
IBR NEXT STEPS IN BRIDGE PERMIT PROCESS

To reach the construction phase, the Interstate Bridge Replacement program is required to successfully receive various permits. One of the required permits is the United States Coast Guard (USCG) bridge permit, which includes river navigation clearance approval, for the replacement bridge over the Columbia River. While the Coast Guard is specifically charged with addressing the needs of navigation, the IBR program has a responsibility to identify a multimodal solution that not only addresses the needs of navigation but those of all program area users including air, transit, freight, vehicle, and active transportation. The IBR program is committed to continuing to work with the Coast Guard to identify a bridge replacement solution with a navigational clearance that addresses the reasonable needs of each of these users for decades into the future.

One of the initial steps in the Coast Guard bridge permit process was the program's submission of the Navigation Impact Report to the Coast Guard in late 2021 which included detailed river user information based on a recently completed river user survey. The report identified impacts to navigation based on a proposed fixed bridge height of 116 feet. This height was proposed because past engineering work confirmed that the proposed height of 116 feet was feasible for bridge design and multimodal connections approaching the bridge. To inform this report, the IBR program considered land use regulations and recent changes in compatible land uses, conducted extensive outreach to river users across approximately 6 months, and evaluated bridge lift and other data sources to determine the past, present and future needs of navigation through the I-5 bridge area. As part of this process, the program has already begun early engagement with users that would potentially be impacted by the 116-foot clearance proposed by the program. Many of the businesses with potential impacts are successful and profitable with a variety of contracts and business plans that do not rely on the current level of clearance. The program is committed to working with these businesses on a variety of ways to avoid, minimize, or mitigate impacts to their current and future contracts.

The program's Navigation Impact Report identified that a majority of vessels using the river would not be restricted by a fixed bridge height of 116 feet. A single vessel (barge-based construction equipment) and 3 users (metal fabricators) with potential future shipments were the only existing river users identified that could be impacted by a bridge height of 116 feet based on their current business plans. The Navigation Impact Report also evaluated waterway conditions, marine infrastructure, land uses and land use plans for areas upriver from the bridge to determine the potential for changes that could affect waterway use and lead to additional or changed navigation. The analysis, similar to past work, found limited facilities and low potential for future growth of maritime facilities that could serve vessels different than today.

In early 2022, the Coast Guard began a public notification process across one month, that resulted in 13 responses to their request for comment on the proposed navigation clearance. This information was used to issue its navigation clearance determination (PNCD), which is attached to this memo. The PNCD identified a clearance of at least 178 feet. This height is consistent with the existing bridge and represents the Coast Guards' initial position of maintaining freedom of navigation on the Columbia River at the Interstate Bridge. As the Coast Guard notes, "this preliminary determination does not

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constitute an approval or final agency determination. A final agency determination will be made in accordance with all applicable regulations after IBR submits a complete bridge permit application.” As new information becomes available, the navigation clearance identified may change.

In the next few months, the program will complete a written assessment to analyze the tradeoffs of a higher navigation clearance. The IBR program respects the Coast Guard’s focus on preserving navigation for the nation. While the program’s hope is to avoid a lift span bridge option, the program will continue to closely coordinate with the Coast Guard to discuss the trade-offs and mitigation to accommodate river navigation, highway, and air needs. A similar assessment was completed by the program regarding the feasibility of constructing a tunnel under the river, which identified multiple challenges including multimodal connections to nearby highways and ramps, costs, safety of multimodal travelers in the tunnel, and cultural and environmental impacts. If new information from this assessment results in additional context and considerations not accounted for previously, the navigation clearance that is identified may change.

Past work completed by the program identified a number of potential impacts that would occur with either a movable span across the Columbia River or a bridge that has significantly higher clearance. The needs and uses of the Columbia River and I-5 are unique compared to lift spans across the country on freeways with significantly less river traffic, more narrow river navigation channels, and vessels that are mostly recreational rather than for business purposes, so this assessment will consider the context of this region and its users. A higher clearance level would allow for less maritime restrictions on the Columbia River but could result in a number of challenges that would need to be addressed with any replacement solution. Some of these include airspace clearance restrictions above the bridge, bridge slope requirements for freight, transit and active transportation, and the need to connect into local interchanges, multiuse paths, and a dedicated transit lane on either side of the bridge. Other challenges with a movable span include the uniqueness of constructing such a large movable span (when accounting for the needed river channel width), and the impacts of bridge lifts on an interstate highway of local, regional, national, and international significance. The assessment will also include some initial estimates on additional costs associated with constructing, and operating and maintaining a lift span. Generally, we know that a movable span would come with increased construction costs when compared to a fixed span, increased long-term maintenance and operations costs to staff the bridge and maintain the mechanical parts of a lift, and safety and congestion impacts to highway traffic and transit associated with bridge lifts.

The program does not anticipate receiving a bridge permit until the 2025/2026 timeframe, so work over the next few years will address program trade-offs to balance regional needs. The program’s hope is that the upcoming movable span assessment will address current issues, in advance of the submission of the draft environmental documentation. The next phase of the program includes development of the Supplemental Draft Environmental Impact Statement, which will identify impacts and benefits associated with all program improvements. Opportunities to avoid, minimize, or mitigate adverse impacts, such as potential modifications to vessel equipment, will be thoroughly investigated, as needed in the environmental and permitting process.

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Dear Sir:

This letter serves to document the Coast Guard's Preliminary Navigation Clearance Determination (PNCD) for the Interstate Bridge Replacement (IBR) Program, between Portland, OR and Vancouver, WA, otherwise known as the Portland to Vancouver I-5 twin bridges. At the request of the Coast Guard, as prescribed in our October 13, 2021, letter to the IBR, "Subject: Interstate Bridge Replacement Program (IBR) Coast Guard Bridge Permitting Process," the Memorandum of Understanding (MOU) between Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA) dated January 14, 2014, and the U.S. Coast Guard Bridge Permit Application Guide (BPAG) published July 2016, IBR prepared a Navigation Impact Report (NIR) in cooperation with FHWA and FTA and delivered the final draft to the Coast Guard in November 2021. The Coast Guard reviewed and conducted further validation of the NIR by publishing U.S. Coast Guard Navigation Only Public Notice (NOPN) 02-22, dated March 23, 2022, seeking comments exclusively related to navigation from maritime stakeholders. The primary goal of the NOPN was to receive comments regarding current or future vertical navigation clearance (VNC) requirements greater than 116 feet. The comment period ended on April 25, 2022, and the Coast Guard received 13 comments. Both the NIR and public comments informed our PNCD.

Summary Conclusion for Preliminary Navigation Clearance Requirements

Note: All vertical clearances are in Columbia River Datum (CRD).

Since 1899, Congress has directed the Coast Guard, via various statutes, to prevent unreasonable navigation impairments on all U.S. navigable waters. The public right of navigation is paramount to land transportation on, under and over U.S. navigable waters. Additionally, U.S. navigable waterways serves as the foundation of the U.S. Maritime Transportation System (MTS). Therefore, bridges across navigable waters of the U.S. are obstructions to navigation and are permitted only when they serve the needs of land transportation without impairing the reasonable needs of navigation.

As documented in your NIR and verified via the NOPN, the Columbia River (specifically the section of the Columbia River immediately east of the existing I-5 twin bridges) has and needs to

continue to provide VNC equal or greater than the existing I-5 twin bridges of 178 feet. Our PNCD concluded that the current proposed bridge with 116 feet VNC, as depicted in the NOPN, would create an unreasonable obstruction to navigation for vessels with a VNC greater than 116 feet and in fact would completely obstruct navigation for such vessels for the service life of the bridge which is approximately 100 years or longer.

The VNC and horizontal navigation clearance (HNC) documented below do not constitute U.S. Coast Guard's final approval, but prescribe the VNC and HNC that would have a high likelihood of obtaining a favorable permit decision. The final U.S. Coast Guard determination will be made in accordance with the applicable regulations after the IBR submits a complete U.S. Coast Guard Bridge Permit Application.

1. **Minimum vertical navigation clearance requirement (VNCR) of any proposed new bridge.**
 - a. Any proposed new bridge would need to meet or exceed the existing VNC of the current I-5 twin bridges, 178 feet, and would preferably have unlimited VNC over the U.S. Army Corps of Engineers (ACOE) approved main navigation channel/project. Any side channels would require vertical clearances equal to or greater than 72 feet.
2. **Minimum horizontal navigation clearance requirement (HNCR) of any proposed new bridge**
 - a. Any proposed bridge would have a HNCR greater than or equal to that of the current or future permitted USACE federal navigation channel projects.
 - b. ACOE may have additional requirements.

Factors that informed our conclusion on VNC:

1. **Present Governing Structure.** Generally, the Coast Guard does not approve bridge proposals with vertical navigation clearances below the “present governing structure” when the existing VNC has been and is currently needed unless there is a compelling navigational reason to do so. The existing I-5 twin bridges are the “governing structure” on the Columbia River west of the Glenn Jackson I-205 Bridge. They are the lowest navigational obstruction (bridge or overhead cable) between the I-205 Bridge and west to the confluence of the Pacific Ocean and the Columbia River. Vessels with a VNCR of up to 178 feet have been able to navigate upriver from the Pacific Ocean since 1917, including past the first obstruction at the Astoria-Megler Bridge (with a vertical clearance of 193 feet). The next four vertical clearance obstructions after the Astoria-Megler Bridge are between river miles 40 and 104 (with clearances ranging from 187 feet to 220 feet). A VNC of less than 178 feet would, for the first time in a century, decrease the present governing structure VNC by as much as 35% (reducing 178 feet to 116 feet). The next upriver VNC obstruction past the current governing structure is the Glenn Jackson I-205 Bridge approximately 6.75 miles upriver with a VNC of 136 feet to 144 feet.
2. **Waterway Characteristics.** Your NIR clearly documents that the existing waterway characteristics (natural and manmade) east of the existing I-5 twin bridges have

historically supported, currently support, and are capable of continuing to support international ocean-going navigation along the MTS for vessels/cargos with VNCR of up to 178 feet. Examples of the subject waterway being able to support vessels requiring up to 178 feet (with an airgap of 5-10 feet); Greenberry Industrial – 136 feet , Vigor – 130 feet; JT Marine – 131 feet; Thompson Metal Fabrication (TMF) - 178 feet. Additionally, as vessels and their cargos are trending larger, it is reasonable to believe that the waterway east of the existing I-5 twin bridges could be improved (additional dredging) to support even larger vessels (*See*: Columbia Business Center (CBC) tenant public comment). Regional waterway characteristics are such that there are no alternate routes for vessels to transit from the Pacific Ocean upriver past the current I-5 twin bridges. In contrast, there are numerous alternate routes past the current I-5 twin bridges for terrestrial transportation.

3. Emergency Response. In the event of a national security event (manmade, natural disaster, or protracted conflict), federal government vessels from the U.S. Navy, U.S. Coast Guard, and U.S. Maritime Administration may be deployed in support of the Captain of the Port Maritime Transportation System Recovery Unit (MTSRU) or other such contingency requirements. The waterway and maritime infrastructure east of the I-5 twin bridges is uniquely equipped to stage maritime support for port recovery efforts with immediate access to rail, highway, heavy marine/terrestrial fabrication and repair. The Portland International Airport is located east of the I-5 twin bridges and uses a portion of the Columbia River at Lemon Island as a pre-determined ditch site for aircraft. The ditch site is less than one nautical mile away from the I-5 twin bridges. (*Ref* USCG Marine Safety Unit Portland Mass Rescue Operation Plan) If an aircraft ditches in the Columbia River, heavy lift cranes and barges would need to transit the Columbia River east of the I-5 twin bridges as part of the recovery process necessitating a VNC greater than 116 feet. Furthermore, during a protracted conflict the waterway east of the existing I-5 twin bridges historically was used to build naval ships, WWII Kaiser Shipyard, now known as Columbia River Business Center (CBC), and could support ship building once again with little improvement. Currently, National Security assets from Military Sealift Command (MSC) Hospital Ships USNS Mercy, T-AKE and T-AO (dry cargo and tanker) routinely transit from the Pacific Ocean, up the Columbia River and turn south on the Willamette/Columbia confluence to enter into the Vigor Shipyard for service. This is within five miles of the subject bridge. The USNS Mercy has VNCR of 135 feet. (*See* Military Sealift Command Comment) In addition to restricting the navigation of USNS ship, like the USNS Mercy, the proposed bridge would prevent other Department of Defense assets including salvage and diving from mooring upstream (east) of the I-5 twin bridges during a natural disaster response which could strain the MTS due to limited anchorages/berths in the area. (*See* USCG Marine Safety Unit Portland) Additionally, Vigor Shipyard now owns marine service facilities near the CBC and supports commercial and government projects that require the subject waterway and current VNC to transport their products including: Folsom Spillway for Folsom Dam, launch towers for NASA, and wheel gates for a dam on the Ohio River.
4. Commercial Navigation Trends. Large commercial ships have historically called on the ports of Portland and Vancouver and there is a global trend for vessels to get larger to increase efficiencies in the transportation system. A recent example of these larger vessels transiting to the Portland/Vancouver area is the MV “Navios Unite,” a Post-Panamax Vessel that transited to Portland in March of 2022 with a VNC of

approximately 166 feet. Another example is the cruise ship, Caribbean Princess that transited to Portland in the spring of 2022 with a VNC near 183 feet, clearing the Astoria Megler Bridge by only seven feet. The larger vessel trend is expected to continue well into the foreseeable future. As these trends are expected to continue into the future and marine fabrication/service facilities east of the I-5 Bridge can be expected to provide services to larger vessels and fabrication of larger products. As an example, JT Marine recently invested in a new drydock that is the largest in their fleet and will allow the company to service larger tugs with higher wheelhouses. Restricting the height to 116 feet will render this growth plan inoperable. The purchase of this drydock is part of JT Marine Inc.'s strategic growth plan outlined below:

We are looking to the future and are positioning our business to meet the repair / construction needs of a marine community that is evolving. Many of the vessels that we are anticipating adding to our book of business are ATB tugs and their barges. This particular type of vessel requires an extremely high wheelhouse as it notches into its barge and needs to have clear, unobstructed view of their tow, for safety. These vessels can in some instances exceed 130'. As we see the Port of Portland and their deep draft abilities increase, we also see these larger vessels now calling on this area. JT Marine Inc. has recently taken the appropriate steps with the Washington State DNR to request an outer harbor line relocation to aid in our ability to grow and continue to serve the marine community and these larger vessels. (See Public Comment from JT Marine).

5. Unique Maritime Manufacturing/Service Facilities. Within the service-life of the existing bridge it is reasonable to believe that larger vessels and cargos would need to navigate through the I-5 twin bridges. The main maritime facilities east of the existing bridge are uniquely suited to support larger vessels with greater than 116 feet VNC. CBC's unique capability over the past 80 years is the capacity to manufacture heavy, over-sized fabricated structures to be shipped on the MTS. In recent years, CBC supported national energy projects and is poised to support green energy and national infrastructure projects in the future. In addition to an increase in vessel size, modularization of large fabricated structures is increasing in demand and relies on minimization of navigation obstructions along the MTS. Modular fabrication includes, but is not limited to; petroleum rigs, ocean going wind farms, bridge components, and space components. This portion of the river has been used, and will continue to be used, to support interstate and foreign maritime based commerce. To be competitive in the global market, these maritime industries are dependent on maintaining the current (since 1917) VNC. These facilities have provided, and continue to provide, thousands of family/living wage jobs and represent hundreds of millions of dollars of commerce for the region. Below is an excerpt from a public comment received from the owners of the Columbia Business Center:

Columbia Business Center is a maritime transportation system stakeholder, as the primary facility upstream of the Interstate Bridge Replacement project that has utilized and relied on the existing 178' vertical navigation clearance for 80 years. If the Interstate Bridge Replacement vertical navigation clearance were lowered to 116 feet it would permanently, materially adversely impact the viability of Columbia Business Center for existing and future uses, in particular, heavy manufacturing in multiple existing and future industries related to national security, climate change,

energy and critical regional and national infrastructure. The negative impacts to the local and regional economy would be substantial, as evidenced by recent lease extension negotiations in which some of our tenants required lease termination rights if the bridge vertical navigation clearance was materially reduced.

Columbia Business Center ("CBC") is one of the largest and most unique, privately owned industrial facilities on the West Coast, with over 220 acres of waterfront property housing two million square feet of outside storage/laydown/fabrication space, rail services, barge/water access and 2.4 million square feet of building space in 27 buildings that are home to more than 100 tenants. With an ideal location along the Columbia River, CBC's reputation as a vital business center for manufacturing was established in early 1942, when the Kaiser shipyard launched the first of the more than 140 ships constructed for the United States Navy during World War II from what is now CBC's facility. At the peak of operations over 38,000 people were employed here, effectively tripling the population of Vancouver, which is why it is still affectionately referred to locally as "the Kaiser Shipyard". Blending vintage buildings with new is part of the unique character of Columbia Business Center, enabling it to suit a diverse range of manufacturing businesses from heavy manufacturers and other related and supporting enterprises... .

The same reasons that Columbia Business Center's location was chosen for Kaiser Shipyard's heavy manufacturing facility make it an unmatched and irreplaceable facility for multiple categories of existing and future, large scale, high value projects. The versatility and scale of CBC is unmatched on the West Coast as many high-bay, specialized buildings are rail-served by a BNSF main-line and larger projects can be fabricated in specialized buildings and expansive outdoor laydown/fabrication space and then loaded out on the Columbia River by way of the active barge slip to local, regional, and international destinations. CBC is strategically located on the Columbia River waterway connected to the Pacific Ocean, off Highway 14 and minutes away from both the 1-5 and 1-205 freeways, with shopping, restaurants, walking trails and many other amenities at Columbia Business Center's doorstep. CBC's dynamic history, location and facilities contribute to its vibrant tenant base centered around heavy industry and a high occupancy rate.

Multimodal Transportation Columbia River access facilitates the movement of products which are too large to truck or ship by rail. On-site barge access accommodates river and ocean-going vessels up to 400 feet in length, and with air drafts up to 178 feet tall. Outside storage capacity near the barge slips allows for unprecedented scale outdoor fabrication/assembly, staging and storage. CBC's barge facilities are private and do-it-yourself in nature, eliminating red tape and outside controls and restrictions. CBC has accommodated construction of naval warships, yachts, oil rigs, bridge and dam components, and mass transit infrastructure. Dating back to its origins as a Kaiser shipyard and continuing to this day, the facilities at CBC allowed for prefabrication and special construction methods to efficiently produce products key to US national security and infrastructure. Whether the first occupant, Kaiser Shipyards; current tenants such as Green berry Industrial, JT Marine, Thompson Metal Fab, or Vigor Industrial; or future tenants, it has always been the case that the vertical navigation clearance requirements of 178 feet under

*the Interstate 5 bridge have been critical to deliver products to and from markets.
CBC PN Comment.*

Factors that informed our conclusion on HNC: At this point in time, without a USACE-approved 408 permit authorizing permanent changes to the existing “Federal Project,” the Coast Guard cannot make a final determination on a required HNC. At a minimum, the Coast Guard anticipates any future structure needing to provide greater than or equal to that of the current or future permitted USACE federal navigation channel projects. However, the Coast Guard has numerous concerns about realigning/designating the primary channel and two barge channels, as well as encroachment into the turning basin. Coast Guard concerns will be communicated to USACE during the 408 permitting process.

Conclusion

The Columbia River System is an extremely important interdependent-multimodal supporting national and international commerce critical to local, national and global economies. Reducing the capability and capacity of the Columbia River System would severely restrict navigation. IBR’s proposed bridge as depicted in Public Notice 02-22 with its 35% reduction of VNC from 178 feet to 116 feet is contradictory to the U.S. Coast Guard’s mandate from Congress to maintain freedom of navigation on the navigable waters of the U.S. and to prevent impairment to U.S. navigable waterways. As new structures are built, navigation clearances should be improved or at a minimum maintained. Any proposed new bridge should have a VNC of greater than or equal to that of the existing I-5 twin bridges of 178 feet or preferable, unlimited VNC, as well as a HNC as permitted during the final USACE 408 permit. There are alternative options to accomplish this VNC to include a tunnel or a high-level lift bridge or bascule bridge, which would provide an unlimited vertical clearance. A modern similar successful project is the Woodrow Wilson Bridge over the Potomac River in Washington, DC that was completed in 2009. It is a higher-level double bascule lift bridge on an interstate (I-95) with transit. The added height of the new bridge reduced the number of bascule bridge openings for vessel passage by 76%.

Again, please note, this preliminary determination does not constitute an approval or final agency determination. A final agency determination will be made in accordance with all applicable regulations after IBR submits a complete bridge permit application.

Sincerely,

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By direction of the District Commander
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