

# HOOD RIVER/WHITE SALMON INTERSTATE BRIDGE REPLACEMENT PROJECT

Presented by:

# **PORT OF HOOD RIVER**

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# **PURPOSE**

This document describes the critical need to replace the Hood River/White Salmon Interstate Bridge ("Bridge") in the next 10 years, and a way forward. The Bridge is publicly owned and critical to the economy of the Columbia River Gorge region, linking more than 28 communities and hundreds of businesses on both sides of the Columbia River. Due to its age and deficiencies, the Bridge must be replaced to continue its vital role in the regional freight network. However, because the facility is located in two states, owned and operated by the Port of Hood River, and costly to reconstruct, replacement efforts require extraordinary cooperation between state, federal, and local agencies.

This document describes a practical approach to developing the replacement bridge that addresses these complexities. It begins by explaining the history, condition, and public agency context of the Bridge and identifying the opportunities and organization that could lead to successful replacement. During the 2017 Oregon legislative session, the state passed two bills that provided critical support to move the project forward:

- Modifications to the Port's statutory authorities relating to bridge replacement (HB 2750)
- State funding to complete required pre-construction environmental reviews, permitting, preliminary engineering, and right-of-way acquisitons. (HB 2017 - the Oregon Transportation Funding Package provided \$5 million in state support.)

# **OVERVIEW & HISTORICAL CONTEXT**

The Hood River/White Salmon Interstate Bridge provides interstate crossings over the Columbia River connecting the Oregon community of Hood River with the cities of Bingen and White Salmon in Washington. A National Highway System ("NHS") facility, the Bridge is recognized as a Critical Rural Freight Corridor by the Washington State Department of Transportation. Annually, more than 4 million vehicles cross the bridge, with an average 3.5% annual increase.



Leslie Butler driving the last spike in the wooden bridge deck December 6, 1924.

The nearly mile-long bridge was built by the Oregon-Washington Bridge Company ("Company") and opened to the public on December 9, 1924. In 1937, the U.S. Secretary of War notified the Company that the fixed channel span would be required to be converted to a lift span to accommodate the completion of the Bonneville Dam and subsequent raised water level. The Bonneville Dam was completed in

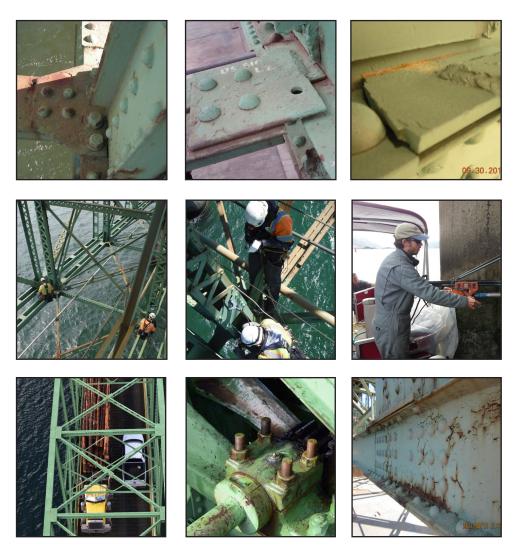
A CRITICAL LINK
IN THE
REGIONAL
INFRASTRUCTURE

The Hood River/ White Salmon Interstate Bridge provides one of only three Columbia River crossings in the 85-mile stretch of the Columbia River Gorge National Scenic Area (NSA). The Bridge connects Interstate-84, OR Hwy 30, and OR Hwy 35 in Oregon with SR-14 in Washington. The 28 bi-state communities along the river are connected by only three bridges, each located more than 20 miles apart, with the Hood River Bridge situated centrally.



1938 and the bridge was virtually rebuilt at this time. In 1949, the Oregon legislature enacted a law permitting the acquisition or construction of interstate toll bridges by certain municipalities including ports. The Port of Hood River purchased the Bridge on December 12, 1950 and has operated, maintained, and improved it since then for the public benefit. The Port of Hood River is a public agency, authorized by ORS 777 to provide economic development, recreation facilities, and aviation and transportation facilities for the public good. The Port's ownership of the Bridge is based on its mission to initiate, promote and maintain quality of life and a healthy economy throughout the Port District and the Columbia River Gorge. *Please see Appendix B: Historical Context* for more background information.

The Bridge is the hub of the regional economy. If the Bridge persists into decay or requires further weight or travel restrictions, that economy will be severly impacted. The Port of Hood River has invested over \$24 million in capital improvements and repairs to keep the existing bridge safe and operational over the last 20 years. However, parts of the steel truss bridge structure are more than 92 years old, and much of the rest is over 80. Simply put, the Bridge is nearing the end of its serviceable life. Although significant steps toward replacement have been accomplished, it is imperative that efforts continue in earnest so that construction of a new, replacement bridge can occur within 10 years. The Bridge is a toll bridge and toll revenues are used for ongoing capital improvements, needed repairs, and maintenance. But toll revenues cannot cover most of the cost of building a replacement bridge – federal or state grants or private equity will be needed to fund reconstruction.



The Port has identified a work plan and organizational structure to pursue a bridge replacement project. The process encourages both ODOT and WSDOT to lend their partnership, expertise, and support and to join Gorge regional transportation partners in fulfilling the critical need to replace the bridge before it reaches the end of its serviceable life.

# WHY THE BRIDGE MUST BE REPLACED.

The bridge has served as an economic engine for the Mid-Columbia Region for many years, enabling transport of goods and services, tourism, emergency response, and worker commute across this mile-wide stretch of the Columbia. However, the Bridge was built at a time when cattlemen used the bridge to herd their animals across the river and the most common motor vehicle was a Ford Model A. There are significant and increasingly important reasons why the next series of steps must be taken to ensure that the Bridge is replaced within the next decade:

- The Bridge is **seismically deficient** and might not withstand even a moderate seismic event. This presents a major risk to marine freight transport on the federal inland waterway and also emergency response.
- The Bridge is functionally obsolete with a sufficiency rating of 49.8. The steel deck is significantly under-sized for vehicle freight crossings, with only two very narrow (9' 4.75"wide), shoulder-less travel lanes. The bridge is weight restricted to 80,000 GVW, yet remains a primary freight route on the National Highway System and is designated in Washington as a Critical Rural Freight Network facility. Regional vehicle freight companies use the Bridge for movement of locally grown fruit and forest products as well as rock and gravel and locally manufactured products such as glass windows and doors and aviation technology components.
- The Bridge has **no bicycle/pedestrian facilities** and cannot support the addition of such facilities.
- The Bridge creates a significant bottleneck for traffic and emergency response
  during weather or other incident-caused closures of the I-84 freeway occurring
  on average twice a year. Whenever freeway closures occur, the Bridge becomes
  essentially part of the interstate highway system, accommodating detoured freeway
  traffic in both directions.

During the June 3, 2016 oil train derailment in nearby Mosier, Oregon that resulted in a fire and a full closure of Interstate 84 at Exit 64 in Hood River, the Bridge accommodated detoured freeway traffic in both directions for nearly 12 hours. The narrow, shoulder-less travel lanes on the Bridge created a choke point that backed up traffic for more than 20 miles in all directions as large trucks, busses, and emergency response vehicles had to carefully negotiate their crossings, coming within inches of each other. (Please see the YouTube video posted at https://www.youtube.com/watch?v=iYLuqyWEI4w)

- Due to the too narrow lift span, inappropriate channel alignment, and the consistently high winds and current, the Bridge is regarded as the **most hazardous obstacle on the federal inland waterway system** for the marine freight navigating the Columbia River; a primary conduit for U.S. wheat, soy, wood products and mineral bulk exports. More than 9 million tons of commercial cargo traveled under the Bridge in 2012- at least 30% of the total cargo barged for import/export on the inland navigation route from Portland/Vancouver to Lewiston, Idaho in that year. Veteran tow operators report that the Hood River Bridge is known to have been struck more often than any other obstacle on the entire Columbia/Snake river system.
- Due to extensive wear and tear, the unrealibility of the Bridge's lift span mechanics
  to provide on-demand span lifts for marine traffic as required by the U.S. Coast Guard
  presents a serious threat to navigation of the inland federal waterway.





In sum, the potential loss of this essential transportation link would have severe economic and social effects on the interdependent bi-state communities of the Gorge and beyond.

# BRIDGE REPLACEMENT BENEFITS

# Benefits to the Gorge Economy

Construction of a new, replacement bridge will bring significant benefits to the regional economies in both states in the near and long term. A Benefit Cost Analysis completed in 2015 by FCA Group concluded that the project had a 4 to 1 benefit to cost ratio over 75 years. By completing the pre-construction phases of the bridge replacement project, the Port and its partners will successfully address the needs first stated in the 2004 SR-35 Columbia River Crossing Feasibility Study Final Report, to "rectify current and future transportation inadequacies and deficiencies associated with the current Hood River Bridge:

- Alleviate current and future congestion at the bridge termini, on the bridge itself
  and the access road to and from the bridge (SR-35) and congestion related to
  diverted traffic due to severe weather conditions or incidents on Mount Hood,
  I-84, or SR-14;
- Provide a cross-river linkage to the transportation system;
- Accommodate the increase in cross-river demand while also providing for bicycle and pedestrian travel across the Columbia River;
- Satisfy social demands and economic needs for cross-river flow of goods and people;
- Accommodate river navigation by providing a horizontal clearance which meets current standards while also providing intermodal and multimodal connections across the river; and
- Addressing and improving upon safety and current substandard design of the current bridge."

# Benefits to Vehicle Freight

The estimated average daily traffic (ADT) at this Bridge in year 2014 was 13,300 vehicles per day, with commercial trucks comprising 29% of ADT. The current bridge is weight restricted to 80,000 GVW. A fully loaded fruit truck hauling fresh pears for processing weighs on average 105,500 lbs. A 2015 report by Columbia River Port Engineers notes that, "Detours either upstream or downstream from the HR Bridge could involve trips of 45 miles or more. The toll at the Hood River Bridge is a bargain as compared to the costs incurred in diverting to the Bridge of the Gods (which is weight limited at 80,000#), I-205, the bridge at The Dalles or at Biggs Junction."



(The Hood River Bridge assesses tolls for trucks based on the axle count of the vehicle combinations. A typical tractor and trailer with five axles will pay \$5.00. Each additional axle is assessed at \$1.00 per axle.)

# Benefits to Marine Freight

The Bridge's 246 foot navigational channel under the lift span is poorly aligned, insufficient, and dangerous for the commercial cargo barges navigating the federal inland waterway. The preliminary preferred alternative calls for a minimum navigational channel of 450 feet, and also recommends a re-alignment of the channel, stating that "The channel alignment should also allow tugs and barges to be aligned with the westerly winds that now hit on the diagonal and cause control problems, especially for tows with empty barges."



In his testimony to the Oregon state legislature on January 25, 2016, Eric Burnette, Executive Director of the Oregon Board of Maritime Pilots described the unique and significant challenges barge pilots face when approaching and navigating under the bridge [excerpt]:

".... When configured as a unit, these 4 barges and one towboat form a large vessel that by itself is slightly over 1/10 of a mile long. It requires precise and skillful navigation. The practical impacts of these combined factors on navigational safety are significant. A tug/barge headed upriver will typically favor the south side of the channel as it passes the While Salmon River Delta, and then quickly shift to the north side of the channel to avoid the Hood River Delta. Once clear of the Hood River Delta it must then immediately get into position to pass under the lift span of the Hood River Bridge.

A down-bound vessel faces a different set of challenges. Lacking the obstacles found on the downstream side of the Hood River Bridge, a tug/barge approaching from upstream will have more time and room to get into proper alignment to pass under the Hood River Interstate bridge. However, once under the bridge, that tug/barge must negotiate both the Hood River and then the While Salmon River Deltas with the current coming from behind. This following current only accelerates the vessel's speed over the bottom and reduces the time available to make the necessary course corrections as it passes both deltas."

In an email to the Port of Hood River on April 11, 2016, Port Captain Fred Harding describes the experience thusly:

"Many gray hairs have been produced by the current span on many a crew. Over the 30+ years I have been watching the Columbia River this bridge has been known to be struck more than all other obstacles on the entire river system. Due to the narrowness of the bridge and the weather in the area of the bridge. If you add into the mix the wind

surfers and kite boarders the difficulty again increases. If it were to be enlarged to 450 feet at the navigation span and the river to under side of the bridge were to be 80 feet I believe much of the stress of the transit would be reduced."

Over 9 million tons of commercial cargo traveled under the bridge's lift span in 2012, at least 30% of the total cargo barged for import/export on the inland navigation route from Portland/Vancouver to Lewiston, Idaho in that year. Barge traffic on the lower Columbia River continues to grow with barge operators annually hauling more than 3 million tons of wheat and barley, and millions of barrels of petroleum products, logs and wood chips. Barges are also used to transport juvenile salmonids beyond passage barriers throughout the Columbia Snake river system.

# Creates New Bike/Ped Connection

The Bridge has no bicycle/pedestrian facilities and cannot support the addition of such facilities. This is particularly problematic since it prohibits bicycle commuting between Washington and Oregon and also fails to serve the recreational interests of cyclists and pedestrians drawn to the National Scenic Area (NSA). In their final report to Governor Kate Brown in 2016, the Governor's Transportation Vision Panel cited a 2014 study titled "Columbia River Gorge Bicycle Recreation Economic Impact Forecast, 2014" to illustrate the economic impact of bicycle recreation capital projects in the Gorge:



"Bicycle recreation spending supports approximately 270 full and part-time jobs, with earnings of \$5.7 million, and generating over \$900,000 in state and local tax receipts."

Since 1986, Oregon DOT has invested over \$73 million in federal and state funding to redevelop the Historic Columbia River Gorge Highway- \$56 million of that on the HCRH Bicycle and Pedestrian facility. Sixty-three of the original 73 miles of the Historic Columbia River Highway are now open to travel either by motor vehicle (Historic Highway or connecting county roads) or by foot and bicycle (State Trail). This facility is drawing tens of thousands of cyclists and pedestrians to the NSA, yet the lack of cycling and pedestrian access on the Hood River Interstate Bridge presents a significant and unfortunate gap in non-motorized connectivity in the NSA.

An October 2012 study by HNTB concluded that while there is significant interest and broad support from area stakeholders in adding safe pedestrian and bicycle crossings to the current bridge, there are significant structural and mechanical barriers that make such a project unfeasible and cost- prohibitive.

#### The study concluded that:

- The steel trusses have a limited reserve structural capacity to support added loads.
- The lift span would require significant mechanical and electrical equipment upgrades and structural retrofit or full replacement to support the added loads and configuration.
- The steel trusses would require full engineering evaluation and structural strengthening to support added loads.
- If a ped/bike facility is added to the bridge the bridge may need to be load limited for vehicles.
- The substructure (piers) and subaqueous (underwater) foundations have an unknown ability to support additional vertical and lateral loading and require further investigation.

The Summary of the Draft EIS notes that a result of the construction of the preliminary preferred alternative design would be that, "Recreational opportunities would be expected to increase with a bridge crossing that has multimodal facilities and would enable bi-state connections to trails and sidewalks."

# **Environmental Benefits**

At the project location, the Columbia River is host to ESA- listed salmon and steelhead species, lamprey, and migratory birds and other sensitive species. The Summary to the Draft EIS details the immediate environmental benefit to the Columbia River with the removal of the steel deck bridge:

"The new bridge would benefit water quality, as compared to the existing bridge, because road runoff from the bridge deck would be collected and treated prior to discharge to the Columbia River. Currently, all oil, grease, metals, and sediments from vehicles may enter the river directly through the grated bridge decking."

The DEIS also notes the expected improvements related to an increased speed limit on the new bridge, stating that "Each of the build alternatives would improve energy consumption of traffic [...] range[ing] between 8 and 15 percent less than No Action as a result of the higher operating speed...."



# Seismic Resiliency

In their final report to Governor Kate Brown in 2016, the Governor's Transportation Vision Panel designates seismic resiliency in the Columbia Gorge river, road and rail corridor as a priority, stating,

"The multimodal transportation corridor that connects the east end of the Columbia Gorge with major population centers in the Willamette Valley is a critical asset to the region. Investments must be made to ensure that this corridor's river, road, and rail transportation system is resilient to a seismic event."

- Page 37, "One Oregon: A Vision for Oregon's Transportation System" Transportation Vision Panel Report to Governor Kate Brown

A seismic vulnerability study completed by bridge engineers HDR in January 2017 identified several potential seismic vulnerabilities on both the Oregon and Washington approach spans, the steel truss spans, and the lift span. HDR anticipated extended closures of each element of the bridge in the event of an earthquake. The report stated that the area around the Bridge has a high hazard of ground amplification, a very high hazard of liquefaction, and a moderate hazard of susceptibility to landslide. With anticipated costs through a Phase 2 Seismic Retrofit totalling more than \$124 million, this vulnerability makes bridge replacement in the next 10 years even more critical for public safety and represents the best public investment for preserving this important link the the region's transportation system.

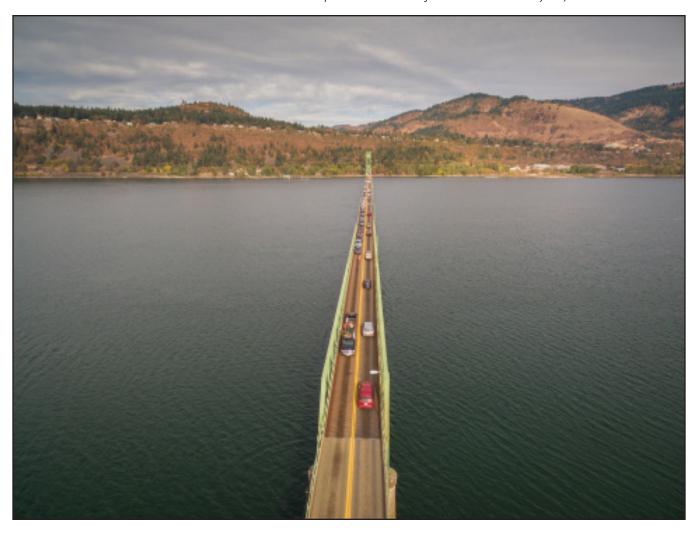
The report cites the 2015 Oregon Resilience Plan, illustrating the seriously grave potential impacts of bridge failure to important components of the state's response plan:

"The Oregon Resilience Plan specifically addresses the need to prepare for a Cascadia Subduction Zone event and has designated U.S. 97 combined with a loop created by I-84, I-5, and OR 58 near Eugene-Springfield as post-earthquake transportation backbone lifeline routes. As emergency supplies move east-west along I-84 and north-south along U.S. 97, the Hood River-White Salmon Bridge could also provide important access between states for freight mobility, emergency supplies delivery, and reconstruction assistance.

The Columbia River itself must also remain navigable after an earthquake to deliver goods and services on the river system; the Bridge must not block navigation. The

regions ports and river traffic will play an important role in recovery after an earthquake as points of goods exchange, storage, equipment delivery and transfer, and response operations."

- Pages 2-3, "Hood River-White Salmon Interstate Bridge Seismic Vulnerability Assessment" HDR Final Report to the Port of Hood River January 17, 2017



# REPLACEMENT PROGRESS TO DATE

Construction of a new bridge is a relatively straightforward project. However, permitting and pre-development tasks for such an interstate structure over a federal waterway and within a federally designated National Scenic Area is inherently a complex, long-term process subject to funding availability. Planning for this project began in 1999, led by the Southwest Washington Regional Transportation Council (RTC) with key involvement by the Oregon Department of Transportation (ODOT), the Washington State Department of Transportation (WSDOT), and the Port of Hood River.

The following are the major actions completed to date:

#### 1999:

Scoping for Feasibility Study

# 2003:

- Completion of NEPA Scoping Phase
- Completed feasibility study
- Draft environmental impact statement

2012:

Completed Type, Size & Location Study

2015:

- FAST ACT amendment designating projects within National Scenic Areas as expressly eligible for program funding
- Bridge designated a National Highway System facility
- Bridge designated a Critical Rural Freight Network facility (In Washington)

2016:

Completed Project Benefit Cost Analysis

2017:

 Pending FASTLANE II Small Grants Application for completion of Final EIS and preliminary engineering

# THE WAY FORWARD

The Port of Hood River is now seeking to implement the next steps toward bridge replacement, and inviting the continued participation of Oregon and Washington, as well as the federal government in this significant and crucial effort. While the Port must ensure that the current bridge remains safe and operational for the foreseeable future, it is also committed to participating in the sustained efforts and partnerships that will be needed to position the replacement project for construction within 10 years.

It is absolutely clear that funding either the pre-construction or construction phases of a \$280-300 million replacement project is well beyond the capacity of the Port of Hood River acting alone. However, as a toll facility owned by a public agency, this bridge project presents unique state, local, and federal funding opportunities as well as the potential for innovative public/private partnerships. The Port is optimistic that concrete ways forward are available in the near term. The Bridge is critical for the economic well-being of the Mid-Columbia Region and governing agencies can and must maximize benefits to the public of a self-sustaining, major infrastructure project in the heart of the Columbia River Gorge National Scenic area.



# Two Potential Pathways

There are two primary ways that bridge replacement can be carried out:

- **Public Project.** This approach would require ownership and management by a public agency. With proper financial support, the Port of Hood River might be able to take the lead on this approach. Either Oregon or Washington DOTs, or a combination of these agencies in partnership with the Port, may present a more likely scenario, however, both agencies have their own significant and underfunded transportation priorities and neither have indicated they have the requisite financial capacity or interest as of yet.
- Public/Private Partnership (P3). This approach would leverage private equity in a joint operating agreement with the Port. Some public funding may be necessary, but the primary equity repayment mechanism would come from ongoing toll revenue. The Port has already received interest in a partnership from private firms but it is not yet clear whether the terms or trade-offs necessary to affect such a project would be in the public interest.

# Immediate Next Steps

The bridge replacement project could be undertaken as a public project led by the Port of Hood River and/or ODOT, or as a public-private partnership (P3) led by a private developer/operator via an agreement with the Port. While private firms have informally expressed interest, the merits of a P3 must be evaluated and compared to those of a public project. The project development process outlined below is designed to address these issues in two phases.

Phase 1 is necessary whether a public project or P3 is ultimately selected, and includes similar tasks regardless of ultimate project delivery method. The work plan for Phase 2 depends on whether the public model or the P3 model is selected as the preferred option in Phase 1.

# PHASE 1: PRELIMINARY DESIGN & PRE-DEVELOPMENT

This phase focuses on reaching agreement on reasonable project funding alternatives and potential project delivery strategies. It also includes completion of the environmental studies and preliminary engineering steps necessary to position the project for permitting and final engineering activities under Phase 2. Phase 1 work will reasonably position the project to be 18 months from the start of construction, or as close thereto as practical, in order to qualify for applicable federal grant opportunities. A more detailed work scope is described in Appendix A.

The following work will be completed in Phase 1:

• Reform Port statutory authorities relating to bridge replacement: While ODOT has a comprehensive statutory regimen for developing a replacement bridge, the Port's authority is vague and insufficient. The Port operates the existing bridge under portions of ORS 381, but this statute does not allow for current public or P3 project delivery practices. To minimize project development risks, the Port's authority to pass-on certain rights and obligations to a P3, such as allowing the P3 partner to set tolls, needs to be clarified.

This work was successfully completed during the 2017 Oregon legislative session.

• **Update and refine replacement bridge design and engineering:** A Type, Size, and Location (TSL) study was done in 2011, but must be re-evaluated to confirm the preliminary bridge design meets current needs, environmental standards, and engineering criteria. A risk assessment is required to prepare a reliable construction cost estimate and schedule. Preliminary engineering will be brought to 30%, additional geotechnical investigations,

roadway design, and right-of-way engineering will be performed.

Products: Engineering reassessment; updated TSL Study; updated cost estimates; risk assessment, results of technical investigations.

• **Update and advance environmental studies/permitting:** Due to the need for in-water piers in the Columbia River, "Waters of the US" and a designated navigation channel, permits from federal agencies will be required for construction. As such, federal NEPA procedures will need to be followed regardless of whether a publicly funded model or a privately funded model is ultimately used. Phase 1 work includes determining whether a Supplemental DEIS is required, and if so, preparing the update. In addition, the Final EIS will be completed in Phase 1, and required mitigation measures will be finalized. Additional environmental compliance documents and associated analyses will be completed, such as: biological assessment, archaeological investigations, consultation with affected Tribes, and Section 4(f) evaluation, etc. **Please see Appendix A for a detailed Scope of Work.** 

Products: Environmental reevaluation; SDEIS (if required); FEIS work plan, budget, and mobilization; early coordination with federal and state permitting agencies.

• **Determine the preferred project delivery method:** The public project delivery option is well known, the primary issue being funding. A two-step process is envisioned to address the P3 option. First, a request for industry information (RFI) may be undertaken to identify the needs and expectations of potential private bridge development partners. Second, an evaluation of the public and P3 project delivery options will be undertaken and a preferred option selected. If P3 is selected, preparation of RFQ/RFP materials will begin. It is possible the P3 solicitation process will begin.

Products: Results from RFI; evaluation and decision on whether to pursue public or P3 project delivery; and if P3 selected, RFQ/RFP materials.

• **Identify funding alternatives:** Funding scenarios for the public project and P3 will be prepared in order to assess the relative merits of the two project delivery methods. This entails, in part, the preparation of traffic studies and toll revenue and expenditure analyses to size the project funding potentially available from tolls. As opportunities arise, grant funding will be sought, including possibly seeking funding from any new federal infrastructure program, if passed.

Products: Assessment of funding options, preliminary toll studies, and, if applicable, grant applications.

• Intergovernmental cooperation: A formal work and decision structure will be established for the bridge replacement project that incorporates the Port, ODOT, WSDOT, and/or other affected Oregon and Washington jurisdictions/agencies. As required, intergovernmental agreements will be prepared and approved for implementing the intergovernmental structure.

Products: Defined work and decision structure and related IGAs.

• **Community outreach:** Coordination activities will be undertaken to ensure that public and private parties in Oregon and Washington are informed about results and consulted with regard to any major decisions regarding the bridge replacement.

Products: Public meetings, information distribution, and public input into key decisions.

#### PHASE 2: FINAL DESIGN & PRE-CONSTRUCTION REQUIREMENTS

The approach for Phase 2 depends, in part, on whether the public model or the P3 model is selected in Phase 1. Depending on the selected project delivery option, this work may be led by the Port of Hood River and/or ODOT, other public entity, or by the private partner in a P3. In either case, Phase 2 focuses on finalizing all pre-requisites to start of construction. This includes completion of engineering and permitting, finalizing all legal agreements required to start construction, and securing all necessary funding commitments.

An overview of Phase 2 activities is described in the following sections for both public and P3 options.

# Phase 2: If a Public Project

If the preferred project delivery is as a public project, the Port or ODOT, would generally undertake the following:

- Engineering: Engineering studies will complete the design from the 30% level in Phase 1 to 100% completion if following a design-bid-build process or to levels appropriate to design-build, if applicable. To accomplish this, final engineering and right-of-way analysis must be undertaken, including roadway design, storm water collection and treatment design, wind analyses, and further geophysical studies. Bid/proposal packages will be prepared, as required. This includes assembling bid/proposal package documents, advertising, responding to bidder questions, evaluating bid/proposal, and recommending award.
- **Permitting:** Coast Guard permits, environmental permits, land use permits, and other clearances needed prior to the contractor being given notice to begin construction will be prepared and negotiated. It is expected that the contractor would obtain all building, trade, and erosion control permits required to construct the project
- **Finance:** A final finance plan will be prepared and agreed-upon. Investment-grade toll studies would be undertaken. Legislation, as may be necessary for the finance plan, will be sought. Federal and state grants as may be necessary for the finance plan will be sought. If applicable, application and negotiation of a TIFIA loans will be undertaken.

# Phase 2: If a Public/Private Parternship (P3)

If P3 is the preferred option, the private partner will be selected early in Phase 2. The same work described above for the Phase 2 public project will be undertaken, however, most work will be the responsibility of the private partner with oversight provided by the lead public agency(ies). The P3 agreements will describe the specific rights and obligations of the parties, and the public partners may retain responsibility for certain functions. The sections below highlight the key additional public functions under the P3 model.

- Seek & Select P3 Partner: An RFQ and/or RFP process will be undertaken to select a private partner. Based on the results of the RFI and other activities in Phase 1, the RFP and/or RFQ to select the P3 partner will be prepared and issued. An extensive process will be undertaken to evaluate the responses and select a potential private partner for negotiations of applicable agreements. If undertaken by ODOT, the process will follow the applicable statutes and rules under ORS 383 or ORS 367, as applicable. If undertaken by the Port, the Port would first enact a set of rules or procedures, likely mirroring those of ODOT (as may be tailored to the Port's specific circumstances), and those rules or procedures will be followed.
- **Negotiate P3 Agreement and Prepare Legal Documents:** Considerable effort will be required to prepare, negotiate, and execute the required legal documents regarding construction, operation, funding, and management of the replacement bridge, and the disposition of the existing bridge. Since at the beginning of Phase 2 there will still be significant uncertainties, it is highly likely that the P3 proposal, and therefore the applicable documents, will describe a two-step process for committing to actual construction. First, the private partner will be required to

perform certain tasks (in accordance with schedule) necessary to remove contingencies or conditions to "closing" the arrangement. Next, there would be a "closing" where the private party makes a fully enforceable commitment to construct the replacement bridge based on criteria and processes set forth in the legal documents.

- Oversee Performance: The lead public agency(ies) will oversee the performance of the private partner and ensuring the private partner is meeting its obligations under the P3 contracts. If required, the lead agency(ies) will be responsible for undertaking enforcement actions if the private party is non- compliant.
- **Finance/Legislation:** It is possible that the private party would be fully responsible for securing all necessary project funding. But it is also possible the arrangement may call for public agency support in securing Port, state, or federal grants. The public partners may also have some obligation to help secure legislation in Oregon and/or Washington as may be needed to implement the P3 agreements.

# PROJECT ORGANIZATION AND MANAGEMENT

The organization and decision-making structure to insure successful management of the activities described above depends on the project development phase and whether a public approach, public-private partnership (P3) approach, or both are pursued.

# PROJECT STEERING COMMITTEE (PSC)

The Project Steering Committee consists of the three primary "owners" of the Project given that the Port owns title to the existing bridge, and the bridge is part of both ODOT and WSDOT highway systems. The goal of the Steering Committee is to develop a collaborative approach between the three agencies to align their interests, roles, and responsibilities regarding the Project. Meetings will be limited to times when a significant discussion must occur and/or agreement must be reached. Conference calling will be used between meetings as appropriate.

Membership of the PSC:

- Port of Hood River Executive Director
- ODOT Region 1 Manager
- WSDOT SW Region Administrator

While each of the agencies would maintain their independent decision-making authority, prospects for the Project will benefit from collaboration among the agencies. Whether or not all three of the agencies are ultimately involved in funding or delivering the Project, all will benefit from having an agreed-upon plan — whether that plan is to seek a publicly-funded project, a P3, or to any active consideration of a replacement bridge. The specific actions of the Steering Committee differ somewhat depending on the phase of the Project and whether it is publicly-funded or P3. Key activities of the Project Steering Committee:

# **PSC Working Under a P3 Approach:**

The viability of a public-private partnership ("P3") to replace the bridge must be assessed given the possibility of limited public funding for the Project. While informal industry interest has been shown, little is known about the breadth of that interest, how a P3 may be structured, and any unique impacts that may be caused by P3. As described in Phase 1 above, the Steering Committee would oversee Port-issuance of a Request for Information ("RFI") to the P3 transportation community regarding the types of P3 arrangements that may be available for the Project, and the kind of terms that may be required. If P3 merits further consideration, the Steering Committee

would collaborate on Port-issuance of a RFQ/P would be issued to select a preferred P3 for negotiations, and a P3 agreement would be finalized.

Within this context, the Steering Committee would:

- Agree on the RFI, ensuring that it meets Project needs and needs of each of the agencies
- Discuss results of RFI and draw conclusions
- Determine a common position on whether further work on a P3 is meritorious
- If meritorious, the roles and responsibilities in further considering P3 options
- Agree on RFQ/P for a P3, ensure it meets Project needs the needs of each of the agencies
- Evaluate responses to RFQ/P, agree on preferred P3
- Monitor negotiations with preferred P3
- Evaluate draft agreement with P3, agree on executing

# **PSC Working Under Public Approach:**

If federal and/or state funding is available to match Port funding, environmental and engineering work will be undertaken to make the Project eligible for federal construction grants. These activities would proceed in parallel to further consideration to P3, if any. An FEIS/ROD would be needed even if the Project were fully privately funded, given the numerous federal permits and approvals that would be required. Also, this additional work would reduce risk for any future P3, allowing the public partners to reasonably negotiate more favorable terms for the public. Within this context, the Steering Committee would:

- Agree on roles and responsibilities of agencies for engineering and environmental studies
- Resolve significant engineering and environmental issues unresolved at technical level
- Determine common positions on the final Project scope, schedule, permitting, and funding issues

# TECHNICAL ADVISORY COMMITTEE (TAC)

This committee will be made up of technical staff from the three agencies and each local/regional jurisdiction with a regulatory or governmental approval in developing or constructing the Project. While there could be differences depending on whether the Project proceeds as a P3 or public-funded project, many members of the TAC will be involved in permitting or otherwise approving elements of the Project in either case. While a public-funded project remains an option, the TAC would work in conjunction with the Steering Committee. If a P3 is selected, the three agencies would determine if the TAC should still function under the Steering Committee, or if the P3 should make its own arrangement with these technical staff. The Port would retain a Project Manager to coordinate engineering and environmental work and staff the TAC.

Membership of the Technical Advisory Committee:

- Port of Hood River Project Manager
- ODOT Region 1 Planning Manager
- WSDOT SW Region Planning Manager
- RTC Transportation Section Supervisor
- U.S. Coast Guard Regulatory Representative
- U.S. Army Corps of Engineers Regulatory Representative
- City of Hood River Engineering Director
- White Salmon City Public Works Planner

- Hood River County Community Development Director
- Skamania County Public Works Director
- Klickitat County Public Works Director
- Engineering Firm Project Manager

The Technical Advisory Committee would:

- Provide technical advice on engineering and environmental matters.
- Assist in early resolution of permitting or other local/state issues.
- Provide regular reports on project activities to elected officials in each jurisdiction.

# POLICY ADVISORY COMMITTEE (PAC)

The PAC is comprised of local/regional governmental officials with a stake in the Project that are not on the Steering Committee, although Steering Committee members would be invited to participate. The PAC will also serve to keep the Steering Committee aware of the local needs so that the Project maximizes its benefit to the community. The PAC will meet at key milestones about 2-4 times per year.

Membership in the Policy Advisory Committee:

- Port of Hood River Commissioner
- SWRTC Executive Director
- Hood River City Councilor
- White Salmon City Councilor
- Hood River County Commissioner
- Skamania County Commissioner
- Klickitat County Commissioner
- Bingen City Councilor
- Hood River Region 1 ACT Representative(s)

The Policy Advisory Committee would:

- Keep abreast of project activities.
- Raise issues before they become stumbling blocks for the project.
- Provide political support for the Project.
- Advise on and assist with public and community outreach activities.

# CONCLUSION

The Hood River/White Salmon Interstate Bridge Replacement Project represents a significant challenge, but is necessary to:

- Respond to a critical threat to an important link in our interstate highway system,
- Mitigate a hazardous obstacle to inland navigation,
- Address barriers to project delivery and funding for major capital improvements not owned by the state,
- Encourage innovative funding models that utilize and leverage toll revenue, private investment, and/or state and federal grant monies
- Improve seismic resiliency in the Columbia River corridor
- Preserve and improve the economic vitality of the Mid-Columbia region

The bridge replacement project enjoys tremendous local support and commitment to developing practical funding partnerships with both states, the federal government, and potential public private partnerships. The Port of Hood River looks forward to working with the state, regional, and local partners to achieve these goals:

- Provide clear statutory authority for the Port to pursue the development and construction of a replacement bridge under either a public or public/private funding model. Current statutes clarify ODOT's authority to enter a public/private tollway partnership but are ambiguous in this regard for the Port.
- Provide funding for the Port to complete pre-development environmental and design work, making the construction project ready and eligible for available federal funding or an innovative public/private funding model.

# APPENDIX A: SCOPE OF WORK FINAL ENVIRONMENTAL IMPACT STATEMENT & PRELIMINARY ENGINEERING

# Task 1. Project Management and Coordination

1.1 Project Management and Quality Assurance

# Assumptions:

- Project duration will be 24 months
- Project invoices and progress reports will be prepared monthly
- Monthly design coordination meetings with PSC & TAC

#### Task 2. Environmental Evaluation

- 2.1 Update Discipline Reports
  - a. Soils and Geology
  - b. Fish
  - c. Wildlife
  - d. Vegetation
    - i. Conduct additional plant surveys for sensitive species, habitat, and invasives species
    - ii. Address project impacts on invasive species, including prevention and control of outbreaks
  - e. Wetlands
  - f. Waterways/Water Quality
  - g. Land Use
    - i. Coordinate with Columbia Gorge Commission on changes to policies that address project compliance with Columbia River Gorge National Scenic Area Management
    - ` plan
    - ii. Reevaluate project consistency with the Port of Hood River Marina master plan and the river walk conceptual plan
  - h. Social and Economic Elements
  - i. Relocations
  - j. Visual Resources
  - k. Noise
  - I. Air Quality
  - m. Energy
  - n. Hazardous Materials

Note: Revisions to discipline reports assume the preferred alternative is consistent with the preferred alternative identified in the project Type, Size and Location (TS&L) Study

- 2.2 Final Environmental Impact Statement (FEIS)
  - a. Prepare FEIS document:
    - i. Updated technical information from revised discipline reports
    - ii. Changes as needed to respond to comments received on the Draft EIS (DEIS)
    - iii. Secondary and cumulative impacts discussion
      - 1. Air quality
      - 2. Noise
      - 3. Hazardous materials transport

- 4. Induced growth
- iv. Updated traffic modeling results
- v. The Final EIS shall provide evidence and detailed explanation on why all alternatives that preserved the Hood River Bridge were eliminated from further study in the EIS (e.g., bridge structural evaluations, barge accidents)
- b. Briefing WSDOT, ODOT and FHWA and obtain signatures
- c. Assemble Record of Comments, including responses to each comment received on the DEIS
- d. Prepare Record of Decision (ROD), which shall include the following elements
- e. Prepare legal ads announcing availability of FEIS and ROD; prepare statute of limitations
- f. Update Administrative Record through the signature of the ROD

# 2.3 Mitigation Plan

a. Prepare detailed mitigation plan that addresses project impacts to shoreline habitat, instream habitats, wetlands, and water quality

#### 2.4 Section 106 of the National Historic Preservation Act

- a. Determine the Area of Potential Effects (APE)
- b. Conduct archaeological surveys in areas that will have ground disturbance within the preferred alternative footprint and all staging areas including underwater exploration
- c. Make a finding of effect for any historic properties and archaeological resources that are eligible for listing on the National Register of Historic Places
- d. If any resources are found to be adversely affected, develop mitigation measures and prepare a Memorandum of Agreement (MOA)
- e. Coordinate with Oregon and Washington State Historic Preservation Officers, Port of Hood River, and other local historic preservation groups

### Assumptions:

- Hood River Bridge is eligible for listing on the National Register of Historic Places
- APE will be reviewed by Washington Department of Archaeology and History Preservation (DAHP) and the Oregon State Historic Preservation Officer (SHPO) and revised up to two (2) times to address comments
- Archaeological surveys will include a pedestrian survey augmented by shovel probes due to poor surface visibility, vegetation, and overburden
- A permit for surveying public lands will be required from SHPO and possibly from
- An excavation permit would be required prior to additional field evaluation to make a finding of effect
- MOA will be reviewed by Washington Department of Archaeology and History Preservation (DAHP) and the Oregon State Historic Preservation Officer (SHPO)
- Historic American Engineering Record (HAER) documentation of the Hood River Bridge would be reviewed by DAHP, SHPO, and the National Park Service one (1) time.

#### 2.5 Tribal Coordination

- a. Coordinate and consult with Yakama Nation, Confederated Tribes of the Warm Springs, Confederated Tribes of the Umatilla, and Nez Perce
- b. Coordinate with tribes on potential impacts to treaty fishing sites and Section 106 resources
- c. Disclose construction impacts and operational impacts on treaty access fishing sites

d. Review compliance with treaty rights in the land use plan consistency section

#### 2.6 Biological Assessment

- a. Prepare a Biological Assessment (BA)
- b. Coordinate and consult with NOAA Fisheries and USFWS
- c. Address the NOAA Fisheries Stormwater Guidance
- d. Determine effect of project on applicable ESA species
- e. Develop acceptable conceptual mitigation measures and construction BMPs

#### Assumptions:

Mitigation will be required to compensate for aquatic project impacts

# 2.7 Section 4(f) of the US Department of Transportation Act

- a. Prepare Final Section 4(f) Evaluation to include:
  - i. Updated technical information from revised discipline reports if applicable
  - ii. Incorporate changes as needed to respond to comments received on the Draft EIS and Draft Section 4(f) Evaluation
- b. Coordinate with State Historic Preservation Offices, Port, and local historic preservation groups

#### Assumptions:

- Hood River Bridge is applicable to Section 4(f); no other resources need to be included in the Section 4(f) Evaluation
- Programmatic Section 4(f) Evaluation can be used for the Hood River Bridge

#### 2.8 Environmental Streamlining

- a. Prepare an EIS Coordination Plan
- b. Concurrence on criteria for selecting the preferred alternative
- c. Concurrence on selection of a preferred alternative

# Task 3. Preliminary Engineering

#### 3.1 Validation

- a. Validate design requirements listed in the Final TS&L Study
- b. Update cost estimate to support financing and grant applications
- c. Achieve an updated design acceptance by ODOT, WSDOT, and other key agencies
- d. Update the design to a level to support the FEIS and biological assessment, if needed

# 3.2 Drainage

- a. Validate bridge deck drainage capacity calculations and potential runoff, including snow removal
- b. Determine the location, preliminary sizing and specs for storm water conveyance and treatment facilities
- c. Specify how proposed treated discharges into the Columbia River would comply with water quality standards and how accidental spills would be managed

#### Assumptions:

- There will be two (2) stormwater treatment facilities
- Stormwater conveyance and treatment facility design will be based on the more

- restrictive of the Washington and Oregon stormwater design criteria will be used
- A separate draft/final Stormwater Hydraulics/Management Report will be included in the 60% (Draft Stormwater Report) and 90% (Final Stormwater Report) phases of final design
- Coordination with WSDOT & ODOT will occur regarding management of accidental spills

#### 3.3 Right-of-Way

- Determine specific right-of-way acquisition of private property and/or transfer of public ownership of property
- b. Prepare draft ROW exhibits

#### 3.4 ODOT Coordination

a. Coordinate with ODOT should occur regarding the connection of bridge approach road and nearby 1-84 ramps

#### 3.5 Geotechnical Studies

- a. Develop a geotechnical work plan to support the preliminary engineering effort
- b. Prepare exhibits that will accompany in-water drilling permit applications and right-of-entry permit applications, and traffic control plans
- c. Conduct geotechnical subsurface exploration, including geotechnical borings at each pier location and at each abutment
- d. Execute laboratory testing to determine geotechnical properties of soil and rock samples
- e. Perform geotechnical analyses to confirm foundation type(s) and size(s) at each pier
- f. Perform geotechnical analyses to determine geometry and foundation approach fills
- g. Performed geotechnical analyses to quantify the seismic effects at piers and approaches and develop mitigation concepts
- i. Draft geotechnical report
- j. Review with ODOT and WSDOT Engineers
- k. Issue final geotechnical report

### Assumptions:

- Work will be governed jointly by Geotechnical Design Manuals of ODOT and WSDOT;
   where conflicts exist, the more conservative design manual will take precedence
- In-water drilling permit applications will submitted by others
- Preliminary traffic control plans developed by the engineer
- 3.6 Wind load analysis to support finalization of TS&L
  - a. Determine impacts of the bridge on windsurfing and kiteboarding
  - b. Develop wind model based on wind rose readings

# 3.7 Utility coordination

- a. Establish a utility coordination matrix by identifying utilities and contact names
  - i. Request utility as-built information
  - ii. Review available information about existing utilities, prior rights of utility owners
- b. Potential Utility Conflict Technical Memo and Utility Concurrence Letters: provide a technical memorandum to identify potential conflicts (type of utility, size, and location (horizontal and vertical)) based on 30% design package
- 3.8 Validation of design requirements listed in the TS&L Study
  - a. Determine the bridge and structural member size applicability based on design code provisions and industry input

## Assumptions:

• Design of foundation piers and other proposed in-water structures will remain substantially similar to the TS&L Study-- additional hydraulic and scour analysis is needed

### Task 4. Transportation

- 4.1 Update traffic model
- 4.2 Re-examine previously used traffic volume growth factors and recalculate if necessary
- 4.3 Prepare traffic forecasts for analysis of potential tolling policies and other financing strategies

#### Assumptions:

- The design year would be twenty years beyond the expected year of opening &
- T-design intersection shown in TS&L Study would move forward as the preferred alternative
- Synchro/SimTraffic software would be used to perform traffic analysis to determine delay, LOS and queue lengths

#### Task 5. Public Involvement

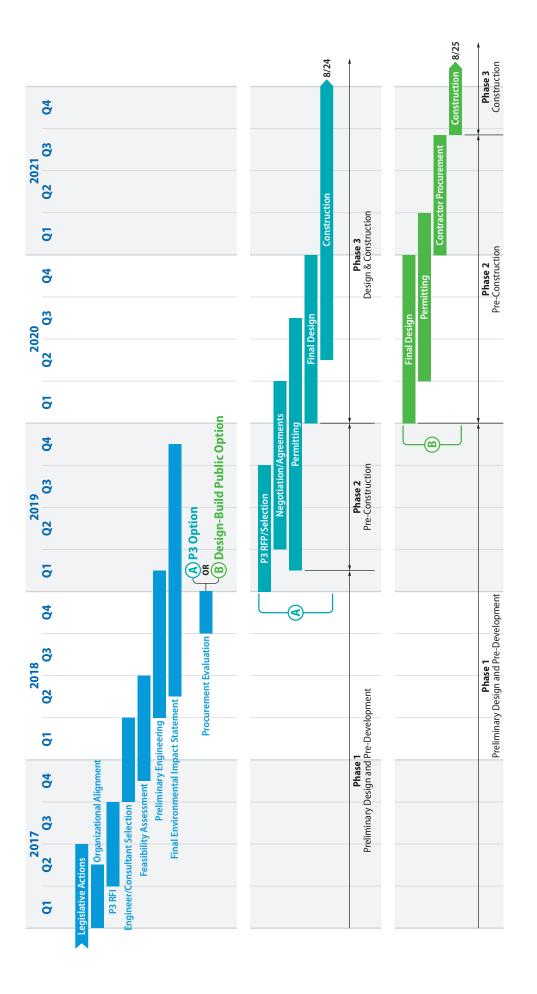
- a. Coordinate with PSC, TAC:
  - i. Participate in meetings with the three committees to review, comment and advise on bridge design issues, results of additional environmental analysis, and other public outreach activities
  - ii. Publicize meetings via media releases
  - iii. Summarize meeting results
- b. Prepare newsletters or fact sheets about the project; distribute to interested parties and via community gathering places, including public offices and local businesses; newsletters would describe the status of the project
- c. Conduct public workshops or open houses to review the preliminary design and environmental impacts associated with the preferred alternative
  - i. Publicize meetings via media releases, public notices, meeting flyers, newsletter/fact sheets, direct e-mail notices and advisory committee member assistance (assuming an advisory committee is used)
  - ii. Prepare for and conduct meetings, including assisting with meeting materials, logistics and facilitation
  - iii. Summarize meeting results
- d. Prepare additional media releases, as needed to publicize project results or activities
- e. Assist with presentations to local groups, if requested
- f. Summarize public involvement activities for incorporation in the FEIS

# **CONCEPT SCHEDULE & COST ESTIMATE**

The graphical chart on the next page provides a potential complete project schedule from current 2017 activities, through both potential pathways to construction; either publicly funded Design/Build or P3.

Following that is a detailed line-item budget for the pre-development tasks proposed in this phase. The work reflected in this budget would complete the Final EIS, address Right-of-Way needs, and provide preliminary engineering and design to 10%.

# Concept Schedule: Hood River Bridge Replacement Project





Task Estimated Cost

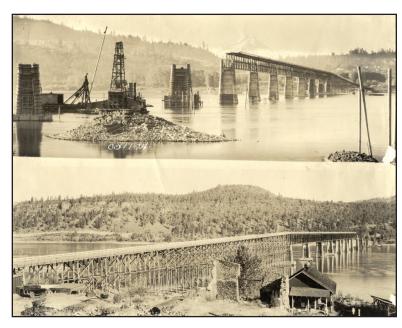
Administrative & Legal Expenses			
Port Project Management Staff & Expenses		\$	80,000
· Contracted Project Management Expenses			200,000
· Project Legal		\$ \$ \$ \$ \$ \$ \$ \$ \$	45,000
· Traffic/Toll Revenue Estimates		\$	125,000
· Regulatory/permit scoping		\$	75,000
· Evaluate project delivery alternatives		\$	85,000
· Financial modeling		\$	60,000
· Public/Private RFI		\$	185,000
· Feasibility Report		\$	85,000
	Subtotal	\$	940,000
Land, Structures, ROW, Appraisals, etc.			
· ROW Scoping/Appraisals		\$	40,000
· ROW Legal		\$	60,000
	Subtotal	\$	100,000
Other Architectural & Engineering Fees			
· Supplemental Draft EIS		\$	50,000
· Update TS&L		\$	170,000
o Bridge Design			
o Topo Survey			
o Hydraulic Study			
o River Users Survey			
· Schematic Roadway design		\$	150,000
· Geotechnical investigation		\$ \$ \$	530,000
· Preliminary cost estimate		\$	50,000
· Wind analysis		\$	180,000
· Final EIS			
<ul> <li>Archaeological Investigation</li> </ul>		\$	290,000
o Biological Assessment		\$	155,000
o Section 4(f) Consultation		\$	25,000
o Public Outrach & Involvement		\$	85,000
o Final EIS Documentation/Report		\$ \$ \$ <b>\$</b>	1,030,000
	Subtotal	\$	2,715,000
Architectural & Engineering Documents			202.000
10% Engineering Outline Specs		\$ <b>\$</b>	300,000
		\$	300,000
	TOTAL	\$	4,055,000
Contingency (20%)		\$	811,000
Grand Total		\$	4,866,000

# APPENDIX B: HISTORICAL CONTEXT

The Hood River/White Salmon Interstate Bridge provides interstate crossings over the Columbia River connecting the Oregon community of Hood River with the cities of Bingen and White Salmon in Washington. A National Highway System ("NHS") facility, the Bridge is recognized as a Critical Rural Freight Corridor by the Washington Department of Transportation. Annually, more than 4 million vehicles cross the bridge, with an average 3.5% annual increase.

The Bridge has been owned and operated by the Port of Hood River, an Oregon municipality, since December 12, 1950. The nearly mile-long was built by the Oregon-Washington Bridge Company ("Company") and opened

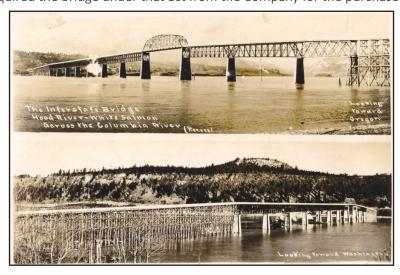
to the public on December 9, 1924. In 1937, the U.S. Secretary of War notified the Company that the fixed channel span would be required to be converted to a lift span to accommodate the completion of the Bonneville Dam and subsequent raised water level. The Bonneville Dam was completed in 1938 and the bridge was virtually rebuilt at this time. The seven 208' deck spans on the Oregon side and the two 208' deck spans on the Washington side were raised to their present elevation by raising the tops of the piers. The lift span and lift towers were added. Three additional spans were added on the south side and two shore spans were constructed to permit lowering the road grade as it approached the Oregon shore. Six deck spans were added on the north side as well as a tollbooth.



In 1949, the Oregon legislature enacted a law permitting the acquisition or construction of interstate toll bridges by certain municipalities including ports. This law was upheld by the Oregon Supreme Court in June of 1950. On December 12, 1950, the Port of Hood River acquired the bridge under that act from the Company for the purchase

price of \$800,000. Sale of the bridge was offered to each state, county, city, and port on each side of the river and all parties declined except the Port of Hood River.

In 1951 the Port invested \$750,000 to modify and improve the bridge, replacing the wood decking with steel beams and steel grate decking, relocation of the tollbooth to the Oregon side, and other improvements. The toll rate at this time was 50 cents for automobiles and for trucks 50 cents per axle. Between 1952 and 1967 natural gas and telephone utilities were installed across the bridge.



Between 1968 and 1979 extensive painting,

lighting, and electrical upgrades were made. The 1980's brought pier cap repairs, deck grating and repainting projects. In the 90's a major bridge engineering study was completed and recommendations were made for projects to extend the useful life of the Bridge with a 1994-estimated cost of \$12-14 million. In 1994, the toll was increased by 25¢ to 75¢ per single-axle vehicle, and discount books were offered to frequent users. The increased revenue was dedicated to the Port's Bridge Repair and Replacement Fund, to be used solely for Bridge maintenance, repair and

upgrades. A Phase One Seismic Retrofit was completed in 1996 to strengthen the Bridge, at a cost of \$350,000. In 1997, the Washington approach was widened at a cost of \$1.6 million. In 1998 the estimated cost of replacing the Bridge was \$175,000,000. The \$2.1 million lift span upgrade project began in 1999.

A significant mechanical and lift span improvement project was completed in 2000. In 2001, an \$8 million redecking and renovation began with a utility relocation project in 2002. The actual re-decking began in January 2004 and was completed in 2005. A \$4 million improvement project for the Toll Plaza began in 2006, establishing the first electronic tolling system in Oregon. The new BreezeBy electronic toll collection (ETC) system utilizes prepaid funds and transponders with that fit onto vehicles to facilitate faster commutes across the bridge.

In 2011, a 30-year operations plan was developed for the bridge outlining prospective project costs for improvements and maintenance to maintain the bridge's safety and useful life. On January 1, 2012, the bridge toll was raised to \$1 for single-axle vehicles, with discounted crossings for BreezeBy customers. The \$2.75 million Lower Chord Rehabilitation project was completed in 2012 evaluating, cleaning, and painting critical connections, as were repairs to the lift span. In February of 2012, a bi-state SR-35 Columbia River Crossing Study was completed, estimating the cost of a new bridge at around \$290 million, with no funding sources identified. The study determined that tolls from projected traffic patterns could provide 30% of funds needed for a replacement bridge.

Major metal deck welding work occurred from 2013-2015 to repair the steel decking on the bridge. In 2015, the Port began a major upgrade to the Bridge's electronic toll collection (ETC) system that will allow real-time accounting processes as well as access to a customer web portal for BreezeBy customers. The project's completion is anticipated in 2017. The Hood River Interstate Bridge continues to be a major source of revenue for the Port, however, the aging structure has undergone a long, expensive list of capital improvement projects over the past couple decades and will continue to require dedicated funds for improvements and maintenance to keep the structure sound over the next 20 to 30 years.

The Port of Hood River has invested over \$24 million in capital improvements and repairs to keep the existing bridge safe and operational over the last 20 years. The current 30-Year Work Plan anticipates an additional \$51 million in capital repairs, upgrades, and maintenance over the next 15 years. Parts of the steel truss bridge structure are more than 92 years old, and much of the rest is over 80 – simply put, the Bridge is nearing the end of its serviceable life. Although significant steps toward replacement have been accomplished, it is imperative that efforts continue in earnest so that construction of a new, replacement bridge can occur as soon as possible. The Bridge is a toll bridge and toll revenues are used for ongoing capital improvements, needed repairs, and maintenance; but toll revenues cannot cover most of the cost of building a replacement bridge – federal or state grants or private equity will be needed to fund reconstruction.

