Port of Vancouver USA

BERTH 8/9 EXTENSION AND EFFICIENCY IMPROVEMENTS PROJECT

FY 2024 PORT INFRASTRUCTURE DEVELOPMENT PROGRAM (PIDP) GRANT REQUEST

Submitted to:
U.S. Department of Transportation –
Maritime Administration

Submitted by:
Port of Vancouver USA
3103 NW Lower River Road
Vancouver, WA 98660

May 10, 2024

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Port of Vancouver USA

The Port of Vancouver USA is pleased to resubmit the following grant application to the Maritime Administration's Port Infrastructure Development Program (PIDP) for our Berth 8/9 Extension and Efficiency Improvements Project. This project is essential to the continued growth and reliability of our port as a global leader in intermodal connections to and from key markets around the world.

The port shares the goals outlined in PIDP and is encouraged by the alignment of this program with our vision for the port. This project will advance initiatives in our Climate Action Plan through the installation of LED lighting and an EV charging station, along with stormwater enhancements using industry best practices. The installation of conduit, vaults and pads at Berth 8/9 will allow for future shore power utilized at the site.

As evidenced in previous efforts such as the West Vancouver Freight Access (WVFA) Project that received federal investment through a 2011 TIGER grant, the port has a strong track record of securing permits, meeting project timelines and leveraging our investments to maximize job creation and economic impact. In fact, with the completion of WFVA in 2018, our annual economic impact increased from $2.9 billion to $3.8 billion in just five years. Our economic impact studies show that the jobs created by this type of project result in higher wages and benefits compared to others in our region.

In summary, our team has the experience to deliver on a project of this magnitude that benefits both our community and U.S. supply chain resiliency. Our top-notch Environmental Team at the port has a strong understanding of what is needed to satisfy the NEPA process. We are confident that these permits can be secured within the required timeframe and have continued progress toward obtaining them.

Enclosed, you will find a cost-effective project, with an enhanced cost-benefit analysis that quantifies the benefits that outweigh project costs. The completed Berth 8/9 Extension and Efficiency Improvements Project will result in a significant growth for the port, our many partners who formally support it, and improve our nation's ability to ship the freight needed to sustain our economy.

Thank you for your time and consideration of this exciting and important project for the Port of Vancouver USA and our community.

Sincerely,

Julianna Marler

Julianna Marler
CEO, Port of Vancouver USA

Field Name	Guidance
Name of lead applicant	Port of Vancouver/Port of Vancouver USA
Is the applicant applying as a lead applicant with any joint applicants?	No
Does the applicant or joint applicant own the property where the grant-funded improvements will occur?	Yes
Is the applicant seeking funding under the small project at a small port set-aside?	No
Project name	Berth 8/9 Extension and Efficiency Improvements Project
Project description	This project will enhance the efficiency, reliability and safety of a shipping dock. The installation of a 250-lineal-foot extension will result in two separate berths that can serve two modern-sized vessels simultaneously. The addition of a dock apron (infill) to close a large open panel and structural dock strengthening will allow for heavier cargo and improve safety and efficiency on the dock. Ground stabilization will reduce the risk of injury and structural damage during a seismic event. Other enhancements include adding a mooring dolphin, guard and bull rails, LED lighting, stormwater management, conduit for shore power, and EV charging station.
Is this a planning project?	No
Is this a project at a coastal, Great Lakes, or inland river port?	Coastal Port (Columbia River)
Is this project located in a noncontiguous State or U.S. territory?	No
Geographic Coordinates (in Latitude and Longitude format)	Latitude: 45.6369444444 Longitude: -122.7063888889
Is this project in an urban or rural area?	Rural
Project Zip Code	98660
Is the project located in a Historically Disadvantaged Community?	Yes, Historically Disadvantaged Community (Census Tract 53011041005).

Field Name	Guidance
Has the same project been previously submitted for PIDP funding?	Yes
Is the applicant applying for other discretionary grant programs (managed by DOT or a separate agency) in 2024 for the same work or related scopes of work?	No
Has the applicant previously received DOT funding for the same work or related scope of work?	No
Has the applicant previously received TIGER, BUILD, RAISE, FASTLANE, INFRA or PIDP funding?	The port has received funding from Tiger II FY 2011.
PIDP Grant Amount Requested	$30,000,000
Total Project Cost	$63,381,000
Total Federal Funding	$30,000,000 (47%)
Total Non-Federal Funding	$33,381,000 (53%)
Will the applicant be seeking approval to expend funds prior to grant agreement execution?	No
Will RRIF or TIFIA funds be used as part of the project financing?	No
Does the applicant use LOGINK or similar logistics platform provided or sponsored by the People's Republic of China or Chinese state-affiliated entities?	No

BERTH 8/9 EXTENSION AND EFFICIENCY IMPROVEMENTS PROJECT

Section I: Project Description

The Port of Vancouver USA (the port) is requesting a $30,000,000 PIDP grant to help fund the **Berth 8/9 Extension and Efficiency Improvements Project.** The project's benefits directly align with PIDP program goals — improving the safety, efficiency, and reliability of the movement of goods through the port and its intermodal connections — making this project a sound investment of federal dollars. The port submitted this project request to PIDP in 2023, receiving mostly high ratings on the merit criteria and selection considerations, with the exclusion of the Benefits-Cost Analysis. Since submitting the request last year, the preliminary work on the project has continued with the engineering design advancing from 30% to 90%, with 100% design expected in 2024.

The total project is estimated at $63,381,000 with the port committed to investing $33,381,000 (53%) of port funds toward the project. The port is also investing in the pre-construction costs of the project, estimated around $3,000,000. The port has the authority to plan, construct, own, operate, and maintain the Berth 8/9 project (see attachment, "Authority to Carry Out Project.")

Through this project, the 45-year-old Berth 8/9 dock will be enhanced to increase its length, capacity and surface area and improve resilience in the event of an earthquake(s). The project involves several construction activities including adding a 250-linear-foot dock extension, constructing a mooring dolphin, and installing a dock apron (infill) at berth 9 and a structural strengthening of the existing berth 9. The dock apron will close a large (361 foot by 84 foot) open panel, enhancing cargo handling capabilities and improving safety on the dock. Other safety improvements will be made including adding a guardrail around the remaining open panel and a dock bull rail on the dock extension and installing enhanced lighting, additional safety ladders and life rings on the dock. The project will also incorporate environmental and energy improvements, including the installation of energy efficient lighting, an electric vehicle charging station, electric conduit for shore power, and stormwater management enhancements. These improvements align with the port's sustainability and environmental stewardship goals.

Figure 1: Terminal 3's Berth 8/9
Source: Mott Macdonald

Port and Project History

Established in 1912, the Port of Vancouver USA handles seven million tons of cargo or more each year. These include wheat, mineral and liquid bulks, vehicles, and a broad range of project cargo including wind turbine components, steel and steel slabs, aluminum, and more. The port is an economic driver for the region, with 4,000 people employed by the port and/or its tenants.

Cargo is transported to the port through a variety of means, including by water via the U.S. Marine Highway M-84 (Columbia, Willamette and Snake Rivers) that connects to the Pacific Ocean approximately 100 river miles away, by rail lines operated by Burlington Northern Santa Fe (BNSF) and Union Pacific (UP), as well as by highway, with Interstate-5 less than two miles from the port entrance.

Here on the Columbia River, Port of Vancouver berths play a critical role in the loading and unloading of commodities, enabling efficient transportation to their next destination. The port has thirteen shipping berths located within four operating terminals; Berth 8/9 is located at Terminal 3. The need for expansion and enhancement of Berth 8/9 has been identified as a critical step towards improving capacity, efficiency, safety, and reliability of the port. With the Berth 8/9 Extension and Efficiency Improvements Project, the port will experience improved efficiency and reliability, and contribute to the continued success of port customers and the global supply chain for years to come.

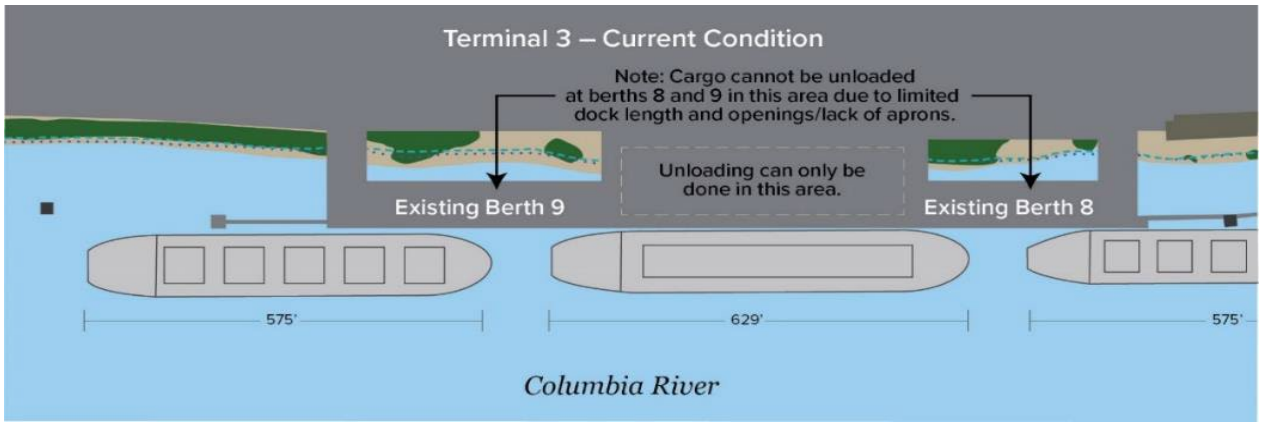

Figure 2: Current Conditions of the Berth 8/9 Dock
Source: Mott Macdonald

Transportation Challenges

The following summarizes the main capacity issues with the existing Berth 8/9 design and its limitations to meet cargo demands.

1. **Limited berth length** to support two modern vessels at same time.
2. **Limited berth load capacity** to support equipment used to move breakbulk and project cargo.
3. **Limited operational surface area** of the berth due to open panels originally designed in the berths restricting transport of large cargo across the dock.
4. Built to outdated seismic codes from the 1970s and 1980s, the dock is **vulnerable to damage from a large seismic event,** resulting in significant operational downtime.

1. Limited Berth Length

The original Berth 8/9 dock was constructed in the late 1970s on reinforced concrete piling, with a length of 500 feet and nominal width of 170 feet. In the 1980s, the dock was extended 420 feet

downstream and 320 feet upstream using concrete piling to increase the total dock length to 1,240 feet. The additional 740 feet on the dock allowed for two vessels to moor simultaneously at Berth 8 and Berth 9.

In 2010, the U.S. Army Corp of Engineers completed the Columbia River Channel Improvements Project. The project deepened the Columbia River navigation channel from 40 feet to 43 feet to accommodate the fleet of international bulk cargo and container ships traveling approximately 100 miles from the mouth of the Columbia River at the Pacific Ocean to Vancouver, WA. After project completion, the opening of the channel drew bigger vessels, with more volumes and heavier cargo, to the port.

As cargo vessels continued to increase in size and length, the dock became insufficient in length to accommodate two large bulk carriers at Berth 8 and Berth 9 simultaneously. With the proliferation of these larger cargo vessels, like Handymax (492'-656' in length) and Supramax (650'+ in length), the dock did not have the length to moor two vessels with the minimum 100 feet clearance between the ships. Due to length limitations, Berth 8 and Berth 9 became Berth 8/9, able to accommodate only one large bulk carrier at a time.

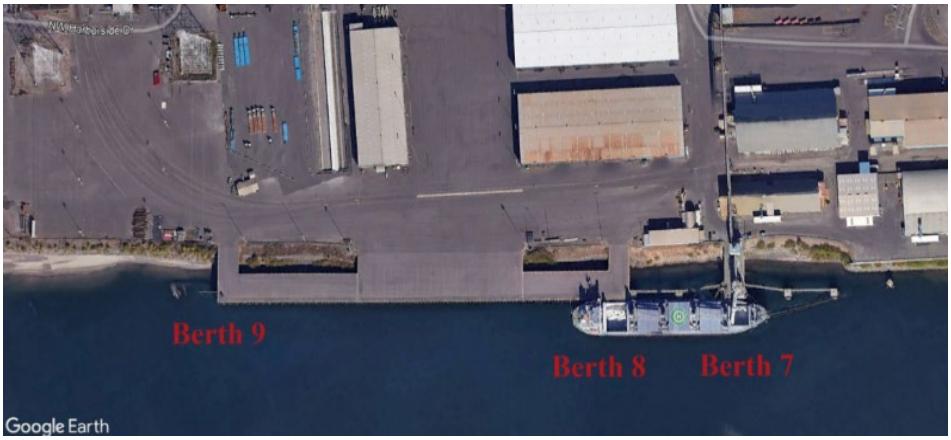

Figure 3: Vessel at Berth 7 Encroaching on Berth 8
Source: Google Earth

This situation is further compounded by vessels moored at the adjacent Berth 7, located at Terminal 2. Berth 7 operations have a fixed loader and require line hauling of vessels to load bulk cargoes into the holds of ships being loaded at Berth 7. When Berth 7 operations require the forward holds to load the vessel, the line hauls downriver taking up Berth 8 dock space. This encroachment of Berth 7 vessels further limits the available dock space of Berth 8/9.

The Port of Vancouver USA currently has two docks (8/9 and 3) that accommodate breakbulk and project cargo, and in recent years, Berth 8/9's operations have been limited due to its infrastructure. Breakbulk cargo includes steel and steel slabs, pulp, aluminum, and project cargo such as wind energy components and other non-container cargo, which account for 40% of the port's import cargo volume. In the last five years, when a vessel was moored at Berth 3, nearly half the time (45%) a vessel was moored concurrently at the other breakbulk/project cargo dock, Berth 8/9. If both breakbulk/project cargo berths have vessels loading and unloading, other vessels must wait to unload their goods, resulting in delays, inefficiencies, and an increase in

greenhouse gas emissions.

Capacity issues at West Coast ports have been met by a reduction of general cargo berths on the Columbia River, including the neighboring Port of Portland in Oregon. Located across from the Port of Vancouver on the Columbia River, the Port of Portland has reduced availability for marine cargo, with one terminal now a dedicated layberth site and another terminal focused on automobiles and containers (although the terminal may close to containers in Oct 2024). In recent years, the Port of Vancouver has seen an increase in steel and steel slab moving through our port instead of Portland, contributing to an increase in non-containerized cargo volume moving through our port.

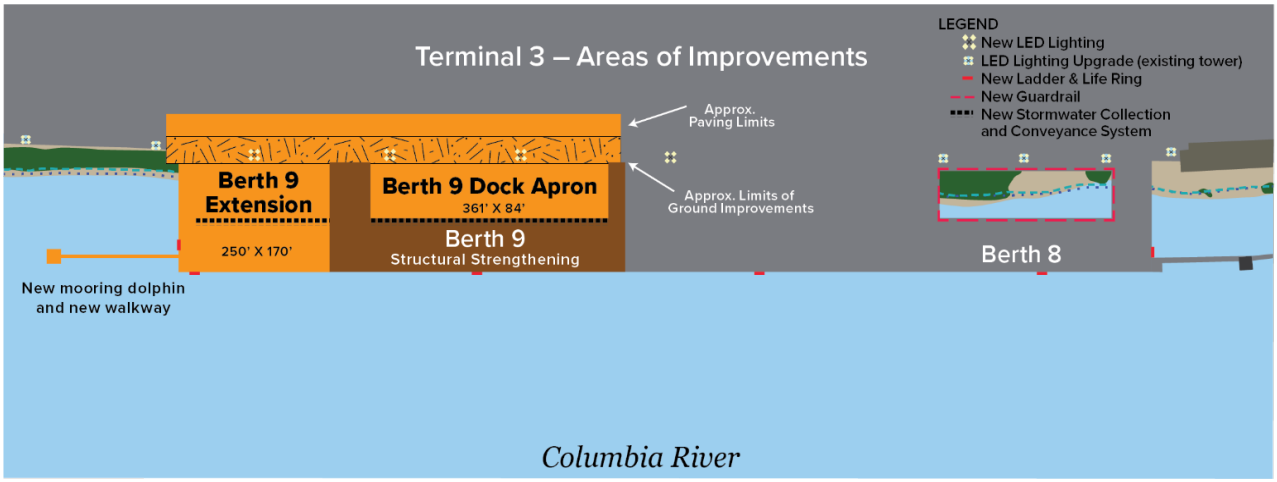

Figure 4: Project Areas of Improvement
Source: Mott Macdonald

2. Limited Berth Load Capacity
The Berth 8/9 complex was designed as a multipurpose cargo facility to serve the then-current cargo capacities and sizes. Cargo at that time mainly consisted of breakbulk cargo palletized, bundled or otherwise packaged. As mentioned previously, with the deepening of the Columbia River channel, vessel sizes have increased along with the weight, size, and quantity of goods being transported through the port. As cargo has increased in size and weight, so has the equipment used to move it. The current berth design does not accommodate the full capacity of our modern heavy lift equipment.

The demand on our berth facilities is further complicated with limited mooring space, limitations to cargo weight, safety challenges and logistical problems. Specifically, large size cargoes such as wind energy blades and heavy lift cargoes such as steel slabs and wind turbines are not transferred across Berth 8/9, creating efficiency issues for operations confined to Berth 3.

3. Limited Operational Surface Area
Beyond the limited load capacity, the current dock has two large open panels which create operational challenges. When berth extensions were added in the 1980s, large open panels were

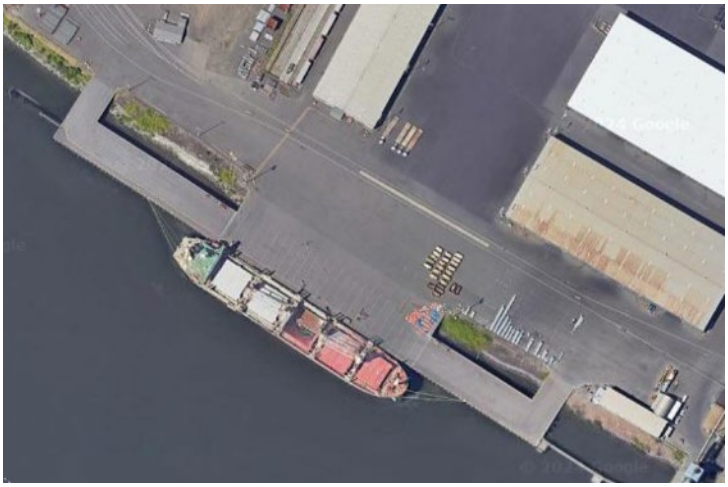

Figure 5: Open Panels on the Berth 8(R)/9(L) Dock
Source: Google Earth

in each of the dock extensions as a cost savings measure. While these large open panels limited the operational surface area of the berth, the design was able to serve the small cargo sizes of the day. The port is now seeing breakbulk and project cargos in increased size, weight and sometimes awkwardly shaped; adding the reduced operational surface area due to the open panels compounds the logistical challenges to move these commodities across the dock. Additionally, the openings pose a risk of equipment or personnel falling through them.

4. Vulnerable to Damage from a Large Seismic Event

The dock was originally constructed in the late 1970s and extended in the 1980s, designed to seismic codes at the time of construction. No seismic upgrades have been made, and the dock does not meet current seismic design codes for the Pacific Northwest. In the very likely event of a large earthquake in our region, the dock is extremely vulnerable to damage and/or partial collapse. In fact, the 2019 Washington State Department of Transportation (WSDOT) Regional Resiliency Assessment found that in the event of a large seismic event, the dock would likely be destroyed and collapse into the Columbia River. Dock vulnerability is due to liquefaction and lateral spreading forces induced on the structure during an earthquake caused by the shoreline embankment moving towards the river.

Strengthening the dock and ensuring the dock extension is designed and constructed to current seismic codes would not only support heavy cargo but also make it more resilient to earthquakes. Ground stabilization and retaining structures will significantly reduce liquefaction and lateral spreading at the dock. These seismic mitigation improvements would result in a significant reduction of post-earthquake operational downtime.

Challenges Addressed through the Project

Through the Berth 8/9 Extension and Efficiency Improvements Project, a 250-lineal-foot extension will be added to Berth 9 dock, creating two fully operational and independent berths — Berth 8 and Berth 9. After project completion, the two berths at the dock will have the length to moor two modern-sized vessels simultaneously, allowing for more vessels and increased volumes of breakbulk commodities moving through the port.

Along with the extension, a dock apron (infill) will be added to the large open panel behind Berth 9. The open panel measures at 361 feet by 84 feet (or 30,324 square feet) and impacts the structural integrity, operational efficiency, and safety of dock. Both the 250-foot extension and Berth 9 dock apron (infill) will be installed with a 1,000 PSF capacity, stronger than berth 8/9's current 750 PSF capacity. The higher PSF capacity dock apron and extension will allow heavy

breakbulk and project cargo, and the equipment needed to transport it, to move across the dock. Currently high and heavy cargo must use Berth 3 due to the weight of the cargo being too heavy to move on the Berth 8/9 dock. In addition to the extension and apron construction, the existing Berth 9 dock will be structurally strengthened to also allow heavy breakbulk and project cargo, and the equipment needed to transport it, to move across the existing dock.

The construction of a dock apron behind Berth 9 will increase operational efficiencies of cargo movement on the dock. Closing the open panel will also eliminate the risk of longshore workers and equipment falling through the open panel. A guardrail around the Berth 8 open panel and a bull rail around the dock extension will be installed as part of this project, further enhancing safety for the longshore workers and overall efficiency at the dock. Lastly, the dock extension and dock apron will increase the strength of the Berth 8/9 dock, improving the overall resilience of the dock in the event of an earthquake. Ground stabilization performed as part of the project will reduce the dock's vulnerability due to seismic activity.

The Berth 8/9 Extension and Efficiency Improvements Project will increase berthing space, structural capacity, operational efficiencies, and resiliency to bring more volume of breakbulk and project cargo to the Port of Vancouver.

Detailed Statement of Work

Several years ago, the port identified the Berth 8/9 Extension and Efficiency Improvement project as a needed infrastructure investment. In 2019, the Berth 8/9 project in the port Terminal Rehabilitation and Improvement Program (TRIP), part of the port comprehensive development and improvement scheme. Early design work started in 2019 but was suspended during COVID so the port could focus its efforts on reducing supply chain issues. In 2023, the project was reinstated with permitting underway and 30% design reached that April. Since then, the project has advanced and is currently at 90% design, with 100% design anticipated within the year.

The Berth 8/9 project will include the following construction elements:

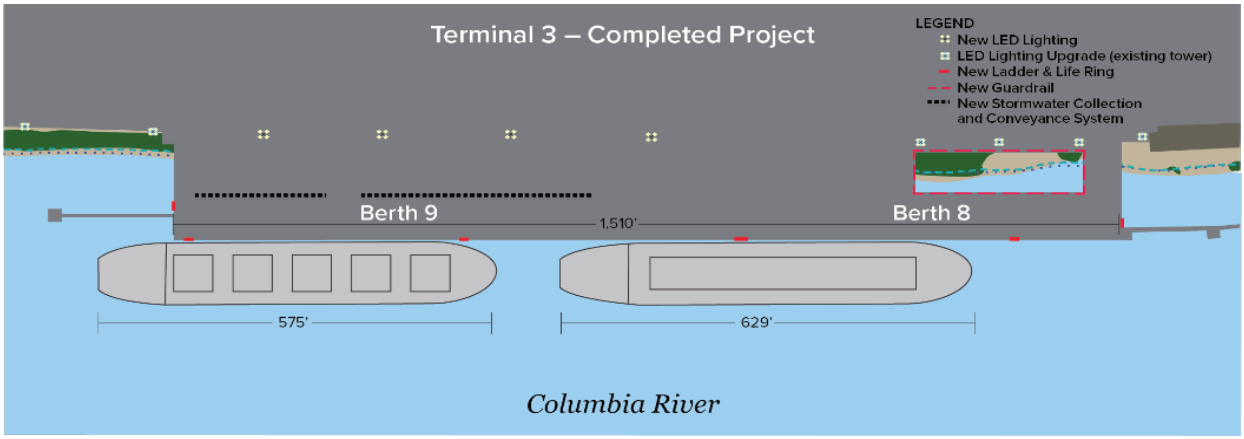

Figure 6: Completed Project
Source: Mott Macdonald

Dock Extension
The port will extend Berth 9 downstream by 250 lineal feet. With a current dock width of 170 feet, the proposed increase in usable area is approximately 42,500 square feet (SF). Like the existing dock, the new dock extension includes plumb steel piling with a reinforced concrete superstructure. An asphaltic concrete wearing course will be placed over the concrete as a protective layer. Potable water and storm drainage piping and appurtenances will be integrated within the dock extension footprint.

Dock Apron (Infill)
A dock apron will be added to the open panel behind Berth 9, completing and closing that section of the dock. The size of this panel is approximately 84 feet by 361 feet, yielding a net increase of usable and safer dock space of 30,324 SF. The Berth 9 apron will improve cargo operations and create new travel corridors for equipment, resulting in substantial operational efficiency and safety improvements for Berths 8 and 9. A guardrail will be installed for safety over the Berth 8 open panel with a dock apron installation planned in a future Phase 2.

Ground Stabilization
Ground liquefaction and lateral spreading resulting from an earthquake is a significant concern at the Port of Vancouver. Ground improvements will be part of this project, added upland and riverward of the dock extension and the Berth 9 apron to mitigate liquefaction and the subsequent lateral spreading of the shoreline embankment. Ground stabilization will improve the subsurface soils around the Berth 9 portion of the dock, reducing ground deformations to improve resilience during seismic events.

Several ground-improvement strategies were investigated, and preliminary engineering analysis indicates that the most effective ground improvement solution for this project will be a deep soil mixing (DSM) buttress. Additional geotechnical investigation will be conducted during project design to confirm and finalize the optimal DSM ground stabilization layout and performance criteria. The deep soil mixing process forms columns of cemented material in the ground by mechanically mixing the in-situ soil with an introduced binder agent such as cement or lime. By forming a DSM buttress with grids or lines of soil mix columns, the improved ground will have increased strength and stiffness and has more uniform load/settlement response properties needed to resist ground deformations during an earthquake event.

Additionally, a sheet pile cut-off wall will be installed, which will be braced at its top by a cast-in-place (CIP) concrete beam connected to the dock structure. These improvements will enhance reliability and resiliency of the port during and after an earthquake event. The ground stabilization will take place at Berth 9, but enhancements will strengthen the reliance of the entire dock, including the Berth 8 section. Overall, it will reduce the risk of significant damage or catastrophic failure, such as collapse of the dock.

The design life for improvements is 50 years of service but is expected to last longer due to the mild atmospheric environment. Maintenance costs for the facility will be minimized by using

durable materials such as coated steel piling and reinforced concrete.

Dock Strengthening
The existing Berth 9 dock is not structurally adequate to support heavier cargo and equipment (Page 97 in the "Project Engineering Drawings" attachment depicts the need for selected dock strengthening). To address this deficiency, the port will implement structural strengthening measures to the existing Berth 9 dock. The structural strengthening will include the application of fiber reinforced polymer (FRP) layers to the underside of the existing concrete deck panels and pile caps that support the make up the deck structure. The FRP layers are saturated with epoxy resins and bonded to the underside of the existing concrete elements to provide additional tensile strength where needed.

Additional Mooring Dolphin
The current mooring dolphin will be removed, and a new dolphin will be constructed to serve the extended dock. This dolphin will have the capacity to support vessels that call on the facility and will be constructed of battered steel piling with a concrete cap creating an overall configuration function as an integrated structural system. A mooring bollard will be affixed to the pile cap for connection of ship lines and an access walkway will extend from the proposed extension to the mooring dolphin.

Planning for Climate Change and Sustainability
The port is committed to environmental stewardship, and this value is integrated throughout the organization in our projects, policies, and programs. The port has a five-person Environmental team whose efforts are focused on making improvements to protect and preserve the air, land, and water at the port and surrounding neighborhoods. Through our Climate Action Plan, the port worked with the community to create a strategy for enhancing our environmental reach. The Climate Action Plan includes port electrification efforts as an important element to decarbonization, and through this project we will undertake the following:

Conduit for Shore Power
The ultimate goal for the Port of Vancouver is to provide shore power for all freight vessels dwelling at the port for more than 18 hours. However, electrical plug-in connections on freight ships, especially with the Handymax- and Panamax-sized vessels that come to our port, have yet to be standardized. We are hopeful that the maritime industry will work together to standardize vessel-side electrical systems and to enable shore power at most port facilities in the United States. As part of this PIDP funding request, conduit, pads and vaults for future shore power will be installed. A shore power feasibility study performed in 2023 is being used to advance shore power efforts at Berth 8/9 and throughout the port.

Electric Equipment and Vehicle Charging
Our stevedores and longshore workers expressed an interest in starting the conversion from diesel to electric vehicles and equipment. As part of the Berth 8/9 project, we will install a charging station for electric vehicles at Berth 8/9. This charging station can be used by port

vehicles, as well as those belonging to stevedores and longshore teams. Beyond this project, the port is actively advancing its electrification plans, adding more electric vehicles and equipment to its fleet to replace older, higher greenhouse gas emitting equipment. The port has identified the area behind Berth 8/9 as a possible location for electric equipment charging infrastructure.

Stormwater Management

The Pacific Northwest has strict permit limits for zinc and copper in stormwater discharges. These contaminants are known to cause harm to anadromous fish, and therefore, reduction of these concentrations is extremely important. A diversion structure and a subsurface vault will be installed as part of this project, allowing for a pretreatment facility for Berth 8/9 stormwater runoff to be installed in the future if needed. Currently, the types of cargo using the dock do not need additional pretreatment filtering of the stormwater. However, if new cargo comes that would benefit from additional treatment, the newly installed stormwater diversion structure will allow the port to expand our treatment facilities. Potentially harmful contaminates will be removed as a precautionary measure before the stormwater moves into the existing Terminal 4 Regional Stormwater Treatment Facility for further treatment.

Safety Improvements

Safety improvements include installation of dock apron (infill) at Berth 9, installation of a guardrail around the Berth 8 open panel, upgrade of site lighting systems and adding a dock bull rail on the dock extension. A curb-like structure at the waterside perimeter of the dock, the bull rail will prevent accidental entry of personnel and equipment into the Columbia River.
New high-mast lighting will be added to the dock extension and current site lighting will be upgraded to provide five foot-candle illumination levels in the work area. The new system will utilize LED fixtures, and where possible, existing incandescent and metal halide systems will be replaced. LED lighting will be directed at the work areas and shielded to reduce light pollution impacts to wildlife in the adjacent areas such as the river or night sky.

Section II: Project Location

This project is located on the Columbia River approximately 100 river miles upstream from the Pacific Ocean and is a Coastal Seaport as defined in the NOFO, subject to the U.S. Army Corps of Engineers regulatory jurisdiction for oceanic and coastal waters under 33 CFR 329.12. GIS coordinates for the project site are Latitude: 45.6369444444, Longitude: -122.7063888889.

Figure 7: Maritime Connection Vicinity Map
Source: Mott Macdonald

The physical location of the Port of Vancouver USA is one of its greatest assets. Positioned on the U.S. Marine Highway M-84 on the Columbia, Willamette and Snake Rivers, its proximity to the Pacific Ocean makes it an ideal transfer point for cargoes moving to and from the Pacific Rim and the world. Approximately eight million short tons of cargo moves through the port each year. In 2023, the port did see a slight decrease in cargo to about seven million short tons; this was due to a historically low volume year of U.S. agricultural exports. This project and the port are not a small project nor a small port due to typical annual volume exceeding eight million short tons.

Man-made transportation systems also serve to strengthen this attractive location. The port is located less than two miles from Interstate-5, the main north-south interstate on the West Coast running from Mexico to Canada and traveling through San Diego, Los Angeles, Portland, Ore., and Seattle. The port is also at the confluence of two national rail lines, Union Pacific and Burlington Northern Santa Fe Railway. The Port invested $250 million in the West Vancouver Freight Access (WVFA) project, which received federal support and aimed to accommodate more railcars and reduce congestion on the Class 1 mainline, improving the intermodal connection at the port.

Figure 8: Rail and road connections vicinity map.
Source: Mott Macdonald

The port is within the City of Vancouver in Clark County, Washington. Incorporated in 1857, with a population of 190,915 as of the 2020 census, Vancouver is the fourth-largest city in Washington state. Vancouver is the county seat of Clark County and forms part of the Portland-Vancouver metropolitan area, the 25th-largest metropolitan area in the United States.

Located in Census Tract 53011041005, the project area is rural, as defined in the FY2024 PIDP NOFO and on the DOT Rural Eligibility map for PIDP. The area is identified as a Historically Disadvantaged Community on the Climate and Environmental Justice Screening Tool.

The census tract has a diverse population with several disadvantaged indicators. Nearly 35% of residents in the census tract identify as a race/ethnicity other than white (non-Hispanic or Latino), with 4% being Black or African American and 20% being two races or more; 41% of the population are Hispanic or Latino. The census tract is also defined as low-income on the Climate and Environmental Justice Screening Tool. According to the EPA EJ Screen, Limited English Speaker is ranked in the 90-95 percentile (national percentiles), while Less than High

School Education is ranked 95-100 percentile (national percentiles).

The Fruit Valley Neighborhood is located just north of the port, and the census demographics are reflected in the neighborhood's residents. A special focus on port outreach efforts is made for the Fruit Valley neighborhood. The tailored outreach and communication efforts include attending in-person meetings, communication materials available in non-English languages and utilizing the port Language Access Plan for Limited English Proficiency speakers (more information on these efforts are detailed in Section F: Equity and Justice40).

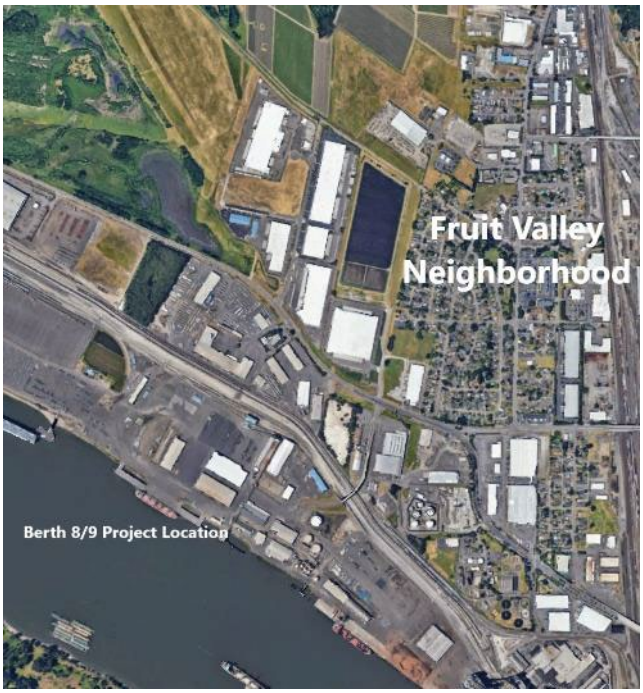

Figure 9: Project Location and Fruit Valley Neighborhood.
Source: Google Earth

Section III: Grant Funds, Sources and Uses of Funds

The Berth 8/9 project was identified as a needed capital improvement at the port due to the decreased capacity, efficiency, and resiliency of the dock over time. The Port's Resolution 3-2019 add the project to the Terminal Rehabilitation and Improvement Program (TRIP) in 2019. A project scope and cost estimate were developed by WSP, Inc. in 2019, but suspended due to the pandemic. The project was reinstated in 2023 and is currently at 90% design with 100% design expected at time of obligation.

WSP (Engineer of Record) updated project plans, specifications and estimates to the 90% level of completion. The project budget was updated in May 2024 and is included as the attachment "Project Cost Estimate Information." A summary of cost by major category is shown in the table below, and includes a 10% construction contingency, 5% design contingency, and applicable Washington State Sales Tax (WSST).

Table 1: Cost Estimate Summary

Item Description	**Estimated Cost**
Construction w/ 2.5% escalation	$49,042,000
Construction (10%) and Design (5%) Contingencies	$7,358,000
Washington State Sales Tax	$4,481,000
Misc (construction management, soft costs, etc.)	$2,500,000
Total	**$63,381,000**

Pre-construction costs including engineering, design and permitting are not reflected in the

estimate above. This work, estimated at around $3,000,000 will be funded solely by the port, will be completed before the obligation date and is not included in this request for funding.

No other Federal funds are currently available for this project. The port will use general funds and the issuance of general obligation bonds (see attachment, "Funding Commitment Letter") to provide the non-federal match. The 10-year Terminal Rehabilitation and Improvement Program (TRIP) includes the Berth 8/9 project.

Table 2: Grant Funds and Sources

	Berth 8/9 Improvements Project	**Total**	**Percentage**
PIDP Funds	$30,000,000	$30,000,000	47%
Other Federal Funds	$0	$0	0%
Non-Federal Funds	$33,381,000	$33,381,000	53%
Total:	**$63,381,000**	**$63,381,000**	**100%**

Section IV: Merit Criteria

Port of Vancouver's Berth 8/9 Extension and Efficiency Improvements Project supports the objective of the Port Infrastructure Development Program to improve the safety, efficiency, or reliability of the movement of goods through ports and intermodal connections to ports. This project meets all key merit criteria objectives, including achieving safety, efficiency, and reliability improvements; supporting economic vitality; leveraging federal funding; and port resilience. The primary purpose of the project the improvement of safety, efficiency, and reliability at Berth 8/9 and throughout the port.

Section A: Achieving Safety, Efficiency or Reliability Improvements

Safety

This project will update a 45-year-old dock with the installation of a dock extension, a dock apron (infill) at the Berth 9 open panel (361 feet by 84 feet), and structural strengthening of the existing Berth 9 dock. With these additions, the dock will become stronger and more structurally complete, and reduce risk of injury and damage in the event of seismic activity. A port-wide risk reduction plan identified retrofitting docks and structures in high hazard areas as a top priority due to the risk of damage and injury from a seismic event. This plan is part of the Clark County's Mitigation Plan, which promotes policies, programs, projects, and activities to reduce death, injury, and damage from a disaster.

In addition to reducing risk of injury during an earthquake, adding the dock apron to a large open panel will improve safety while workers are on the dock. The apron will reduce the possibility of objects falling through the open panels in the dock and into the Columbia River. While there have been no documented instances of equipment passing through the open panels, the Berth 9 apron will reduce the possibility of accidents potentially caused by that opening.

The additional safety improvements part of the project include:

- Upgraded and additional safety ladders and life rings installed on the dock.
- Installation of a guardrail around the Berth 8 open panel.
- New high-mast light poles installed on the dock extension with LED lighting.
- Updated current site lighting to five foot-candles to LED lighting, improving visibility and lighting conditions for longshore workers.
- Installation of a bull rail on the dock extension to prevent accidental entry of equipment and personnel into the Columbia River.

These activities will result in substantive improvements to safety at this facility in addition to enhanced operations. Jones Stevedoring, the employer of the longshore workers (ILWU Local 4), has provided a letter of support.

Efficiency

The project will improve operational efficiency at the port, doubling berth capacity and cargo handling capabilities at Berth 8/9. The Berth 9 dock apron (infill) addition and the dock extension will create a larger, operational over-water work area. Currently, the Berth 8/9 dock is 142,000 SF. The extension and Berth 9 dock apron will add an additional 72,824 SF at the dock. Once completed, the total dock work area will be a contiguous 214,824 SF or a 51% increase from the current dock.

Table 3: Square Footage Increase at Berth 8/9

Segment	Square Footage
Current Berth 8/9 Dock	142,000
Berth 9 Apron (infill)	30,324
Extension to Berth 9	42,500
Total New Dock	**214,824**
Increased Square Footage	**72,824**
	51%

The length of the berth will be extended to allow for two modern vessels to moor at Berth 8 and Berth 9 simultaneously, essentially doubling the capacity at the Berth 8/9 dock. The port's overall capacity for breakbulk and project cargo will be augmented as vessels will now have three berths to utilize at Berth 3, 8 or 9. Currently, nearly half the time (45%) a vessel is moored at Berth 3, one of the port's two operational breakbulk/project cargo-serving berths, with a vessel also utilizing Berth 8/9. By creating two independent berths that can accommodate two vessels simultaneously at Berth 8 and Berth 9, the need for vessels to wait for a dock will be significantly reduced. Cargo will be moved more efficiently by reducing wait times and lowering the greenhouse gas emissions from vessels that need to dwell in the river before they can dock and being loading or unloading.

Reliability

In its current state, the Berth 8/9 dock has significant infrastructure deficiencies that negatively impact the port's cargo operations. These deficiencies include insufficient structural capacity for the movement of heavy cargo and limited mooring space, a challenge which has increased as vessel sizes have also grown. The port adopted Resolution 3-2019 to address the Berth 8/9

limitations. An engineering consultant, WSP, was hired to address the limitations and the proposed Berth 8/9 improvement project was added to the Terminal Rehabilitation and Improvement Program (TRIP), and the port's Comprehensive Scheme of Harbor Improvement and Industrial Development, following a public hearing and State Environmental Policy Act (SEPA) process.

Figure 10: Terminal 5 Laydown Area for Wind Blades
Source: Port of Vancouver USA

The updated dock will be a more reliable mooring destination for breakbulk carrying vessels and will be able to serve heavier cargos at the Berth 9 dock. With Berth 8/9 becoming Berths 8 and 9, the port will have more mooring space for vessels and will become a more reliable destination for the unloading and loading of goods including breakbulk, project cargo and non-containerized cargo. This includes having the flexibility to allow unscheduled vessels to come to our port in lieu of waiting at other ports operating at capacity. In recent years, vessels from Southern California and Columbia River ports came to Vancouver to unload cargo after experiencing long wait times at those other ports.

Large laydown space near the port's Terminal 5 makes our port a competitive and compelling facility for heavy and significantly sized cargo, including 80-meter wind blades and massive wind turbines and tower sections. With this project, mobile harbor cranes and other heavy cargo equipment will be able to travel and be utilized on Berth 9 dock; currently to transport high and heavy cargo like wind blades at Berth 8/9 ship's gear is required due to the dock's structural limitations.

Beyond the reliability that comes with increased berth availability, the project improves the resiliency of the dock in the event of an earthquake. The improvements in this project, such as the addition of an apron and ground stabilization, will make the dock structurally stronger and reduce effects of liquefaction, decreasing the possibility of the dock being damaged or destroyed after a seismic event. This will allow the structure to be utilized for delivering emergency response aid inland in the event of a natural disaster.

Section B: Supporting Economic Vitality at the Regional or National Level

Benefits-Cost Analysis Summary

Benefits-Cost Ratio: As shown in the attachments "BCA Narrative" and "BCA Spreadsheet," the project has a BCR of 3.04. The Benefit Cost Analysis (BCA) shows this project will provide cost-effective benefits to the region. These monetized benefits are substantial at a 3.1% discount

rate for Non-CO_2 benefits and costs/2 % discount rate for CO_2 benefits, the combined discount rate produces a Benefit Cost Ratio (BCR) of 3.04. The BCA model assumes that 10% of the wind cargo that currently moves through the Port of Corpus Cristi moves through the Port of Vancouver, WA during years 1-5 of the model post construction, increasing to 30% in years 6-10 and to 50% for the reminder of the modeling for years 11-20. This volume scenario addresses the "Rule of Half" as well as allowing the customers to refine their supply chains over the 20 years post construction. Please see the "BCA Narrative" and "BCA Spreadsheet" attachments for more detailed information.

Table 4: Project Benefits and Costs

Benefit or Cost Category (in millions)	Present Value @3.1%/2%
Project Benefits:	
Operating Cost Savings	$198.76
Travel Time Savings	$4.64
Environmental Savings	$3.03
Safety Savings	$1.28
State of Good Repair	$0.91
Public Benefits	$208.62
Less Life-cycle Costs	($8.44)
Plus Residual Value	$12.81
Total Benefits	$212.99
Total Project Cost	($70.05)
NPV	$142.94
Benefit Cost Ratio (BCR)	3.04

Source: The Beckett Group

Economic Competitiveness: Moving cargo through the Port of Vancouver, WA versus trucking the cargo from Texas is estimated to save shippers $199 million when discounted at 3.1% in operating costs over the 20-year period post-construction.
Mobility: Using Travel Time Value as a measure of reduced congestion by delivering cargo by truck and barge, a net of $4.6 million discounted at 3.1% in Travel Time is saved.
Safety: Over the 20-year analysis 13.4 million miles will be removed from the roadways, thus, using the average fatality rate on the nation's highways will save 0.2 lives totaling almost $1.2 million in discounted savings.
State of Good Repair of the Roadways: It is estimated that 13.4 million miles will be removed from the regional and highways, saving the local and state governments over $0.9 million in discounted road maintenance and preservation costs.
Emission Savings: Using the Port of Vancouver, WA versus the Texas route to truck the cargo will save 8 million gallons of fuel equaling 78,600 MT of CO_2. Total discounted benefits to the environment are estimated to be $3 million in reduced negative effects on the environment.

The BCA estimates that over the 20-year post construction period, 6 million metric tons of wind energy cargo will be moved through the Port of Vancouver (POV), WA versus the Port of Corpus Christi, TX. The route to Lewiston, ID from POV will be a combination of truck and barge versus a truck only route from Texas.

Using characteristics of a potential cargo mix and volume estimates as the basis, the BCA provides an estimate of net present value (NPV) and benefit cost ratio. At a discount rate of 3.1% for non-CO2 benefits/costs and 2.0% discount rate for CO2 benefits, the Present Value (PV) of costs in 2022 dollars is $70.1 million when two future electric cranes are added into the costs in the BCA and the PV of total public benefits is $208.6 million. This analysis yields a Net Present Value (NPV) of $143 million with a benefit-cost ratio of 3.04 over the 20-year period of analysis. The greatest share of discounted benefits is in the Economic Competitiveness category from operating savings of $198.8 million, followed by reduced travel delay benefits of $4.6 million, emission reductions of nearly $3.0 million, safety saving of $1.3 million, and state of good repair saving of over $0.9 million. The project is appropriately capitalized up front and uses

asset management approaches that optimize its long-term cost structure. Additionally, a sustainable source of revenue is available for long-term operation and maintenance of the project.

Other Economic Vitality Supporting Activities

The Port of Vancouver USA supports the efficient transportation of non-containerized cargo such as breakbulk and project cargo. In the last decade, more than 6.5 million metric tons of imported and exported project cargo and breakbulk moved through our port, with 260,000 metric tons moved in 2023. These breakbulk commodities include aluminum, pulp, steel and steel slabs and windmill components and comprised 40% of the imported goods last year. This is a steady and reliable source of revenue for the port and wages for our workforce.

With limitations for breakbulk and general cargo on the West Coast and the Columbia River, we anticipate more of these breakbulk commodities coming to the Port of Vancouver. Through this project, the Berth 8/9 dock will have expanded capacity for vessels and heavy cargo, making our port a great fit for carriers and commodities, especially with limited options for the movement of their goods. In addition to supporting the movement of breakbulk goods, the loading and unloading of these types of commodities utilizes a skilled workforce at the port. The breakbulk cargos include wind energy components, steel pipe, steel plate, steel coil and steel slabs, aluminum, large equipment including transformers and electrical equipment to replace fossil fuel equipment, pulp and more. The movement of these often large, heavy, and awkward project cargoes require skilled and experienced longshore workers to ensure the safe and efficient movement of these goods from vessel to dock to the next mode of transportation.

Table 5: Port Wind Energy Volume

Port of Vancouver Wind Energy Volumes

Wind components include blades, towers, nacelles, coolers, spinners, etc.

Year	Vessel Count	Piece Count	Metric Tons
2009	39	2,700	101,104
2010	12	743	25,240
2011	43	3,064	106,182
2012	23	1,050	47,876
2013	3	156	7,469
2014	19	953	25,228
2015*	0	-	-
2016	5	547	10,948
2017	1	48	394
2018	2	135	1,324
2019	4	381	3,460
2020	26	1,172	70,146
2021	12	639	30,518
2022	24	1,172	54,641
2023	17	1,115	60,702

*Limited, reduced subsidies saw a drop in 2013-2019, with no wind components coming to the port in 2015

The port works with local stevedore, Jones Stevedoring Company, and longshore workers from International Longshore and Warehouse Union – Locals 4, 40 and 92 – to move commodities from the vessel to the terminal. These labor union positions support living wage jobs for workers in our community and region, as stevedores and longshore workers reside in communities throughout Oregon and Washington. The port anticipates larger volumes of breakbulk cargo coming after the Berth 8/9 project is completed and the dock has two separate, operational berths, which in turn will provide more union hours and jobs for local stevedores and longshore workers.

Wind Energy Project Cargo

The Port of Vancouver moves more wind energy components than any other port on the West Coast, including Canada and Mexico, and is a compelling port for the movement of this commodity. Earlier this year, a wind company redirected tower sections from the gulf to our port. The lower two sections of wind towers, which were originally trucked from the gulf to Alberta, now move through Vancouver. They are transported by truck to their Canadian destination, reducing highway miles and costs associated with trucking these components from the gulf. The port anticipates 15 barges will bring approximately 600 tower sections to our port instead of the gulf in 2024.

Not only is wind energy a valuable commodity that comes through the port, but it aligns with the port Renewable/Clean Energy Policy (more detail available in Section V: Selection Considerations—Section E: Climate Change and Sustainability). Through the thousands of metric tons of wind towers, blades, heads and other pieces, wind energy is made possible to communities around our region. The port anticipates a significant increase in wind energy components in the coming years (as reflected in the attachment, "BCA Narrative"). This is a direct result of federal incentives included within the Inflation Reduction Act.

Current and Future Commodities

Beyond wind turbine components, additional products are expected to utilize Berth 8 and Berth 9 once construction is completed. Products include aluminum ingots, which the port handled nearly 100,000 tons in the last two years; we anticipate this number to continue to increase due to market conditions including U.S. demand for aluminum and high and volatile containerized shipping prices. Transformers and equipment, including large and heavy electrical equipment, are being transported on the Columbia River and moving through the port with end destinations in the U.S. and Canada.

The project site is also being considered to move containerized minerals which could include but not limited to copper concentrate. If these types of products come, the port is considering utilizing rotainer technology at Berth 9 to move the commodities effectively and efficiently. A rotainer is a container that is rotated to be emptied, with a crane mounted revolver head utilized to physically tip the containers into ship holds. Rotainers are ideal for unloading materials off of a train, truck or ship directly into a ship's hull, minimizing dust, spillage and other sources of product loss. The utilization of rotainers at Berth 9 is possible due to the dock extension and dock strengthening that will occur with the Berth 8/9 Extension and Efficiency Improvements Project.

Port equipment and skilled workforce make us uniquely capable of handling heavy and oversized cargoes, which we anticipate will only increase in volume as the region and country moves to electrify. Wood pulp has been a historical line of business at the port, and we anticipate this to be a continued commodity moving through the port. Roll-On/Roll-Off operations, accommodating large cargos like military vehicles and agricultural/mining equipment, would also be possible after the dock is extended and enhanced through the project.

Section C: Leveraging Federal Funding to Attract Non-Federal Sources of Infrastructure Investment

The project has a federal share of 47% and the port's investment of the project at 53%, far exceeding the 20% minimum non-federal match requirement. In addition, the port is independently investing in the pre-construction phase of the project, funding around $3,000,000 for the engineering, design, and permitting of the project.

Section D: Port Resilience

The proposed improvements will improve the overall resiliency of the port. Currently the port has two locations for general cargo (project cargo and breakbulk) at Berth 3 and Berth 8/9. With the completion of this project, that third berth will have significant improvements on overall resilience.

As discussed previously, the dock extension, apron (infill) and ground stabilization that is part of this project will result in a dock that is more resilient in a very likely seismic event. The port participated in the Washington State Transportation System's Regional Resiliency Assessment Program (RRAP) project in March of 2019 which assessed specific critical infrastructure within a designated geographic area addressing infrastructure resilience issues that could have regionally and nationally significant consequences. Through this assessment, the port was identified as being in moderate to high liquefaction zones across all port property. If (or when) an earthquake strikes the region, the dock extension will be up to current seismic codes and the entire dock will be strengthened so that the dock may experience minor to moderate structural damage but will not be subject to structural failure or total collapse into the Columbia River.

With the Berth 8/9 dock being able to withstand an earthquake, it would be able to be used for regional emergency response inland allowing aid to reach less fortunate communities in SW Washington State and supporting the restoration of essential services in a timely manner, which is a priority of the Department of Homeland Security and WA State Emergency Management.

In addition to the RRAP, the port is included in Clark County's Hazard Mitigation Plan. The plan was designed to reduce or eliminate long-term risk to life and property in the region and was created with input from several stakeholders, including port staff who created a port-specific section. The port's section of the plan identifies retrofitting structures located in high hazard areas and assessing property elevations for floodplain mitigation.

Flooding and rising water levels (sea-levels) in the Columbia River due to climate change have been analyzed and taken into account with the Berth 8/9 project. A recent study conducted by the Interstate Bridge Replacement Project, of which the port is a stakeholder, predicted a maximum net rise of eight inches to the Columbia River. Even in this worst-case scenario, the Berth 8/9 dock would not be impacted by expected water level rise.

The port proactively takes steps to enhance security and reduce the risk of a terrorist attack. In recent years, the port has successfully been awarded FEMA Port Security Program grants to strengthen its cybersecurity, structural security and resiliency. Security enhancements are considered for the port's infrastructure projects, as is the case with the Berth 8/9 project. High-mast light poles will be installed in the dock extension and bright LED bulbs will be used in the new and current high-mast lighting on the dock.

This project also supports resiliency against another impactful event. The pandemic brought to light critical system deficiencies and risks around the supply chain. Container ports became logjammed as they were flooded with vessels carrying cargo; vessels would have to wait to get into the port and wait to have cargo moved, greatly disrupting the supply chain. But as ports in Southern California and regional container ports became overwhelmed, our port was to welcome some of these vessels, offload their cargo, and reduce the disruption to the supply chain.

One example of this is steel shippers arriving in Southern California who were informed they would need to anchor for an undetermined amount of time waiting to offload their non-containerized cargo. As a result of the backlog and delays faced, shippers chose to come to the Port of Vancouver to offload all their steel instead of waiting for other port space. Once the steel was offloaded in Vancouver, it was transported to its destination. Should a large supply chain disruption, like a pandemic, occur, the Port of Vancouver will be able to reduce supply chain disruptions because of the Berth 8/9 project.

Section V: Selection Considerations

Section E: Climate Change and Sustainability

At the Port of Vancouver USA, we believe that a strong economy and healthy environment are vital to a strong region. By incorporating sound environmental practices into our projects, programs and daily operations, the port is protecting our natural resources while strengthening the regional economy. The port has demonstrated a proactive, innovative and integrated approach to sustainability.

The Port of Vancouver was one of the first ports to develop a Sustainability Program in 2008 with the goal to meet present day global economic, environmental and social needs without compromising the ability of future generations to meet theirs. As a sustainable port, we look at our operations in an all-inclusive manner, enhancing our profitability while operating responsibly within our larger community. One of the goals identified in our Sustainability Program and a key strategy in the port Strategic Plan, is the development of a Climate Action Plan.

This Climate Action Plan (CAP), finalized in 2021 with input from stakeholders, provides the port with a menu of actions aimed to reduce greenhouse gas (GHG) emissions and meet reduction goals established by the plan. The CAP has actions and strategies to ensure the port is on track to achieve our overall climate commitment of meeting or exceeding state and federal targets for GHG emission reductions, including being carbon neutral by 2050 and a 45%-50%

reduction of 2005 emissions by 2030. As part of the CAP, the port performed a GHG inventory of 2019 port emissions from the port operations that is made available on the port Climate Action Plan webpage. The City of Vancouver also included port-related GHGs in their 2019 GHG inventory to support their Climate Action Framework, which the port is a member of their Community Climate Advisory Group. The port and the City are currently updating their 2019 GHG inventories which are anticipated to be published midyear 2024.

The State of Washington has set aggressive GHG reduction targets and enacted several policies to reduce future GHG emissions state-wide, which the port is committed to participate in. The Clean Energy Transformation Act requires public utilities to provide carbon neutral electricity by 2030 and switch the state to 100% clean electricity by 2045. Until 2030 the port is committed to purchasing renewable energy certificates to offset the GHG emissions associated with the port's purchased electricity, which we have been doing since 2008. This means the electric mobile cranes, lights, future shore power and electric vehicle charging station at Berth 8/9 will be run on clean electricity. In 2021, Washington adopted California's zero emission vehicle standards that require a ramping up the percentage of vehicles sold in Washington from 2025-2035. The project's proposed electric vehicle charging station will ensure increasing number of electric vehicles will have adequate access to charging infrastructure.

This project incorporates specific project elements to address climate change, including installing an electric vehicle charging station, the pads, vaults and conduit for future shore power, installing LED lighting, including replacing existing incandescent and metal halide lighting, and improved stormwater facilities.

The port recently completed an engineering study for provision of shore power and electrification efforts. The findings from this study will be used in the installation of shore power conduit, pads, and vaults at Berth 8/9, as well as port-wide environmental initiatives including as acquiring zero-emissions and/or hybrid equipment, charging infrastructure for electric equipment, and advancing plans to implement the use of shore power. The port is also exploring the addition of rotainers at the Berth 8/9 site to be used for specific commodities. Rotainers minimize spillage and dust, making it one of the best ways to move sensitive commodities such as copper concentrate or lead. The use of rotainers aligns with the port's mission to preserve the environment, including the Columbia River.

This project's environmental enhancements work well with other port projects and grants strategy. In 2024, the port has been awarded a grant to replace a diesel forklift with an all-electric one, with grant funds provided by the Washington State Department of Ecology. Another grant will help fund the installation of nine EV chargers on port property. This grant is managed and funded by the Washington State Department of Commerce. The port will continue to seek federal, state, and local grants and incentives to advance our Climate Action Plan efforts.

The Berth 8/9 project avoids, minimizes and mitigates impacts to the environment, armoring against the negative impacts of climate change, through the following:

- Air and Water Quality – The same actions listed above to reduce GHGs will reduce impacts to air quality. Stormwater will be captured from the new dock surfaces and routed to new enhanced treatment system/s. Air and water quality are important to the community around the port and through thoughtful planning the project aims to minimize impacts.
- Wetlands – No wetlands are located at or adjacent to the site.
- Endangered Species – The port is developing a strategy to address the effects of the in-water project elements on endangered species through project design, purchase of mitigations credits from Wapato Valley Mitigation Bank and/or removal of creosote derelict piles from other areas of the port. Port staff have discussed the project with local and state agencies, including USACE, NOAA Fisheries, USFWS; the feedback from these agencies will be used to shape a comprehensive mitigation strategy. These mitigation elements and enhanced stormwater treatment will be beneficial to endangered species in the Columbia River such as salmon, a vital food source to the southern resident killer whales.

The Berth 8/9 project will also reduce greenhouse gases and climate change effects beyond the port with the increased movement of clean wind energy. The port's elected Board of Commissioners actively engages with our community to help shape port projects and policies. As a result of seeking public input and feedback, the commissioners adopted the Renewable/Clean Energy Policy to focus on the movement of more climate friendly goods and energy commodities at the port.

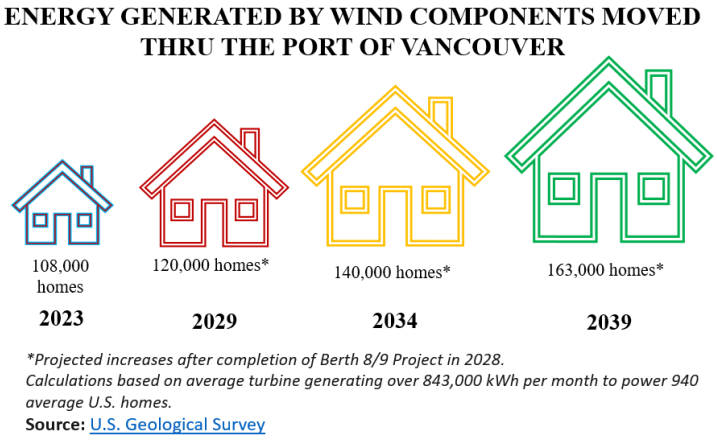

Figure 11: Electricity Generated by Wind Energy
Source: Port of Vancouver USA

Wind energy is a vital cargo that moves through the port. Transporting wind energy supports the port Renewable/Clean Energy Policy, and the port is proud to advance sustainability and greenhouse gas reduction by moving these renewable energy components to communities throughout the West Coast. Moving these wind energy components allows for the installation of new wind turbines and updating older turbines, resulting in increased renewable energy and decreased fossil fuel usage. Since wind started coming through the Port of Vancouver in 2008, nearly 550,000 metric tons have moved through our port, the equivalent of 1,050 wind turbines installed and generating power. The volume of wind energy components moving through the port in 2023 alone equated enough energy to power approximately 108,324 U.S. homes.

The port anticipates increased volumes of wind energy coming through the port (reflected in the "BCA Narrative" attachment) after the Berth 8/9 Extension and Efficiency Improvements Project

is completed. Through the increased volume of wind components, more wind turbines will be installed, replaced or enhanced to advance the region and nation's efforts in moving from fossil fuels toward renewable energy sources.

The port's location to the Pacific and multimodal connections including water, road and rail, available laydown space for large wind blades and towers, and skilled and season project cargo longshore workers, make our port a destination for wind and strengthen the nation's supply for clean energy.

Section F: Equity and Justice40

The Port of Vancouver's vision is to build a community connected to a world of economic opportunity that supports a healthy environment, trade and living-wage jobs. This vision aligns with advancing Justice40 and equity efforts. This community building includes the Fruit Valley Neighborhood, our residential neighbors to the north of the port. Fruit Valley is located Census Tract 53011041005, the same tract as the port and the Berth 8/9 project location. Residents in this census tract, including those living in Fruit Valley, are listed as having several disadvantaged indicators on the USDOT Equitable Transportation Community (ETC) Explorer. The overall health vulnerability is listed at 81%, with high asthma prevalence and low mental health prevalence. The social vulnerability is listed as 75%, high in 200% poverty line, no high school diploma, housing cost burden, and limited English proficiency. High environmental burden includes Diesel PM Level and risk management sites proximity. The community is including the Washington State Department of Ecology's Overburdened Communities highly impacted by criteria air pollution. Nearly 35% of residents in the census tract are a race/ethnicity other than white (non-Hispanic or Latino).

As detailed in Section E: Climate Change and Sustainability, the project incorporates several aspects to enhance sustainability and reduce climate change. This will be especially impactful to near-port areas, like Fruit Valley with 96% asthma prevalence and diesel PM level of 84%, through the reduction of greenhouse gas emissions and improvement of air quality.

The port takes an active role in communicating and engaging with the community to help shape port policies and projects, including Fruit Valley residents. With language barriers and other disadvantaged indicators, a tailored, accessible outreach plan was created to inform these neighbors. Efforts include mailing postcards with information in English and Spanish and a QR code printed that directs to a dedicated webpage with information and webform for feedback. To further enhance the accessibility of our website, the port is in the process of selecting a consultant to update our website to include language interpretation directly on the website.

Beyond print and digital outreach, the port has a staff member who serves as a liaison to the port for Fruit Valley residents. The port Community Relations Manager has worked closely with Fruit Valley leaders and trusted community organizations to create a communication strategy for the residents. Communication activities include port representation at community, school and neighbor events, sponsoring public events, engaging with the Fruit Valley Elementary School's

Equity Committee, and distributing information through the school, housing communities, public centers and facilities, etc. Special attention is paid to hosting and attending events at a time and day conducive to families and having information easily accessible and available for all, including limited English speakers.

The port Language Access Plan is utilized at these events to ensure those with limited English proficiency can share their feedback, questions and concerns. Port staff who interact with the public are provided with a resource card that lists language on one side and instructions to receive interpretive services by phone on the other. This tool is especially helpful when communicating with Fruit Valley residents, who often speak Spanish, Russian, and other languages at home.

Figure 12: Port Partnership with the Community
Source: Port of Vancouver USA

These strategies will be used to for the Berth 8/9 project to allow for meaningful conversations and opportunities for the public to share concerns, insight and ideas that will help shape not only the Berth 8/9 Project, but future projects as well. Updates on the project will be shared with the port audience through the port mailed *Community Report* and digital environmentally themed *Solstice* newsletter. A dedicated webpage will be launched and hosted on the port website. This webpage will provide information on the project and will invite feedback from the public via email/web form or some other mechanism.

In addition to reaching out to the Fruit Valley Neighborhood residents and the greater Vancouver community, the port also provides updates and request feedback from local American Indian tribes through outreach including letters mailed to tribal leaders. The port regularly incorporates tribal feedback into projects including the recent Vancouver Landing project, in which the opening ceremony was attended by multiple tribal leaders and blessed by a Cowlitz elder and spiritual leader. The port also participates in regular meetings with members of the Cowlitz Tribe and Yakama Nation.

Section G: Workforce Development, Job Quality and Wealth Creation
The Port of Vancouver USA is committed to helping create a skilled workforce and providing living wage job opportunities in our community. This is accomplished by working closing with port tenants, industry partners, unions and economic development organizations to provide training and apprenticeship opportunities, promoting inclusive programs for underrepresented groups, and advancing DEI efforts in hiring and workplace culture practices.

Working with local unions Laborers Local 335 and the Operating Engineers Local 701, the port hires seasonal apprentices in its maintenance department. These apprentices receive on the job training, with some apprentices hired full time at the port after their apprenticeship ends. The port launched a voluntary Apprenticeship Utilization Incentive Program to encourage contractors on specific Public Works projects to have a percentage of labor hours performed by apprentices enrolled in a WA state approved Apprenticeship Program.

For early-career workers, paid internships are available high school and college students including Partners in Careers and Future Leaders Project, which provide first generation and underrepresented students with experience and access to organizational leaders. Likewise, a maritime internship program brings in two or three college students from maritime academies during the summer. The port partners with Vancouver Public Schools on the Core Plus Maritime Program and Cascadia Tech Academy's new maritime program.

The port is actively advancing our diversity, equity and inclusion work within the organization and the broader community. The port Diversity, Equity and Inclusion committee is comprised of staff from various departments, roles, backgrounds and demographics, who are advancing DEI efforts in communication, policy, recruitment, training, and more. To reach and recruit a diverse workforce, the port published job postings in numerous and targeted outlets. These include Society of Women Engineers (SWE), Professional Business Development Group (PBDG), National Society of Black Engineers (NSBE), Oregon Association of Minority Entrepreneurs (OAME), Joint Base Lewis-McChord, community colleges and more. For Small Works and Public Work projects, the port has advertised projects with the Office of Minority and Women Owned Business (OMWBE), as well as in various publications including the Asian Reporter and El Latino de Hoy (Spanish-language newspaper).

The port played a key role in legislative efforts to affect change and provide equal opportunities for all businesses to work with public agencies statewide. A port staff member co-authored language for a new public works bill to the Washington State Legislature. The bill, which was passed, provides a definition for small business pursuing public works, creates a small business certification program through OMWBE and removes barriers, encouraging utilization of small and diverse businesses. Staff at our port have researched best practices of Small and Diverse Business Inclusion plans with clear and measurable goals. Staff have also been assisting with training on this new law as well as the updated Apprenticeship Utilization in Public Works law to public agency staff members to prepare for the implementation in 2024.

Section VI: Project Readiness

Section A: Technical Capacity

The port recently completed the 10-year long, $250 million West Vancouver Freight Access Project. This was a program that was executed over 23 phases of work. Each phase was an individual contract whereby each component of the overall system was realized. The project included rail, new roadways, a new bridge, marine structures, demolition of significant port

structures, pavements, utilities and relocation of a large industrial tenant. A significant portion of this project was funded with grant money including large federal awards through the Transportation Investment Generating Economic Recovery (TIGER II) and High-Speed Intercity Passenger Rail (HSIPR) discretionary grant programs.

The port Finance team is experienced with managing the financial aspects of federal grants and the Procurement and Contracts team is well versed and experienced with federal grant requirements. Moreover, our engineering team has many successful projects completed under their purview, including completed the federal grant projects listed above on schedule, on budget, within the requested final reimbursement time period and provided all grant reporting on time and in the required format. Port of Vancouver staff are more than prepared to execute and have the requisite experience and expertise necessary to deliver this project.

The port has retained WSP as the project Engineer of Record (EOR) to prepare necessary permitting applications. At the time of this submittal, we have completed 90% engineering plans and specifications for the proposed project; 100% design is expected to be completed in 2024. We have been working on this project with WSP since 2019. Port staff includes professional engineers registered in the State of Washington. These professionals will be actively involved in managing and implementing the program.

All costs referenced in this application were updated in May 2024. The values used in the cost analysis were derived from historical records from actual projects at the port and the consultants own extensive internal database. All estimates are based on a 90% level of completion for all engineering documents.

Our schedule for execution of this project included below with an estimated obligation date of May 2026 used in the development of this schedule. This schedule provides sufficient time to reach obligation well before the September 30, 2027 deadline. Once the project is obligated, construction will begin, and funds exhausted before five years of obligation. These commitments are reflected in the project schedule below.

Table 6: Project Schedule

Task Item	**Start and End Dates**
Environmental (including NEPA) and Permitting	April 2023 – April 2026
Grant Obligation	February 2025 – May 2026
Design	March 2023 – July 2024
Construction Bid and Contracting	June 2026 – October 2026
Construction	October 2026 – August 2028
Project Completion (Berth Open for Vessels)	September 2028
Project Close Out	Fourth Quarter 2028

There are no right-of-way acquisitions or intergovernmental agreements needed to construct this project. The port owns or controls all of the upland property within the project boundaries. The port manages and controls the aquatic areas along our upland under our Port Management Agreement (PMA) with the Washington Department of Natural Resources (DNR). Although the project construction and activities will occur within easement areas granted by DNR for Bonneville Power and PacifiCorp for high electrical transmission lines, construction of the project will not interfere with the utility companies' easement rights. The port possesses the remaining property rights to use the land and in-water areas to construct the project.

Risk Mitigation
Significant project risks and proposed mitigation for each is presented in the following table:

Risk	Mitigation
Public opposition to additional roadway and rail traffic and/or an increase in the number of marine vessels	As with other similar projects, port staff will inform and solicit feedback from the public regarding the Berth 8/9 project. Outreach efforts include attending local neighborhood and community meetings to inform and discuss the project with residents, updating the community on the project through public commission meetings and having a dedicated webpage with project information project and tools for the public to provide feedback.
Lack of domestically available products meeting the Build America, Buy America criteria	The Project Engineering Consultant, WSP, has identified the availability of supplies and confirmed suppliers for the project. Some BABA-compliant items may be limited but are currently available. Two exceptions are the molded products, including cone and arch fenders, and the electrical cable protection trench, which are currently not made in America. These molded products and cable protection trench are typically required for a project like this.
Supply chain disruptions	Consider material pre-purchase contracts for items that are especially significant to the project or that have an extended lead time.
Approvals/Permitting Delays	See below Section B: Environmental Risk for risk mitigation strategies.

Section B: Environmental Risk
The project will require federal, state and local environmental reviews and permit approvals. The port is confident in its ability to secure all necessary permits and entitlements for the project prior to the obligation of funds. Our staff and our consultants are extremely experienced with permitting of projects on the Columbia River, especially those relating to port development. This includes consultant firm WSP, who have a history of successfully acquiring permits for maintenance of existing facilities and new developments at the Ports of Vancouver, Kalama and

Longview in Washington and the Port of Portland in Oregon. The project is not dependent on or affected by any U.S. Army Corp of Engineers (USACE) investment or USACE planning activities. As an active partner, the port participates as one of the non-federal sponsors in the ongoing maintenance of the Lower Columbia River federal navigation channel. The port is dependent on on-going maintenance of the navigation channel, and partners with USACE and other Columbia River ports to ensure efficient vessel passage on the river.

Environmental Permits and Review

The project is located in and adjacent to the Columbia River and includes construction elements that will require permits from the U.S. Army Corp of Engineers (USACE) along with associated reviews to document compliance with federal environmental regulations, listed in Table 8.

Table 7: Federal Permits

Federal Environmental Permits and Reviews
USACE SEC. 10/404
NEPA
SECTION 7 OF THE ESA
SECTION 106 OF THE NHPA
CLEAN WATER ACT

The port has engaged with the USACE, National Oceanic and Atmospheric Administration (NOAA Fisheries), U.S. Fish and Wildlife Service (USFWS) and other state and local permitting authorities to introduce the project, confirm the permitting requirements and identify any specific items that need to be addressed. The agencies confirmed the permits needed, that the project is permittable and did not identify any major issues that would prevent timely issuance of the project permits (Meeting Minutes available on the project webpage link in the footer below).

Mitigation for impacts to the aquatic environment will be accomplishment through the purchase of mitigation credits from the Wapato Mitigation Bank which is currently under review and expected to be eligible for credit issuance within the project timeframe. In lieu of mitigation bank, the port may also elect to remove a series of wooden creosote treated piles remaining from past port development. The port anticipates submitting permit applications in the second quarter of 2024. This allows adequate time for agency review prior to the obligation date.

The port has secured dedicated federal agency staff to evaluate the Berth 8/9 Extension and Efficiency Improvements Project. The port participates, along with other ports in the region, in funding a USACE regulatory staff person under Section 214 of the Water Resource Development Act. In addition, the port has entered into an interlocal agreement with other Washington ports to fund a similar position with National Oceanic and Atmospheric Administration (NOAA) and U.S. Fish and Wildlife Service (USFWS). This provides for dedicated staff to evaluate and process applications for permits from the USACE and complete the required consultations under Section 7 of the ESA within an appropriate timeline. The port also understands the need for compliance with Section 106 of the National Historic Preservation Act (NHPA). The port has completed a Cultural Resources Survey (available on Project Webpage) for the project consistent with the requirements of Section 106. The survey concludes that the project is within the Vancouver Lakes Archaeological District (45DT101) but no

archaeological or historic resources were found to be present with the project area and the project will have "No Effect on Historic Properties."

National Environmental Policy Act (NEPA)
NEPA review has not been completed for the project at this time. Port staff consulted with Environmental Protection Specialist Erin Kendle with MARAD's Office of the Environment in 2023 to identify the anticipated NEPA level of review, the technical documentation needed and the process that will be followed to complete the NEPA process. MARAD staff confirmed that an Environmental Assessment (EA) is the anticipated NEPA level of review required for the project.

The project has been evaluated against the environmental disciplines and no impacts have been identified that could not be addressed in an Environmental Assessment (EA). The port has completed the NEPA process for multiple other projects including the preparation of an EA and has the technical ability to complete this process within a reasonable time period. As discussed earlier, the project is anticipated to have no effects under Section 106 and the port has access to dedicated staff to complete consultation under the ESA, two key items that must be completed with NEPA.

Table 8: State and Local Permits

State and Local Permits Environmental Permits and Reviews
LOCAL
SHORELINE
CRITICAL AREAS
STATE
SEPA
HYDRAULIC PROJECT APPROVAL
401 WQ CERTIFICATION
SHORELINE CONDITIONAL USE PERMIT
NPDES CONSTRUCTION STORMWATER

State and Local Environmental Permits
The project will require typical land use and development permits from local and state agencies, listed in Table 8. The port has engaged the City of Vancouver and other agencies with jurisdiction to introduce the project, confirm required permits and discuss any concerns with the project. The agencies confirmed that the use was permittable and did not identify issues that would prevent issuance of permits in a timely matter to support the project schedule. The city and state agencies have statutory requirements to issue permits within a specific time with expected issuance of permits within 120 days of submittal.

State Environmental Policy Act (SEPA)
The State of Washington requires that most projects be reviewed under the State Environmental Policy Act (SEPA). A project level SEPA review will be conducted. The port is lead agency under SEPA and will be responsible for review of the project. It is expected that the project will result in a Mitigated Determination of Non-Significance (MDNS) as the project is not expected to result in significant adverse impacts to the environment that can't be appropriately mitigated. In 2019 the port updated its Comprehensive Scheme of Harbor Improvements to include the project as required by state law. This action was reviewed under SEPA and a Determination of Non-Significance

was issued for the project (Port Resolution No. 3-2019 included in the attachment "Project Planning Documents").

Section VII: Determinations

Statutory Determination	Guidance
The project improves the safety, efficiency or reliability of the movement of goods through port or intermodal connection with the port.	As detailed in Section IV: Merit Criteria, the project improves safety of the dock through the installation of an apron and other safety equipment, allows for more efficient use of the dock through the extension that allows for two vessels to be moored (instead of one) and reliability is enhanced by strengthening the dock to prevent significant damage and/or destruction during an earthquake.
The project is cost effective.	This project has a benefit-cost ration of 3.04. See Section B: Supporting Economic Vitality at the Regional or National Level.
The eligible applicant has the authority to carry out the project.	Yes. See Attachment "Authority to Carry Out Project."
The eligible applicant has sufficient funding to meet the matching requirements.	The port will utilize funds in its General Fund and through the Issuance of Taxpayer Supported General Obligation Bonds.
The project will be completed without unreasonable delay.	Significant work is underway for the project, with many permits submitted or in the process of being submitted. The project is currently at 90% design. Pre-construction efforts are moving forward, including design, engineering and permitting, which are anticipated to be completed in 2025.
The project cannot be easily and efficiently completed without Federal funding or financial assistance available to the project sponsor.	Of the total project construction costs, the port will contribute $33,381,000 or 53% to cover the construction of the project. Without federal support of 47% for the construction of the project, the port will need to halt the project until this funding is identified and secured. The project scope would remain as we believe both the extension and Berth 9 infill are essential to enhancing the dock. The project schedule would suspend until funding is secured, most likely increasing the project cost due to inflation.

List of Attachments

1. SF-424
2. Project Narrative
3. Attachment Form
4. BCA Narrative
5. BCA Spreadsheet
6. Project Schedule
7. Funding Commitment Letter
8. Project Engineering Drawings
9. Project Planning Documents
10. SF-424 C. Budget Information for Construction Programs
11. Project Cost Estimate Information
12. Letters of Support
13. Authority to Carry Out Project