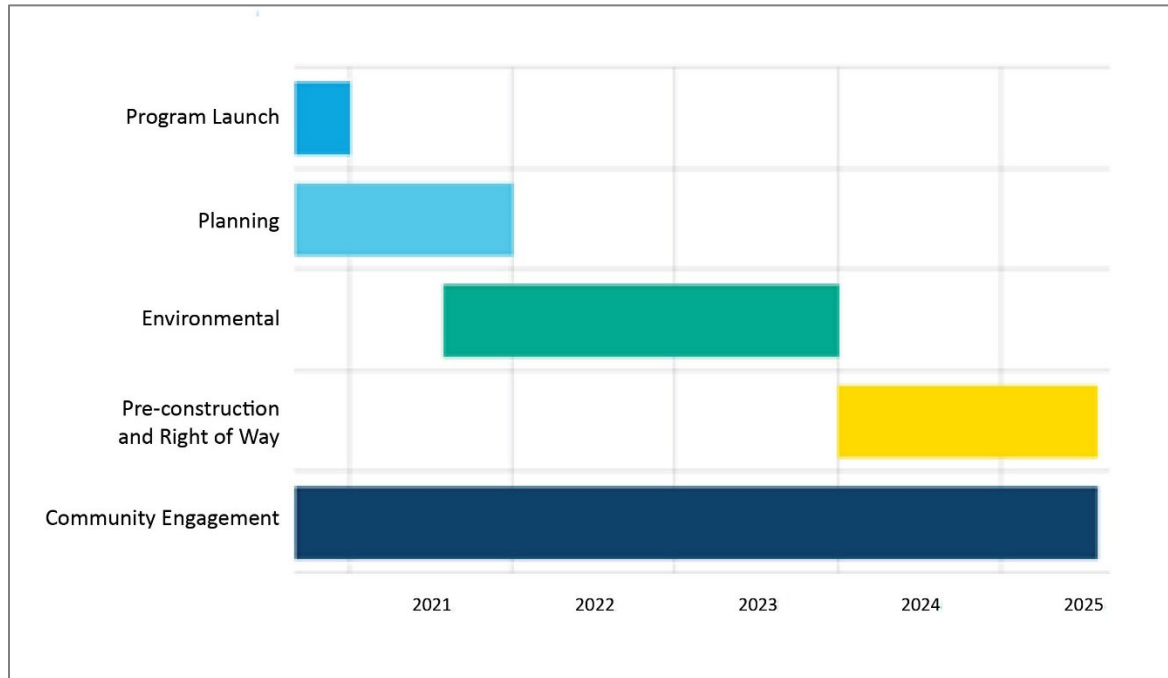


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and Need Statement and establishing a community Vision and Value Statement; this phase extends to the end of 2023. Pre-construction and right-of-way acquisition extend from 2024 until construction begins in 2025. The program has implemented an extensive and inclusive community engagement program that continues throughout all phases.

Figure 2. Program Timeline



## 12. TIP PROGRAMMING

*TIP programming table and proposed TIP programming table.*

In addition to the table on the next page, please see Attachment A, the ODOT STIP Amendment Project Summary.

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Table 2. TIP Programming

I-5: Columbia River (Interstate) Bridge (K21570)				
Current STIP Description	Planning activities for the replacement of the I-5 Interstate Bridge between Oregon and Washington. Replacing the bridge will improve traffic and mobility for freight and the public traveling across the river.			
Proposed STIP Description	Planning and design activities for the replacement of the I-5 Interstate Bridge between Oregon and Washington. Replacing the bridge will improve traffic and mobility for freight and the public traveling across the river.			
Summary of requested changes	<ul style="list-style-type: none"> <li>• Bring 18-21 \$9M Planning project to 21-24 STIP</li> <li>• Add PE phase - \$36M ODOT, \$35M WDOT - Total \$71M</li> <li>• Adjust description to include design activities</li> <li>• New total project cost of \$80,000,000</li> </ul>			
Justification	<ul style="list-style-type: none"> <li>• This amendment is needed is for programming \$30M in funds approved by the OTC March 11, 2021, \$6M in redistribution approved by 9/2020 OTC, and \$35M funds committed by Washington DOT.</li> <li>• FHWA has asked ODOT to transition from the Planning phase to the Preliminary Engineering (PE) phase of the project.</li> <li>• Without this amendment, committed funds will not be authorized and project will not be able to move past the planning phase.</li> </ul>			
RTP Requirements	This project change requires adjustment to the fiscally constrained RTP. Funds from the fiscally constrained Fix-It buckets in the RTP will be reduced to allow for the \$36M ODOT funds to be advanced on this project. Memo with details was sent to Metro 9/17/21 by Chris Ford. We find the analysis is still applicable with the addition of WDOT funds since RTP focuses on Oregon revenue only.			
STIP/MTIP requirements	This requires a full amendment to the STIP/MTIP, work has started to get it through the process as soon as possible.			
Phase	Federal Fiscal Year		STIP Estimated Cost	
	Current	Proposed	Current	Proposed
Planning	2020	2020	\$9,000,000	\$9,000,000
Preliminary Engineering	N/A	2022	\$0	\$71,000,000
<b>Totals</b>			<b>\$ 9,000,000</b>	<b>\$80,000,000</b>
Summary of Expenditure Accounts (as of 09/22/2021)				
Phase	Authorized		Expended	Remaining
Planning	\$9,000,000		\$5,950,410	\$3,049,590

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## 13. RTP PROJECT NUMBER

*Provide the corresponding Regional Transportation Plan project number to facilitate a project description check for plan consistency.*

The RTP project ID is 10893, "I-5 Columbia River Bridge."

## 14. TITLE IV ADA

*Indicate whether the project is derived from an agency Title IV Americans with Disabilities Act (ADA) implementation plan.*

The IBR program is not derived from ODOT's Title IV ADA implementation plan.

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# Attachment A

## ODOT STIP Amendment Project Summary



**Statewide Transportation Improvement Program  
Amendment Project Summary**

**Key Number:** **21570** **2018-2021 STIP**

**Project Name:** **I-5: Columbia River (Interstate) Bridge** **(DRAFT AMENDMENT PROJECT)**

Project Overview			
Total Current Estimate	\$80,000,000.00	Description	Planning and design activities for the replacement of the I-5 Interstate Bridge between Oregon and Washington. Replacing the bridge will improve traffic and mobility for freight and the public traveling across the river.
Responsible Region	1	Related Programs	
Project Status Date	2/6/2020	STIP Name	2018-2021 STIP
Project Status	UNAPPROVED	Administrator	ODOT
Monitor	ENVDOC	Applicant	ODOT
Bid Let Date		MPO	Portland Metro MPO
Target Date		Constructor	CONTRACTOR PAYMENTS
Award Date		Functional Class	URBAN INTERSTATE
Air Quality Approval Req.		Work Class	STRUCTURES
Air Quality Approval Date.		IGA #	
		Contract #	
Created On	9/20/2019	Created By	GABRIELA GARCIA
Last Updated On	9/22/2021	Last Updated By	ADRIANA ANTELO
Comment	3/11/21 OTC approved additional \$30M // \$9M in redistribution \$ approved by the OTC 8/16/19. RTP ID 10893. \$6M in redistribution approved by 9/2020 OTC. kp.		

Locations													
Route	Highway	MP Begin	MP End	Length	Street	City	County	ACT	Bridge	Reg	State Repr Dist	State Sen Dist	US Cngr Dist
I-5	001 PACIFIC HIGHWAY	306.70	308.72	2.02		PORTLAND	MULTNOMAH	R1ACT		1	44	22	3
I-5	001 PACIFIC HIGHWAY	308.04	308.72	0.68		PORTLAND	MULTNOMAH	R1ACT	01377A	1	44	22	3
I-5	001 PACIFIC HIGHWAY	308.04	308.72	0.68		PORTLAND	MULTNOMAH	R1ACT	07333	1	44	22	3

Phases												
Ph	Phase Total Est. Cost	Original Auth Amount	Original Auth Date	Current Auth Amount	Current Auth Date	Current STIP Amount	Curr STIP Year	Initial STIP Amount	Init STIP Year	EA	Fed Aid ID	Status
PL	9,000,000.00	9,000,000.00	2/6/20	9,000,000.00	2/6/20	9,000,000.00	2020	9,000,000.00	2020	C0265207	S001(533)	APPROVED
PE	71,000,000.00	0.00		0.00		71,000,000.00	2022	36,000,000.00	2022			APPROVED
<b>Tot</b>	<b>80,000,000.00</b>	<b>9,000,000.00</b>		<b>9,000,000.00</b>		<b>80,000,000.00</b>		<b>45,000,000.00</b>				





**Statewide Transportation Improvement Program**  
**Amendment Project Summary**

**Key Number:** 21570

2018-2021 STIP

**Project Name:** I-5: Columbia River (Interstate) Bridge

(DRAFT AMENDMENT PROJECT)

Work Types					
Phase	Work Type	Percent of Phase	Work Type Amount	Opt Code	Option Desc
PL	BRIDGE	100.00%	9,000,000.00	S	STATE PROJECT
	<b>PL Totals</b>	<b>100.00%</b>	<b>9,000,000.00</b>		
PE	BRIDGE	100.00%	71,000,000.00	S	STATE PROJECT
	<b>PE Totals</b>	<b>100.00%</b>	<b>71,000,000.00</b>		
<b>Grand Totals</b>			<b>80,000,000.00</b>		

Financial Plan -- Target Amounts									
Phase	Funding Resp	STIP	Year	Use Hist Savings	Total Trgt Amt	Fed Trgt Amt	State Trgt Amt	Local Trgt Amt	Comment
PL	IBR Interstate Bridg	2018-2021 STIP	2020		9,000,000.00	8,299,800.00	700,200.00	0.00	
	IBR Interstate Bridg	2021-2024 STIP	2021		6,000,000.00	5,533,200.00	466,800.00	0.00	Additional target added from redistribution per K. Parlette email 11/25/20
	<b>PL Totals</b>				<b>15,000,000.00</b>	<b>13,833,000.00</b>	<b>1,167,000.00</b>	<b>0.00</b>	
PE	IBR Interstate Bridg	2021-2024 STIP	2022		0.00	0.00	0.00	0.00	
	OTHER	2021-2024 STIP	2022		0.00	0.00	0.00	0.00	WashDOT funds
	<b>PE Totals</b>				<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	
<b>Grand Totals</b>					<b>15,000,000.00</b>	<b>13,833,000.00</b>	<b>1,167,000.00</b>	<b>0.00</b>	

Financial Plan -- Estimate / Actual Amounts									
Phase	Funding Resp	STIP	Year	Use Hist Savings	Total Est/Act Amt	Fed Est/Act Amt	State Est/Act Amt	Local Est/Act Amt	Comment
PL	IBR Interstate Bridg	2018-2021 STIP	2020		9,000,000.00	8,299,800.00	700,200.00	0.00	
	IBR Interstate Bridg	2021-2024 STIP	2021		0.00	0.00	0.00	0.00	Additional target added from redistribution per K. Parlette email 11/25/20
	<b>PL Totals</b>				<b>9,000,000.00</b>	<b>8,299,800.00</b>	<b>700,200.00</b>	<b>0.00</b>	
PE	IBR Interstate Bridg	2021-2024 STIP	2022		36,000,000.00	33,199,200.00	2,800,800.00	0.00	
	OTHER	2021-2024 STIP	2022		35,000,000.00	0.00	0.00	35,000,000.00	WashDOT funds
	<b>PE Totals</b>				<b>71,000,000.00</b>	<b>33,199,200.00</b>	<b>2,800,800.00</b>	<b>35,000,000.00</b>	
<b>Grand Totals</b>					<b>80,000,000.00</b>	<b>41,499,000.00</b>	<b>3,501,000.00</b>	<b>35,000,000.00</b>	



**Statewide Transportation Improvement Program**  
**Amendment Project Summary**

**Key Number:** 21570

2018-2021 STIP

**Project Name:** I-5: Columbia River (Interstate) Bridge

(DRAFT AMENDMENT  
PROJECT)

Fund Codes													
Phase	Fund Code	Description	ICA P	Percent of Phase	Total Amount	Federal Percent	Federal Amount	State Percent	State Amount	Local Percent	Local Amount		
PL	Z001	NATIONAL HIGHWAY PERF FAST	Y	100.00%	9,000,000.00	92.22%	8,299,800.00	7.78%	700,200.00	0.00%	0.00		
	<b>PL Totals</b>				<b>100.00%</b>	<b>9,000,000.00</b>		<b>8,299,800.00</b>		<b>700,200.00</b>		<b>0.00</b>	
PE	ACPO	ADVANCE CONSTRUCT PR		50.70%	36,000,000.00	92.22%	33,199,200.00	7.78%	2,800,800.00	0.00%	0.00		
	OTH0	OTHER THAN STATE OR		49.30%	35,000,000.00	0.00%	0.00	0.00%	0.00	100.00%	35,000,000.00		
	<b>PE Totals</b>				<b>100.00%</b>	<b>71,000,000.00</b>		<b>33,199,200.00</b>		<b>2,800,800.00</b>		<b>35,000,000.00</b>	
<b>Grand Totals</b>							<b>80,000,000.00</b>		<b>41,499,000.00</b>		<b>3,501,000.00</b>		<b>35,000,000.00</b>

Amendments						
Status Date	Amendment Num.	Status	Project Change Type	S/C	Key Number	Change Reason
9/22/21	21-24-1433	DRAFT	ADD PHASE		21570	Add project to the 2021-2024 STIP, add Preliminary engineering phase total estimated at \$71,000,000.
2/6/20	18-21-3214	APPROVED	ADD PROJECT		21570	Add a new project.

<b>Selection Criteria:</b> STIP	2018-2021 STIP	<b>Key Number</b>	21570	<b>Project ID</b>	44589
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# Oregon

Kate Brown, Governor

## Department of Transportation

Highway, Region 1, Roadway

123 NW Flanders Street

Portland, OR 97209

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### FILE CODE:

DATE: September 24<sup>th</sup>, 2021  
TO: Transportation Policy Alternatives Committee (TPAC) and interested parties  
FROM: Chris Ford, ODOT R1 Policy & Development Manager  
SUBJECT: I-5: Columbia River (Interstate) Bridge: Requested Amendment to the 2021-24 Metropolitan Transportation Improvement Program

The purpose of this memo is to introduce an amendment to the 2021-24 Metropolitan Transportation Improvement Program (MTIP), which will allow for the same amendment to the 2021-24 Statewide Transportation Improvement Program (STIP).

The I-5: Columbia River Bridge project, also known as the Interstate Bridge Replacement (IBR) project, is in the 2018 Regional Transportation Plan (RTP) as project number 10893. The project was amended into the 2018-21 MTIP and STIP as a Planning phase, but is not yet included in the 21-24 MTIP and STIP.

The amendment would add \$36 million allocated by the Oregon Transportation Commission (OTC) to a preliminary engineering (PE) phase. The money would add to the \$9 million in planning phase funds from the 18-21 MTIP/STIP and to \$35M in funds from Washington. This \$80 million comprises a substantial component of the estimated \$135 million in estimated costs to complete NEPA for the IBR program, with a goal of completing a supplemental environmental impact statement (SEIS) in mid-2024.

The MTIP amendment would allow for the \$36 million to be amended into the 21-24 STIP and subsequently released by the Federal Highway Administration (FHWA) for use toward NEPA efforts.

Please see supporting information submitted by ODOT in Attachment 1. For questions about ODOT's requested amendment, contact Ray Mabey, Assistant Program Administrator, Interstate Bridge Replacement Program, at [raymond.mabey@interstatebridge.org](mailto:raymond.mabey@interstatebridge.org)



A modern  
connection for  
a growing  
community

# Supplemental Project Information for MTIP Amendment: K21570 I-5: Columbia River (Interstate) Bridge

November 2021

# Supplemental Project Information for MTIP Amendment: K21570 I-5: Columbia River (Interstate) Bridge

Prepared for:



**Washington State  
Department of Transportation**

Prepared by:  
Raymond Mabey, PE  
Assistant Program Administrator



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## OVERVIEW

### *A short description of the purpose and scope of the document.*

The IBR program team submitted a project information worksheet to Metro to consider for the MTIP amendment process in September. Metro staff requested additional information related to the 2018 RTP investment priority outcomes of safety, equity, climate and congestion management. To perform this analysis, additional information to what has previously been requested has been developed for review and consideration. This document includes supplemental information on the following:

- Part 1 – State and Regional Policy Review – describes how the proposed project amendment has considered, addressed and is consistent with the Oregon Highway Plan (OHP) Policy 1G and Action 1G.1, 2018 RTP, and the Regional Transportation Functional Plan
- Part 2 – Performance Evaluation Measures – descriptions of how the project meets or will analyze the performance related to equity, safety, and congestion relief.

A IBR program submittal to Metro dated September 2021 provided context for the MTIP amendment request, covering the following topics:

- Project History
- Project Goals and Objectives
- Project Area
- Project Design Elements
- Project Costs and Funding Strategy
- Agency and Stakeholder Involvement

This submittal supplements that initial document to address plan consistency and address performance evaluation criteria.

## PART 1: STATE AND REGIONAL POLICY REVIEW

### *What was the basis and origin of the project?*

Regional leaders identified the need to address the Interstate 5 (I-5) corridor, including the Interstate Bridge, through previous bi-state, long-range planning studies. In 2004, the Washington and Oregon Departments of Transportation formed the joint CRC project. The intent of this project was to improve safety, reduce congestion, and increase mobility of motorists, freight traffic, transit riders, bicyclists, and pedestrians. This project was active between 2005 and 2014 and successfully received a federal Record of Decision in December 2011. However, the CRC project did not secure adequate state funding to advance to construction and was discontinued in 2014.

In 2019, a bi-state legislative committee requested that the Oregon Department of Transportation (ODOT) and the Washington State Department of Transportation (WSDOT) re-initiate the CRC project as none of the previously identified needs for the project had been addressed. The Washington and Oregon Departments of Transportation re-initiated the work, and the project is currently operating under a new name: Interstate Bridge Replacement (IBR) program.

Key objectives for the program's planned work include:

- Evaluating high-capacity transit modes, including both light rail and bus rapid transit, to determine the mode that best meets the region's needs today and into the future, and that fits within the operating plans of the two partner transit agencies, C-TRAN and TriMet.
- Leveraging past work to maximize previous investments and support efficient decision-making. This will include analyzing changes that have occurred since the previous planning process. The intent is to identify a solution that meets current and future community needs, values, and priorities.
- Developing screening criteria and performance measures that reflect the program values. We are committed to identifying a design solution that prioritizes equity and climate concerns.
- Engaging the community in a meaningful and authentic way while centering equity and elevating voices from communities of concern.

### *Examination of how the proposed project has considered consistency with the Oregon Highway Plan, Regional Transportation Plan, and the Regional Transportation Functional Plan.*

As previously noted, the IBR program is re-initiating the CRC project and proposing design and program refinements as needed to reflect community priorities and meet community needs. An assessment of how the program will support relevant agency plans is part of this initial evaluation related to plan consistency.

The proposed project supports Growth Management Act policies and the Oregon State-wide Planning Goals pertaining to transportation and infrastructure improvements. The project would accommodate and integrate with a variety of planned transportation facilities throughout the Portland/Vancouver Metro area. The project would be consistent with goals for providing infrastructure to urban areas and for directing high density growth to urbanized locations. Regional plans, adopted by the Southwest Washington RTC, Clark County, and Metro would be supported by improved infrastructure and the extension of a high-capacity transit system.

Goals in the state highway plans (the OHP and the Washington Transportation Plan) clearly state objectives for mobility, congestion relief, and freight movement. The IBR program would support these goals. As requested by Metro, the remainder of this section focuses on the IBR program's support of the following plans:

- OHP Policy 1G and Action 1G.1
- 2018 Regional Transportation Plan
- Regional Transportation Functional Plan Section 3.08.220: Transportation Solutions

## Oregon Highway Plan – Policy 1G and Action 1G.1

**Oregon Highway Plan Goal 1G:** *It is the policy of the State of Oregon to maintain highway performance and improve safety by improving system efficiency and management before adding capacity. ODOT will work in partnership with regional and local governments to address highway performance and safety needs.*

**Oregon Highway Plan Action 1G.1:** Use the following priorities for developing corridor plans, transportation system plans, the Statewide Transportation Improvement Program, and project plans to respond to highway needs. Implement higher priority measures first unless a lower priority measure is clearly more cost-effective or unless it clearly better supports safety, growth management, or other livability and economic viability considerations. Plans must document the findings which support using lower priority measures before higher priority measures.

- 1. Protect the existing system.** The highest priority is to preserve the functionality of the existing highway system by means such as access management, local comprehensive plans, transportation demand management, improved traffic operations, and alternative modes of transportation.
- 2. Improve efficiency and capacity of existing highway facilities.** The second priority is to make minor improvements to existing highway facilities such as widening highway shoulders or adding auxiliary lanes, providing better access for alternative modes (e.g., bike lanes, sidewalks, bus shelters), extending or connecting local streets, and making other off-system improvements.
- 3. Add capacity to the existing system.** The third priority is to make major roadway improvements to existing highway facilities such as adding general purpose lanes and making alignment corrections to accommodate legal size vehicles.
- 4. Add new facilities to the system.** The lowest priority is to add new transportation facilities such as a new highway or bypass.

### IBR Program Evaluation: IBR Program is Supportive of OHP Policies

The IBR program is supportive of the priorities identified in the OHP, focused on improving the efficiency and capacity of the existing system while increasing safety and multimodal investments. The program would add auxiliary lanes and safety improvements (e.g., improved shoulders) to the highway and would improve low-carbon modal capacity through substantial investment in transit, bicycle, and pedestrian improvements, as well as invest in local street improvements to improve local connectivity and improved transportation performance.

### 2018 Regional Transportation Plan

Adopted by the Metro Council in December 2018, the 2018 Regional Transportation Plan (RTP) sets the long-range vision, goals, and outcomes for the regional transportation network. The 2018 RTP also

includes policies and a long-range investment strategy for achieving the region’s vision, goals, and outcomes for the system. Through the development of the 2018 RTP, four policy priorities – safety, equity, addressing climate change, and managing congestion – were identified to make further near-term progress.

The 2018 RTP states that the “The RTP calls for implementing system and demand management strategies and other strategies prior to building new motor vehicle capacity, consistent with the Federal Congestion Management Process (CMP), Oregon Transportation Plan policies (including OHP Policy 1G) and Section 3.08.220 of the Regional Transportation Functional Plan (RTFP).”

The project under consideration is included in the RTP: project ID 10893, I-5 Columbia River Bridge. The project currently in the RTP is includes tolling, a new bridge, highway improvements, light rail transit, and bicycle and pedestrian improvements.

## Regional Transportation Functional Plan Section 3.08.220: Transportation Solutions

Section 3.08.220 of the Regional Transportation Functional Plan says that cities and counties shall consider the following strategies, in the order listed, to meet the transportation needs:

1. TSMO strategies, including localized Travel Demand Management (TDM), safety, operational and access management improvements;
2. Transit, bicycle and pedestrian system improvements;
3. Traffic-calming designs and devices;
4. Land use strategies in OAR 660-012-0035(2) to help achieve the thresholds and standards in Tables 3.08-1 and 3.08-2 or alternative thresholds and standards established pursuant to section 3.08.230;
5. Connectivity improvements to provide parallel arterials, collectors or local streets that include pedestrian and bicycle facilities, consistent with the connectivity standards in section 3.08.110 and design classifications in Table 2.6 of the RTP, in order to provide alternative routes and encourage walking, biking and access to transit; and
6. Motor vehicle capacity improvements, consistent with the RTP Arterial and Throughway Design and Network Concepts in Table 2.6 and section 2.5.2 of the RTP, only upon a demonstration that other strategies in this subsection are not appropriate or cannot adequately address identified transportation needs.

The IBR program has prioritized the strategies as listed in Section 3.08.220, with the exception of the land use strategies which are outside of the jurisdiction of the IBR program. The IBR program has committed to work collaboratively with local partners to implement the program to be future-compatible with local and regional land use plans.



## IBR Program Evaluation: IBR Program is Supportive of Regional Transportation Plan and Regional Transportation Functional Plans

The IBR program will support Metro's efforts to maximize TDM and transportation system management (TSM) efforts, and it would evaluate vehicular capacity needed to meet demand. Specific efforts underway by the IBR program include:

- The development of high-capacity transit and evaluation of multiple scenarios for transit system improvements. These transit scenarios are consistent with the RTP.
- Evaluation of tolling and congestion pricing; the preliminary tolling structure plans include options for peak period pricing as part of the tolling of the I-5 bridge (tolls are planned to be higher during the peak periods). Congestion (or peak period pricing) is consistent with the Metro Regional Framework Plan and the Portland's Comprehensive Plan.
- The program will be consistent with, and build upon, related projects such as the installation of smart technology systems being installed by ODOT and WSDOT on I-5 in the Portland metropolitan region. These include an active transportation management (ATM) system, adaptive ramp meters, bus on shoulder, real-time modal travel time information, and commuter trip-reduction programs. These tools provide information to drivers to better manage traffic flow and enhance transit capacity during congested travel periods.

Additional system or demand management strategies planned or supported by the IBR program related to the goals outlined in the OHP and RTP are outlined in Part 2C, Performance Evaluation: Congestion Relief.

### *Additional support for local plans*

The IBR program would allow the land use plans for Hayden Island and the City of Vancouver to be realized. Specifically, the project would support the City of Portland's Hayden Island Plan and the City of Vancouver's vision for downtown redevelopment and connectivity. The Hayden Island Plan was adopted in 2009 to provide guidance to the CRC project. The plan seeks to protect the interests of the island, as well as ensure that the amount and type of development on Hayden Island would not overload the proposed freeway improvements. In the City of Vancouver, a replacement crossing would open the waterfront underneath the existing bridges and would vacate the existing I-5 right-of-way underneath the BNSF railroad berm, thus supporting Vancouver's planned extension of Main Street south to Columbia Way, which would include improved bicycle and pedestrian facilities.

The proposed project would comply with the direction of the Vancouver Comprehensive Plan to provide infrastructure to city centers and to provide a range of transportation facilities that would accommodate transit, bicycles, and pedestrians.

## PART 2: PERFORMANCE EVALUATION

This section describes the project’s approach to equity, safety, and congestion management. Performance across these goals/values/outcomes is of critical importance for the program and for the region.

### 2A: PERFORMANCE EVALUATION: EQUITY

*An overview how the project addresses equity, from engagement to analysis of benefits and impacts.*

*How was the project identified in a planning process?*

The project was identified during the planning process described in detail in the Columbia River Crossing environmental documentation. The CRC project was developed over several years and with extensive engagement of agency, public, and community partner involvement; the project made 27,000 public outreach contacts at about 900 events.

The equity approach for CRC was framed in terms of environmental justice and Title VI, but also included populations outside of the technical purview of those regulatory contexts (i.e., older adults, people with disabilities, and zero-vehicle households in addition to minority and low-income populations). It examined both short- and long-term effects related to the project, such as displacement, loss of community resources, and construction-related impacts. Some of the mitigation commitments made as a result of the analysis included:

- Create programs to promote use of local workers by utilizing apprenticeships and job training programs (to address loss of service industry jobs)
- Make information about tolling and transponders accessible and enabling unbanked people to purchase transponders using cash or EBT cards
- Build sound walls for highway noise and install residential sound insulation for light rail transit noise

*How has the IBR program elevated equity and the voices of BIPOC<sup>1</sup> and low-income communities?*

Since the project’s re-initiation in 2019, the IBR program has been engaging the community with an emphasis on elevating the voices of communities of color, low-income communities, people with disabilities, and other underserved populations to help shape the program. This includes the

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<sup>1</sup> Black, Indigenous, and people of color

formation of an Equity Advisory Group (EAG), a Community Advisory Group (CAG), listening sessions, partnerships with community-based organizations (CBOs), multicultural liaisons to engage communities speaking languages besides English, and other direct stakeholder outreach.

The EAG makes recommendations to IBR program leadership regarding processes, policies, and decisions that have the potential to affect historically underrepresented and underserved communities. Members of the EAG include partner agency representatives, CBOs, and community members who receive stipends for their participation. The EAG helps ensure that the IBR program remains centered on equity.

The CAG is representative of community members with balanced membership from both Portland and Vancouver. The group provides input and feedback on the IBR program, developing recommendations to help ensure the program outcomes reflect community needs, issues, and concerns. CAG members and the program team engage in ongoing community dialogue with a commitment to meaningful, two-way feedback. Two co-chairs, one representing each state, lead the group's diverse and inclusive membership. CAG members include CBO representatives and at-large community members who receive stipends for their participation.

The program held a series of "Elevating Equity Listening Sessions" in late summer 2021. This included sessions specifically for BIPOC individuals, older adults, people with disabilities, houseless individuals, and non-English language speakers. Participants expressed support for the program (particularly the high-capacity transit elements), as well as concerns about construction impacts and tolling.

One other recently launched initiative is a mini-grant program wherein CBOs receive funding to assist the IBR program with engagement activities. Selected CBOs include the Coalition of Communities of Color, Somali American Council of Oregon, Washington Advocacy for the Deaf and Hard of Hearing, Brown Hope, the Slavic Community Center of NW, and others.

The result of these engagement efforts thus far has been a reaffirmation of the need and priority to replace the Interstate Bridge and improve transportation options in the larger program area.

### *What analysis of equity benefits and impacts is forthcoming?*

The assessment of potential benefits and burdens is ongoing. The overall approach evaluates how different design options will impact mobility and accessibility for equity priority groups, particularly in terms of access to proposed high-capacity transit stations, to jobs, and community resources. The evaluation will be incorporated into the process of screening design options as well as development of performance measures – for example, the EAG recently delivered to the program administrator a set of equity-centered screening criteria to be used in evaluating design options under development.

One early finding from analysis conducted thus far is that relative to the Portland-Vancouver region, the immediate program area has a high concentration of people with disabilities, low-income households, and zero-vehicle households. This indicates the importance of improved transit in the corridor and potential for strong ridership.

## 2B: PERFORMANCE EVALUATION: SAFETY

### *What are the safety concerns in the program area?*

The federal government is interested in investing in nationally significant infrastructure projects. Ensuring the program is ready for investment requires our local and regional partners to work together to advance one multimodal design solution by May 2022. The replacement of the Interstate Bridge cannot wait any longer to address critical safety issues resulting from aging of the structure outdated design.

- The Interstate Bridge is built on wood piles in sandy soil, making the piles vulnerable to failure in the event of an earthquake; it is not practically feasible to retrofit the piles to current seismic standards.
- Design configuration of the existing bridge creates conflict areas that result in reduced vehicular flow rates, congestion, and crashes that result in injuries, fatalities, infrastructure damage and economic loss.
  - Design configuration issues include I-5 mainline ramp spacing, deficient ramp merge, diverging and weaving lengths, narrow lanes, limited sight distance, lack of safety shoulders, and bridge lifts. I-5 mainline ramp spacing results in deficient ramp merging, diverging, and weaving lengths
  - The roadway has narrow lanes, limited sight distance, and lacks safety shoulders.
  - The approaches to the Interstate Bridge in the program area experience crash rates over three times higher than statewide averages for comparable facilities.
  - Bridge lifts occur up to 250 times a year on average.
  - There were 7 fatal and 17 serious injury crashes in the program area from January 2015 to December 2019.
  - The shared use paths on the bridges do not provide adequate safety or space for travelers who walk, bike, or roll, and are not compliant with the Americans with Disabilities Act.

The ODOT Safety Priority Index System (SPIS) is the primary method for identifying high crash locations on state highways within Oregon. The SPIS score is based on 3 years of crash data and considers crash frequency, crash rate, and crash severity. ODOT bases its SPIS on 0.10-mile segments to account for variances in how crash locations are reported. To become an SPIS site, a location must meet one of the following criteria:

- Three or more crashes have occurred at the same location over the previous 3 years
- One or more fatal crashes have occurred at the same location over the previous 3 years

Each year, a list of the top 10 percent SPIS sites is generated, and the top 5 percent of sites are investigated by the five regional traffic managers' offices. These sites are evaluated and investigated for safety problems. If a correctable problem is identified, a benefit/cost analysis is performed and appropriate projects are initiated, often with funding from the Highway Safety Improvement Program.

A search of the ODOT 2017 to 2019 SPIS database revealed two locations within the Oregon section of the project area that ranked among the highest 5 percent in the state. The two locations are between mileposts 307.77 and 308.09 (the Hayden Island Interchange), and mileposts 308.15 and 308.38 (just north of the Hayden Island interchange). ODOT does not include the interchange ramps and intersections in the calculations of SPIS rates for the highway.

### *Are there any known or potential safety measures likely to be part of the scope of work?*

The existing traffic safety hazards on I-5 in the project area include lack of shoulders, narrow lanes, poor vertical and horizontal sight distances, substandard merge and diverge distances, substandard weaving distances, and bridge lifts. Many of these design issues could be corrected with a replacement river crossing because the program would apply current design standards. Use of current standards will remedy multiple safety deficiencies on the existing bridge and associated roadway facilities.

The CRC project established a list of safety measures that would be developed for the project. These are being planned for inclusion into the IBR program and will be confirmed as design progresses. The anticipated measures include:

- Lane widths will meet current design standards.
- Sight distance will be improved, allowing drivers more time to react to changing operations on the roadway.
- Increased length of merge and diverge distances, weaving distances, and braided ramps to mitigate substandard interchange spacing.
- Shoulders will be provided to allow for breakdown areas and crash avoidance maneuvers.
- The connection between the Marine Drive interchange and Hayden Island would be improved by eliminating the local movement between interchanges from the I-5 mainline and accommodating the connection with a local multimodal bridge and/or redistributing Hayden Island traffic to the Marine Drive interchange. I-5 freeway operations would improve by braiding the on- and off-ramps between Marine Drive and Hayden Island.
- Auxiliary (or add/drop) lanes connect two or more highway interchanges and improve safety and reduce congestion in the through traffic lanes by providing space for cars and trucks entering and exiting the highway to increase the distance needed to merge and diverge between interchanges. This is especially important for closely spaced ramps such as between Victory Boulevard and Marine Drive, and at the river crossing where three large interchanges (Marine Drive, Hayden Island, and State Route [SR] 14) all have traffic entering and exiting I-5 within a 1.5-mile segment.
- Local streets impacted by the project will be designed to meet current standards at the intersections and will provide bicycle and pedestrian improvements that meet current safety standards.

- The shared use path will be designed to accommodate users of all abilities and varying speeds of mobility (ranging from walking to use of electric bikes).
- Bridge lifts, which stop traffic on I-5 and create unstable flow conditions would no longer occur.

## 2C: PERFORMANCE EVALUATION: CONGESTION RELIEF

The Portland-Vancouver region places a high priority on TDM and TSM, as evidenced by the inclusion of specific policies in the region's adopted plans and the actual implementation and operation of TDM and TSM programs. TDM seeks mostly to reduce travel demand by shifting travelers to different modes, different times, and different routes. TSM is intended to maximize system efficiency, maximizing the available capacity. The IBR program would include many facility improvements that will allow the region to expand upon current TDM and TSM efforts. Additional TDM and TSM improvements and elements of the IBR program may be developed through the continued design process.

The project proposes to use an array of system approaches to address congestion and travel demand as a means to right-size any changes to roadway capacity. For example, the project would have a substantial transit element, which would expand transit service in the corridor, thus providing more attractive options for drivers to move to transit. The project would also include substantial improvements to the bicycle and pedestrian facilities and local street network. The transit, bicycle, pedestrian, and street network improvements would support modal shifts by providing safe and reliable multimodal options to vehicular travel. The project will evaluate transportation system and operation elements to manage congestion and promote travel reliability in the program area.

The project will model tolling on the I-5 bridge to evaluate impacts of roadway pricing. The IBR team, in coordination with the ODOT toll program, determined that a sensitivity analysis will be completed to reflect a representative toll scenario. The scenario accounts for tolling on all of I-5 and I-205 from the Columbia River to the I-5/I-205 split near Wilsonville. The IBR program will model a typical weekday, variable toll rate scenario based on a schedule.

### *What new street configurations would be part of the project?*

Among the street configurations planned for the project, the following would serve to improve the local connectivity of the street network. These improvements would increase the opportunity for safe local travel, including for non-motorized use.

- Raising I-5 as it crosses the Columbia River into Washington would allow for an extension of Main Street beneath the BNSF railroad crossing, from 5th Street south to Columbia Way, which supports the City of Vancouver's vision of providing greater connectivity to the waterfront.
- The proposed Fourth Plain interchange improvements would increase bicycle and pedestrian safety by adding eastbound and westbound bicycle lanes, with a sidewalk on the south side.



- The IBR program would modify local streets on Hayden Island to improve connectivity and local multimodal access.
- The IBR program would improve local connectivity and multimodal facilities in the Bridgeton neighborhood. This would include improved connections to the 40-Mile Loop.

### *What are the current transportation system management and operations strategies that would be used in or near the project to manage congestion prior to adding capacity?*

Regionwide TSM facilities and equipment help maximize capacity of the street and highway system. The I-5 corridor was among the first in the region to employ TSM technology to help the corridor operate with maximum efficiency. Regional TSM programs include the following:

- System monitoring and traveler information systems (e.g., web-based information systems, variable message signs).
- Facility management systems (e.g., optimized signal systems, ramp meters, signal priority for special users, such as transit).
- Incident management systems (e.g., incident response and recovery teams).
- Ramp meters are currently in use by ODOT along the I-5 corridor throughout the Portland area and by WSDOT on I-5 in Vancouver. The IBR program would retain ramp meters at all current locations. The ramp meters will allow both monitoring and regulating the flow of traffic to maintain mainline traffic flow on I-5; maintaining flow is a key element of the TSM programs in the region. Where multilane ramps are provided, ramp meters and related equipment could also allow queue jumps for buses, carpools, or other designated vehicles. Were this option to be chosen and implemented, the ramp meters and equipment could be operated such that they complemented a TDM program that affords travel time advantages for users of transit or carpools.
- Bus on shoulder (allows buses to use the highway shoulders and bypass congested travel lanes).
- Tolling (project and regional studies and planning for tolling are underway).

Support and expansion of the current programs is anticipated with or without the IBR program because of the priorities that have been set in the planning documents described in Part 1 of this document.

### *What are programmatic demand management activities that are currently supported in the vicinity of the project and additional demand management elements that will be considered by the project?*

The region supports a range of TDM programs, with significant effort by the transit agencies in Vancouver and the Portland metropolitan areas. TriMet and C-TRAN work together to provide transit

service within and beyond the project area. The following are current TDM features employed regionally to support TDM efforts:

- **Transit:** C-TRAN and TriMet each operate regional bus-based fixed-route transit service as well as special access (i.e., dial-a-ride) service. Additionally, TriMet regionally operates fixed-route light rail transit with service along Interstate Avenue terminating at the Expo Center. C-TRAN operates express commuter buses from Clark County to central Portland via I-5 on weekdays.
- **Park-and-ride lots:** C-TRAN and TriMet operate several park-and-ride lots throughout the region.
- **Carpool/ridesharing:** The CarpoolmatchNW.org website helps the public find potential rideshare/carpool partners based on individual information provided regarding people's commute routes and times.
- **Vanpool:** The Metro Vanpool program sponsored by Metro and C-TRAN provides information, incentives, and opportunities for employers or groups of commuters to form a vanpool within the Portland/SW Washington region.
- **High-occupancy vehicle lane on northbound I-5 in North Portland:** A reduction in travel time is an incentive making carpooling more attractive than driving alone.
- **Employer-sponsored commute programs:** Commute trip-reduction laws in both Washington and Oregon have spurred actions on the part of employers to actively promote TDM. Employers of certain sizes are required to demonstrate efforts to achieve TDM results and track success. Employers have considerable flexibility to tailor programs to their needs, their employees' needs, and to the availability of alternative modes of travel. Typical employer-sponsored TDM features include flexible work schedules; working from home (telecommuting); subsidized, or even free, transit passes; ride matching and preferential parking for carpools and vanpools; guaranteed ride home; parking cash out (giving those who do not occupy a parking space the equivalent in cash to use to subsidize their mode of choice); incentives to walk and bike; secured bicycle parking; and changing rooms/showers.

For a TDM program to be successful, one of the prerequisites is the existence of at least one viable alternative to single occupancy vehicles (SOV). There are real or perceived problems in the I-5 corridor that appear to have limited, or at least hindered, the use of alternatives to the SOV mode of travel. The facilities planned as part of the IBR program and their contribution to helping TDM programs achieve their potential are described below.

## Public Transit Corridor Facilities

One of the key elements of the Purpose and Need for the IBR program is, "Improve connectivity, reliability, travel times and operations of the public transportation systems in the project area." Currently, public transit in the corridor consists of both express and local buses that mix with other traffic and use the existing lift-span bridges for their crossings of the Columbia River. TriMet's MAX light rail transit currently terminates at the Expo Transit Station near the Marine Drive interchange. One northbound lane on I-5, which is a managed lane intended for exclusive use by vehicles with two

or more occupants during the 3 p.m. to 6 p.m. weekday period, helps northbound transit vehicles maintain faster service during the PM peak periods.

There are several significant advantages for public transit that will be brought about by the IBR program:

- The planned high-capacity transit corridor would offer ways to avoid congestion on I-5 that are experienced by buses operating in regular service today.
- By using a high-level fixed-span bridge for the new Columbia River Crossing, transit vehicles will no longer be subject to interruptions of service due to river traffic requiring a bridge lift.
- Adding a fixed guideway to be used by high-capacity transit will increase capacity, reliability, and efficiency of the transit system.
- Capacity of the transit system will be substantially higher than that afforded by public transit mixed with other traffic in the existing corridor.

## Facilities for Bicyclists and Pedestrians in the Corridor

Deficiencies of the existing facilities for pedestrians and bicyclists are well documented. One of the pass/fail criteria used in the initial screening of alternatives for the CRC project was whether the alternatives “improve bicycle and pedestrian mobility in the bridge influence area.” The existing accommodations for bicyclists and pedestrians on the I-5 bridge consist of narrow sidewalks generally between 4 and 5 feet in width. Bicyclists and pedestrians crossing the bridge both northbound and southbound share this limited space. Numerous protrusions reduce the effective width. The railings are of insufficient height for safety and lack a rub-rail. The railings’ balustrades and the bridges’ trusses protrude, leading to the potential for a cyclist’s handlebars to snag on protrusions causing a loss of control and a crash. In addition, the close proximity to the narrow lanes and higher speed motor vehicle traffic makes the experience for bicyclists and pedestrians unpleasant.

Substantial bicycle and pedestrian improvements will be included in the IBR program. These include new facilities such as the multi-use pathway across the river, street improvements around the rebuilt interchanges, and new facilities for bicyclists and pedestrians around the new light rail stations and park and ride facilities. Key improvements (discussed from south to north within the project area) include:

- Pedestrian and bicycle improvements at the Marine Drive interchange would include connections with multi-use paths along the North Portland Harbor, the Expo light rail transit station, and local streets.
- The multi-use path over the North Portland Harbor and the Columbia River would serve as a continuous route for bicyclists and pedestrians.
- To improve east-west connections on Hayden Island, sidewalks and bicycle lanes would be provided along local streets (e.g., Jantzen Drive, Hayden Island Drive, and Tomahawk Island Drive).

- The bridge over the Columbia River would accommodate a multi-use pathway that would separate pedestrians and bicycle traffic through pavement markings. All bicycle and pedestrian improvements would meet Americans with Disabilities Act accessibility standards.
- Ramps from the north end of the main bridge over the Columbia River would connect the multi-use path to Columbia Way and Columbia Street in Vancouver. The wide multi-use path would also reduce conflicts between bicyclists and pedestrians by affording enough space to accommodate two-way travel for both.
- The multi-use path would provide connections to regional pedestrian and bikeway facilities that exist throughout Vancouver.
- Additional improvements in Washington would include rebuilt overpasses with improvements to bicycle and pedestrian facilities that would enhance east-west non-motorized movements and a rebuilt overpass for Evergreen Boulevard that would include bike lanes and 15-foot-wide sidewalks with clear delineation and signing.

### *How will tolling be analyzed for the project, and how could it be used as a TSM and TDM measure?*

Regional tolling programs are currently under consideration. Tolling would also be part of the IBR program. Multiple scenarios and pricing models are being analyzed by the IBR program to determine the optimal means of managing demand while also supporting regional and statewide equity goals. Tolling can be used to be both a TSM measure (e.g., traffic smoothing) or a TDM measure (pricing roadway use). Some considerations related to tolling in relation to the IBR program include:

- Toll revenue collected from Interstate Bridge users will help fund the bridge replacement and pay for long term bridge operations and maintenance.
- While funding construction is the primary objective on IBR, toll rates are expected to vary by time of day in a manner that would support mobility and relieve traffic congestion, promoting travel time savings and improved reliability.
- The time-saving benefits of the tolling extend to all travelers, with the greatest benefit to those without flexible work hours that travel during the morning and afternoon peak periods.
- Tolling could address congestion relief; variable pricing keeps roadways functional with higher tolls at peak times to manage traffic flows to the available capacity, potentially subject to minimum and maximum rates.