

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
STAFF BRIEFING

Item No. 6A
Date of Meeting March 2, 2021

DATE: February 19, 2021
TO: Managing Members
FROM: John Wolfe, Chief Executive Officer

Sponsor: Tong Zhu, *Chief Commercial & Strategy Officer*

Project Managers: Emma Del Vento, Capital Program Leader, Port of Seattle, and
Thais Howard, Director of Engineering, NWSA

SUBJECT: Terminal 5 Modernization Program Quarterly Update

A. BRIEFING REQUESTED

Regular Terminal 5 Modernization Program Update.

B. BACKGROUND

In April 2019, the Northwest Seaport Alliance (NWSA) entered a long-term lease for the redevelopment of Terminal 5 in the North Harbor to create a modern international container terminal for ultra-large container ships. Once the Terminal 5 Modernization Program is completed, the facility will have the capability to handle the largest vessels currently calling the west coast, allowing the NWSA to compete for the super post-Panamax vessels, increasing current container volumes, supporting economic development, and both creating and securing current jobs in the region for the next thirty years and likely beyond.

C. PROGRAM SYNOPSIS

Considering a year of COVID-19, extreme weather, underwater conditions, and Seattle City Light theft, progress of the Terminal 5 Berth Modernization Program remains on track with key milestones around budget and schedule. Emerging scope items and greater definition of projects have allowed the delivery team to work in concert with the sponsor and tenant to make adjustments to the schedule, be aware of budget impacts, while managing quality and risk. More detail below:

Scope

Scope increases previously reported include:

- Wharf demolition and reconstruction for slope stabilization
- Additional soil removal and related paving
- Lease obligations related to cost uncertainty

Scope increases since the last update include:

- Open Lease project responsibilities that remain in dispute between NWSA and the Tenant as to which party bears financial responsibility:
 - North Reefer Demarcation – Electrical distribution from north reefer infrastructure vault to reefer plugs.
 - South Reefer Repair project – The existing T-5 terminal includes 640 reefers that the tenant will use during Phase 1 operations. A portion of these reefer plugs are not operational due to the existing electrical feeder to the substation and an electrical switch. The program will repair the feeder and switch as a change order to the existing wharf construction contract.
- Tribes: Due to the expanded timeline for completion of the North Berth in-water work, the NWSA will need to review the Tribal agreements for the 2021/22 in-water work window.
- Gate Complex Repairs: There is significant damage to the structure and pavement around the scales. The Lease puts responsibility for damage due to the displacement of soils, water intrusion, or to the paving system to the NWSA as the owner of the facility. Because of this, the repairs in and around the Gate Complex appear to be NWSA responsibility under the Lease. These repairs are required for Phase 1 operations. The City of Seattle has already agreed to expediate necessary construction permits to support moving the overall project along as quickly as possible. Some repairs will be completed to support the beginning of operations of Phase 1, and the complete repair will be completed in Q1 2022.

Schedule

The T-5 Berth Modernization construction project is currently on schedule to complete both phases of the project by the original schedule date of December 31, 2022. Dredging will be completed per the contract before March 2023. Phase 1 north berth will be ready to receive cranes by June 1, 2021. Contractor is working to deliver the remaining portions of the wharf construction by October 31, 2021.

- The wharf construction contractor's schedule is showing completion of the north berth, except toe wall and dredging in June 2021, a change due mostly to the slope stabilization (pinch piles) change order, existing conditions that led to unforeseen repairs, and COVID-19 impacts. For purposes of managing contractor cost claims, NWSA has not accepted the schedule to date and is working with the contractor on an agreed-upon substantial completion date. The NWSA issued a letter for forbearance to the general contractor on 01/07/21 reserving NWSA's rights to collect liquidated damages.
- The toe wall is partially installed. The toe wall is the underwater wall driven into the sediment to secure the wharf and its slope stabilization piling system. The toe wall must occur before dredging and will allow the berth dredge to -55 ft depth. Toe wall driving could not reach design depth and has stopped for this in-water work season (August 15 – February 15, annually) due to contractor means and methods of the installation and/or existing differing site conditions. Additionally, portions of the toe wall that have been installed have been removed or cut to height to allow crane delivery by June 2021. The lease requires berth dredging to be completed no later than March 2023.

Budget

Program Budget of \$340M was approved in April 2019.

Through January 31, 2021, spent to date is approximately \$165.2M and matches progress and schedule milestones for all projects.

Construction as of December 31, 2020, is 63% spent (of the new contract amount) and 45% complete (discrepancy is due to mobilization and early material purchase for Phases 1 and 2).

ITEM	COST
T5 Modernization Program	\$365 - \$380M
Dept of Ecology Stormwater Grant	-\$5M
WA State Allocation for Shore Power	-\$4.4M
PIDP Grant	-\$7.5M
Net Total Cost	\$348.1 - \$363.1M

Risk

The Stochastic Analysis and Risk Register will be updated in mid-March. The combined additional impact of elements since the Q3 2020 quarterly update is currently estimated at \$25-40M. In the scenario where all of these scope elements are added and occur at the high end, the P-100 is close to \$380M and the P-85 is approximately \$365M. While these forecasted costs are designed to be comprehensive, conservative and cover all project phases, final program completion is two (2) years out and inherent unknown risks may still emerge, and other risks may not occur.

The increase in the P-85 value since the Q3 2020 update is due to the following factors in the forecast:

1. Additional soil removal (originally estimated at \$6-7M above the bid amount) has increased by approximately \$3-4M. The initial estimate of this change that was reported last quarter and did not include the cost for additional paving related to additional soil removal. Most of the additional work is related to the electrical trenching work. The total is between \$9-11M.
2. South reefer repair project (estimated at \$800,000 - \$900,000), material costs make up the majority of the estimate. The scope includes providing new feeders and installing a new electrical switch.
3. North Marine Building Bid was 40% higher than engineer's estimate which has increased the budget by approximately \$1.6M. This total increase was previously reported but is now included in the update stochastic analysis and is reflected in the probable program estimate.

4. North reefer infrastructure probable amount has increased by approximately \$600,000 (less than 4% of estimated budget) with the completion of the 60% design for a total range between \$14-19M.
5. Increase in the risk by approximately \$5.5M - \$20M due to the north reefer demarcation issue. This scope includes the electrical distribution between the north reefer infrastructure project and the reefer plugs that will be provided by the tenant.
6. A new scope of work related to repairs at the Gate Complex are estimated at \$3 - \$6M. This work repairs damage to the structure around the scales, new scales, and repairs asphalt subsidence around the structure.

Note that items 2, 5, and 6 are all costs that are the subject of ongoing dispute resolution discussions with the tenant with regard to financial responsibility for these items.

Safety

Orion Marine Contractors (T-5 Berth Modernization General Contractor) meets Port of Seattle requirements with Health and Safety Plan, Site Specific Safety plans; and have led the way forward through the 11 months of COVID-19 with continual adjustments and monitoring using additional supervision, access protocols, PPE to include face coverings, and, hand washing. Orion has regularly had after action reviews with crews and has been responsive to all NWSA/POS direction.

During Q4 2020 there were 6 positive cases of COVID-19 on site which generated about a week stop work for testing of most crews. There have been no near misses and no recordable incidents in Q4 2020 for almost 30,000 hours worked. To date no further on-site COVID-19 cases have occurred. The contractor has continued to work safely for over 16,000 hours between early January and mid-February.

Unfortunately, the project experienced a theft at the new T-5 main electrical substation in December. Installed copper cables were cut and material removed from the installation. Repair work is being completed and costs will be determined. Security guards will be on site through the end of the installation of this equipment.

D. CURRENT STATUS

Milestones:

Orion Marine Contractors are moving forward with:

- North Berth
 - Above-water dock construction – on schedule for June 2021.
 - Landside crane rail – on schedule. The landside crane rail concrete is complete. Waterside crane rail concrete is nearing completion and will be complete in March.
 - Electrical Substation –Seattle City Light (SCL) started 4-month transformer work in early November, Transformers were delivered in December.
 - Utility: sewer, water, and electrical duct bank - on schedule. The primary duct bank is complete, and work is focused on the secondary duct bank.

- South Berth
 - Wharf – Fender Demolition is underway and pinch pile driving on the landside started
 - Utilities – underway with dewatering and shoring

Major milestones for Permit Conditions and Lease Obligations Q4 2020 and early Q1 2021 include:

- T-5 Air Quality Management Program approved by Puget Sound Clean Air Agency (February 2021)
- North Marine Building bid award (December 2020) and Notice to Proceed (March 2021)
- Stormwater Treatment System 100% Design and bid advertisement (January 2021)
- Rail Quiet Zone 95% and Pedestrian Path design complete (January 2021)
- Implementation of Spokane Street signalization and W Marginal Way Flashing Alert (December 2020)
- North Reefer Infrastructure 90% Design (January 2021)
- South Reefer Study Complete (November 2020) and Change Order Authorized for construction of repair (February 2021)
- South Berth Crane Removal: relocated all 6 cranes to South Harbor (October 2020)
- Management Plans will be in review with Agencies (Operational Noise in agency review)
- Other: PIDP Grant Announcement for \$10.7M Federal match

E. CONTINGENCY AND RISK

The contingency and risk section provide the Managing Members' early visibility to emerging issues and associated costs in T-5 modernization program implementation. In addition to the risks outline above retired risks and potential risks are outline below.

Future Potential risks:

- Quiet Zone Property Acquisition (\$1-2M) and schedule delay

Under the Memorandum of Understanding we have with the City of Seattle; we are responsible for all costs associated with the Quiet Zone. As part of the project, a property acquisition will need to be made by the City and the project will pay the cost; the City will hold the title to the property. Discussions have begun with the property owner. Risks are in the finalization of the costs of the acquisition and in the potential impacts to the schedule.

- NWSA received the Stormwater 90% design in October 2020 with the updated construction estimate of \$35.2M. Based on known conditions, and similar projects at neighboring locations, we agree with the tenant's estimate range.

- Reefer Reimbursement (\$9M) lease condition if Terminal 5 Phase 2 not executed.
 Lease obligations are for NWSA to reimburse Tenant for reefer infrastructure up to \$9M should tenant elect Phase 1 Plus.
- Tribal Agreements and requirement for additional fishing coordination with respect to the in-water work window

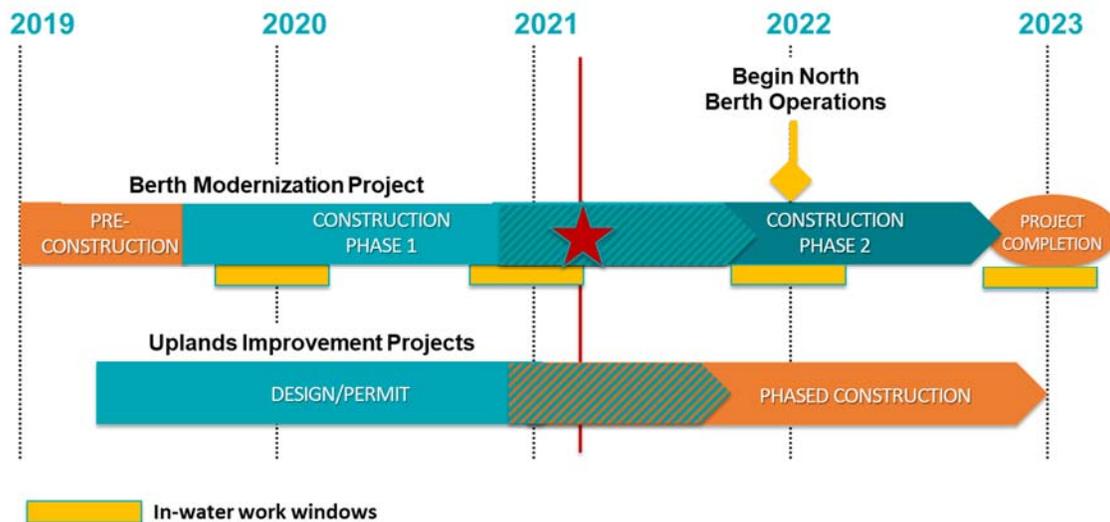
Retired major risks are:

- Wharf construction and crane rail
- Redesign of some tenant projects

Continuing risks:

- Encountering in-water obstructions for sheet piles and phase 2 in-water pile driving (significantly reduced)
- Further unknown COVID-19 (impacts have been reduced)
- Lease Obligations: CBP Booth, RPM location, N. Reefer demarcation, additional unknown requirements (a site inspection is being scheduled to identify these)
- Over-legal load 2 impacts to West Marginal and compliance with City permits
- Unforeseen site conditions (have been reduced)
- Other external factors (West Seattle Bridge Safety Improvement Program, Lower Bridge construction projects, etc.)
- Toe wall driving and dredging
- Gate Complex Repairs
- Tribal Agreements for in-water work

F. PROGRAMMATIC SCHEDULE



The T-5 Berth Modernization construction project is currently on schedule to complete both phases of the project by the original schedule date of December 31, 2022. Phase 1 north berth crane delivery is on schedule to receive cranes in June 2021. The north berth toe wall and turnover of the north berth will be complete with the related lease projects (N Marine Building, Clean Truck Program, Power to Radiation Portal Monitors and Customs and Border Protection Booth, S Reefer Repair, Gate Complex Repair) and Master Use Permit Conditions by Q4 2021.

Other projects tied to Phase 1 include:

Seattle City Light (SCL): site turnover to SCL was November 2, 2020 and work is forecast on schedule for Phase 1 completion.

Rail Quiet Zone: Permit Condition for the quiet zone technical analysis for submittal to BNSF will be distributed by February 15, 2021. Construction will be 2022/23.

West Marginal Way Closure and Pedestrian Path: Permit Condition for design for SDOT review and approval to implement when 5-way intersection is closed. Final design will be completed and distributed by Q1 2021. Construction will be 2022/23.

T-5 Access Bridge restriping – done.

Access Road Improvements: Install striping and signage to surface access route connecting T7 to West Marginal Way SW. Construction will be completed 2022/23.

Spokane St Signal – Signal upgrades complete pending one signal that will be impacted by the East Marginal Way Grade Separation Project.

T-5 Access Bridge Overpass Restriping and Signs – complete.

West Marginal Way Flashing alert – will be complete in April.

Gate Queue Management Plan – Agency review and acceptance Q1 2021.

Gate Time Awareness system – T-5 connection. Anticipated completion for Phase 1, implementation will be at start of Operations.

Operational Noise Management Plan – Agency review and acceptance Q1 2021.

Establish Noise Complaint Hotline – on schedule for Phase 1 Permit Condition to be met.

Air Quality Management Plan – Agency review and acceptance Q1 2021.

Clean Truck Gate Equipment – part of Phase 1 lease agreement. On schedule to be completed by April 15, 2021.

Marine Buildings – North Marine Building is part of Phase 1 Lease. South Marine building construction has been deferred and is scheduled to meet Phase 2 lease obligation on or before December 31, 2022.

RPM Power Supply – was part of Phase 1 Lease. The Parties have agreed to delay construction until tenant determines location of their RPMs. Tenant is considering relocating their out gate.

North Reefer Infrastructure – was part of Phase 1 Lease. The Parties have agreed to delay construction. Currently forecast for construction completion is Q3 2022.

South Reefer Repair – new project. Construction completion forecast before the start of north berth operations, July 2021.

Gate Complex Repair – new project. Construction completion to be determined.

G. OPPORTUNITIES

- Department of Ecology Stormwater Grant - \$5 million awarded.
- State budget for shore power infrastructure at Terminal 5 – NWSA’s application to the VW Settlement to support the T-5 shore power project was denied by the Department of Ecology, allowing the NWSA to claim a \$4.4M appropriation in the Washington State budget. Staff is working with the Department of Commerce on the contracting required for the appropriation. The interlocal grant agreement will require Managing Member authorization and will be scheduled for a future Managing Members’ meeting.
- Maritime Administration PIDP grant – award announcement was made in November 2020 for \$10.7M (\$3.2M to SSA and \$7.5M to the NWSA). Amount is reduced from the \$17.7M requested. Scope of the projects and grant agreement work in progress.

H. LOOK AHEAD

- Q1 2021
 - North Marine Building Execution and start of construction
 - Completion of Seattle City Light (SCL) work
 - Stormwater Bid Package advertisement and award
 - Rail Quiet Zone 100% design
 - Permit Conditions in review with Agencies
- Q2 2021
 - North Berth Crane delivery
 - North Marine Building under construction
 - Stormwater Project under construction
 - Phase 1 Permit Conditions Approved by Agencies and SDOT
 - Phase 1 Lease Obligations in construction

I. NEXT STEPS

The next program update will occur in July 2021.

J. ATTACHMENTS TO THIS REQUEST

- Computer slide presentation.

K. PREVIOUS ACTIONS OR BRIEFINGS

Date	Action	Amount
February 2, 2021	T5 Modernization - Upland Elements Construction Authorization	\$0
October 6, 2020	T5 Modernization - Program Update	\$0
September 1, 2020	T5 Modernization - Tribal Agreement Update	\$0
August 4, 2020	T5 Marine Building - Approval to advertise for North Building construction only	\$0
July 2, 2020	T5 Marine Building - Authorization to advertise for North and South Buildings construction request	\$0
July 2, 2020	T5 Modernization - Program Update	\$0
April 7, 2020	T5 Modernization - Program Update	\$0
January 14, 2020	T5 Modernization - Program Update	\$0
October 1, 2019	T5 Modernization - Program Update	\$0
August 6, 2019	T5 Modernization - Program Update	\$0
June 4, 2019	T5 Program Update	\$0
May 20, 2019	Program Authorization for Construction of Berth Modernization Program	\$0
April 2, 2019	Additional Program Funding and Authorization to Fund T5 Modernization Program	\$314,150,000
February 26, 2019	Authorization to advertise for construction	\$0
February 5, 2019	Pre-authorization Program Briefing	\$0
November 13, 2018	Motion to prepare construction documents for authorization to advertise	\$0
August 1, 2017	Railroad quiet zone funding, tribal payments, and Agreements	\$5,650,000
October 4, 2016	Additional Funding, Seattle City Light Agreement, and Project Labor Agreement	\$8,200,000
June 7, 2016	DEIS Briefing	\$0
November 4, 2015	Additional SEPA and Design Funding	\$2,000,000
October 13, 2015	Test Pile Bids Exceeded Engineer's Estimate	\$0



Item No: 6A
Date of Meeting March 2, 2021

Quarterly Program Update Terminal 5 Modernization

Presenters:

Thais Howard, NWSA Director, Engineering
Emma Del Vento, POS Capital Program Leader,
Port of Seattle

Terminal 5 – Project Synopsis

- **Berth Modernization Project**
 - ***New Target Schedule for Phase 1 North Berth***
 - **June 2021** – Crane delivery
 - **Oct 31, 2021** – N Berth toe wall complete
 - ***Target Schedule for Phase 2 (South Berth)***
 - **Dec 31, 2022** – No change
 - ***Program Delivery (Dredging)***
 - **Mar 06, 2023** – No change
- **Uplands Improvements Projects**
 - ***Permit Condition Progress***
 - **April 15, 2021** – No change
 - ***Lease Obligations (Phase 1)***
 - **Oct 2021** – Complete Phase 1 Lease Obligations (N Marine Bldg, S Reefers, Clean Truck Program, Radiation Portal Monitors)
 - **Dec 31, 2021** – Gate Complex repairs for operations to start

Scope Changes

Gate Complex
N Reefer Demarcation
S Reefer Repair
Tribal Payments

...

Impacts of scope/
schedule change to
budget; Total \$365 -
\$380M



Terminal 5 – Program Overview

Primary Elements of Scope

- **Berth Modernization**

- Crane Rails
- Dock Rehabilitation
- Slope Stabilization
- Berth Deepening
- Power Supply/
Distribution

- **Uplands Improvements**

- Permit Conditions
- Lease Obligations
 - Stormwater
 - Marine Buildings
 - Reefers
 - Gate Complex* *new*



Terminal 5 – Q1 2021 Progress

- **Berth Modernization Project**

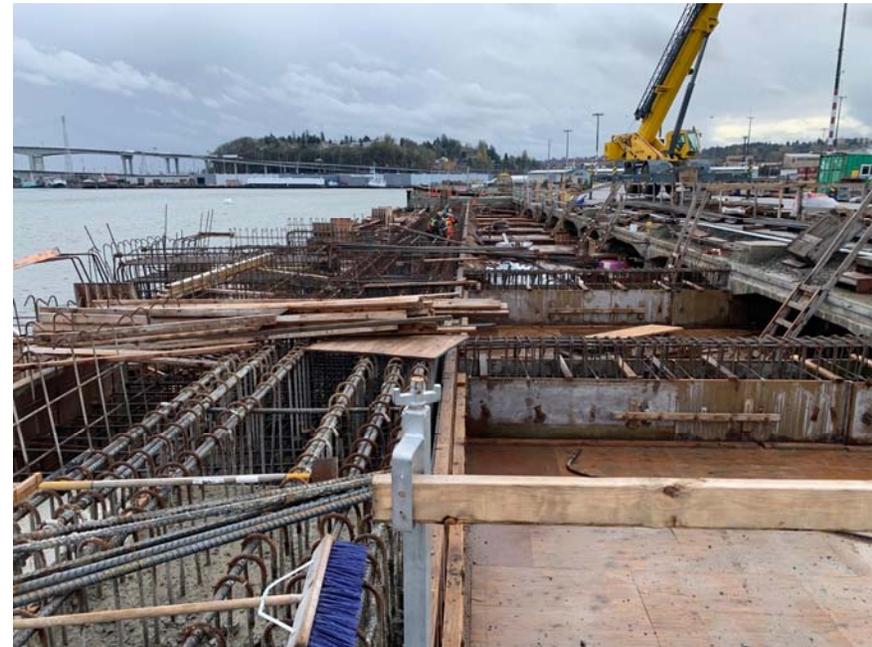
- Above-water dock construction - on schedule
- Landside crane rail – on schedule, almost ready to place rail
- Electrical Substation –Seattle City Light (SCL) started 4-month transformer work in early November
- Utility: sewer, water, and electrical duct bank - on schedule
- In water work: complete for the 20/21 work window

- **Uplands Improvements Projects**

- Permit Condition Progress
 - Rail QZ 95% design
 - Air Quality Management Plan approved
- Lease Obligations
 - Stormwater Treatment: Bid Feb 2021
 - North Marine Buildings Notice to Proceed
 - N. Reefer Design 90% Design

- **Grants**

- PIDP – Awarded November 2020
- Shore Power State Allocation
- Department of Ecology Stormwater Grant



Waterside Crane Rail – South end

Terminal 5 – Construction Progress



Backfill area between WSCR and asphalt



Pouring curb at substation

Terminal 5 – Budget

- **Forecast**
 - Original Authorization \$340M
 - Current likely budget \$365 - 380M
(estimated, no stochastic model)
- **Spent to date:** **\$165.2M**
- **Management Reserve Recent Transfers**
 - South Reefer Repair \$800K
 - North Marine Building \$1.5M
 - Gate Complex \$4.5M

*Recent additional lease agreements scope will increase the P-85 to approx. \$365M and the P-100 to \$380M

Terminal 5 – Budget

Forecast currently over budget
With new risks budget is estimated to be \$365 – \$380M
Construction is 63% spent and 45% complete

ITEM	COST
T5 Modernization Program	\$365 - \$380M
Dept of Ecology Stormwater Grant	-\$5M
WA State Allocation for Shore Power	-\$4.4M
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Net Total Cost	\$348.1 - \$363.1M



Terminal 5 – Berth Modernization Trends

- **Construction Contract**

- Original Contract Amount \$ 160M
- Projected Contract Amount \$ 198.9
(New Contract Amount + Potential Risk to construction contract)
- Original Contingency \$ 24M
- Remaining Construction Contingency \$-14.9M
- Bid Variance \$ 24M

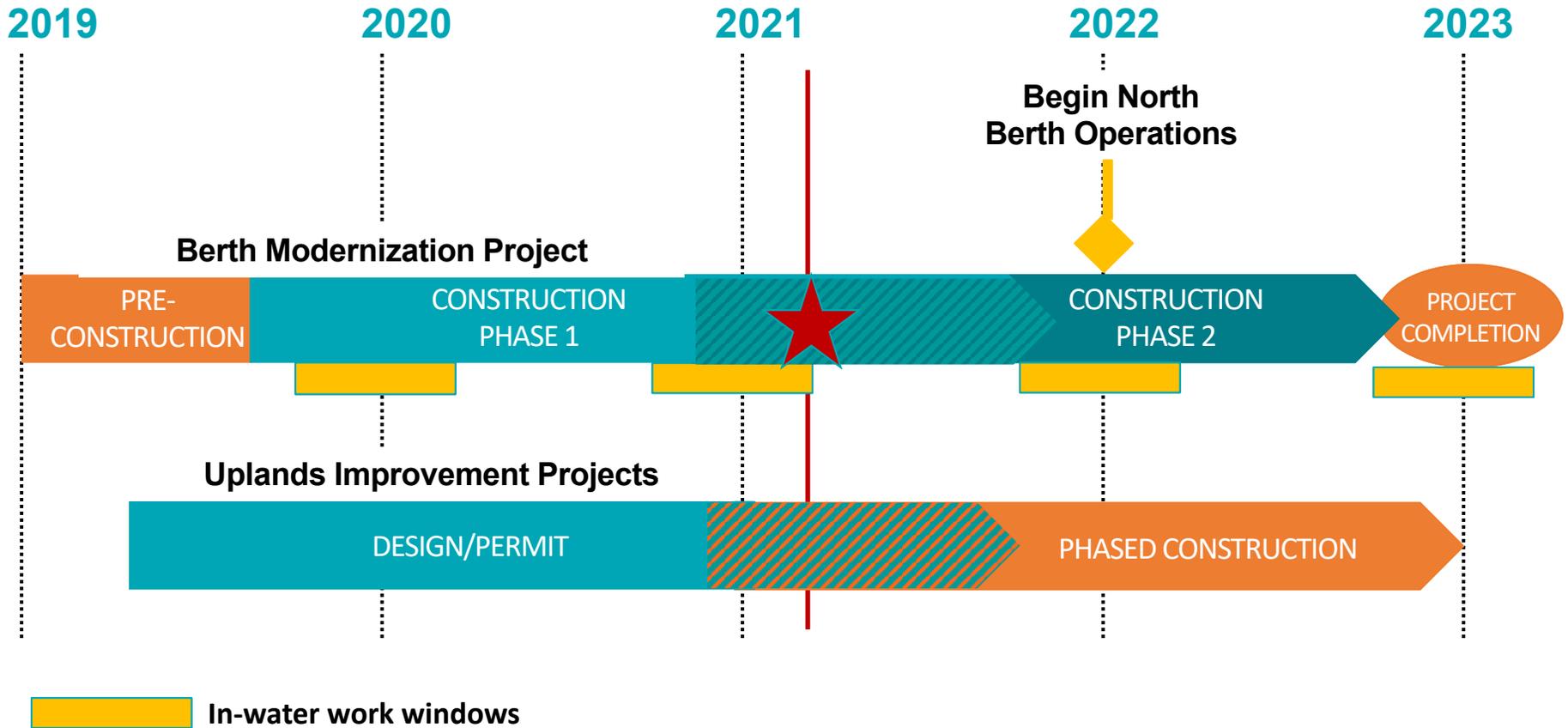
- **Management Reserve**

- Original Amount \$ 20M
- Remaining \$ 5.8M
- Pending risks up to \$ 55M



Terminal 5 – Programmatic Schedule

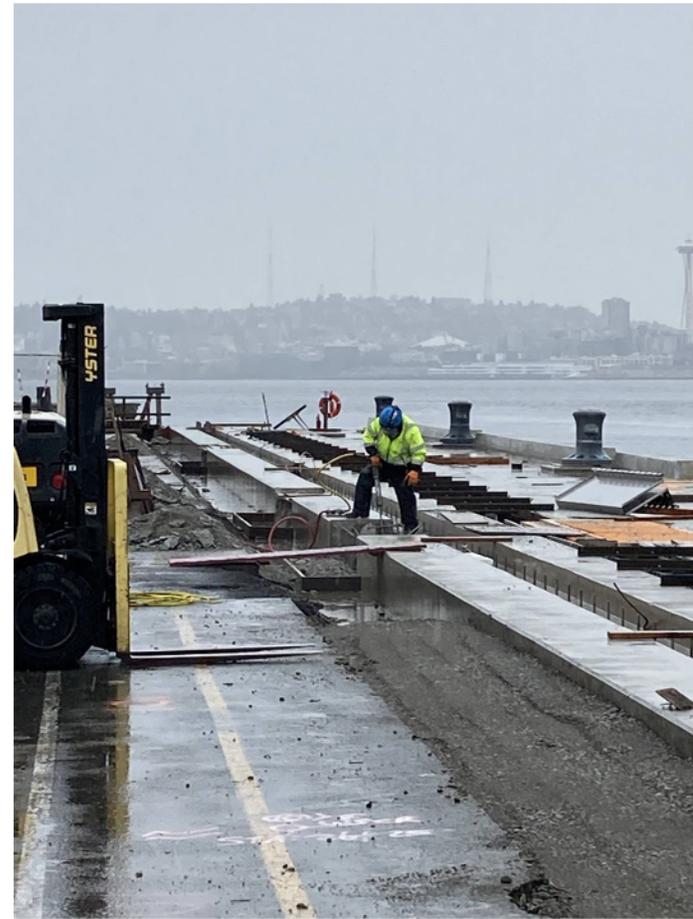
Berth Construction 51% complete; 46% time elapsed



Terminal 5 – Opportunities

- **Department of Ecology stormwater grant – \$5M**
- **State allocation for shore power infrastructure at Terminal 5 – \$4.4M**
- **PIDP Grant – \$10.7M (\$7.5M NWSA, \$3.2M SSA) awarded Nov 2020**

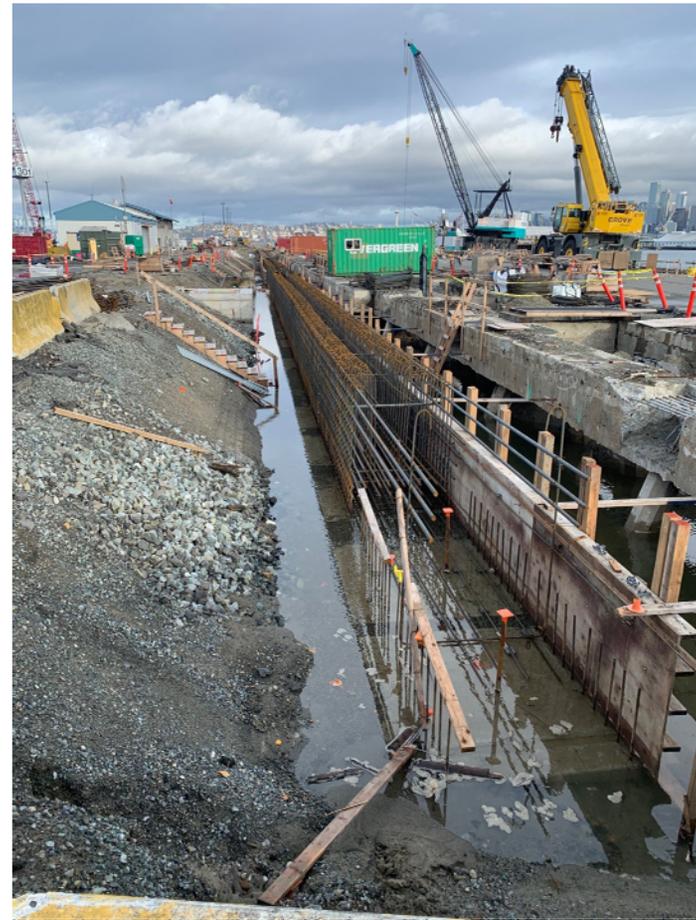
PIDP = Port Infrastructure
Development Program



Stowage Sockets North End

Terminal 5 – External Engagement

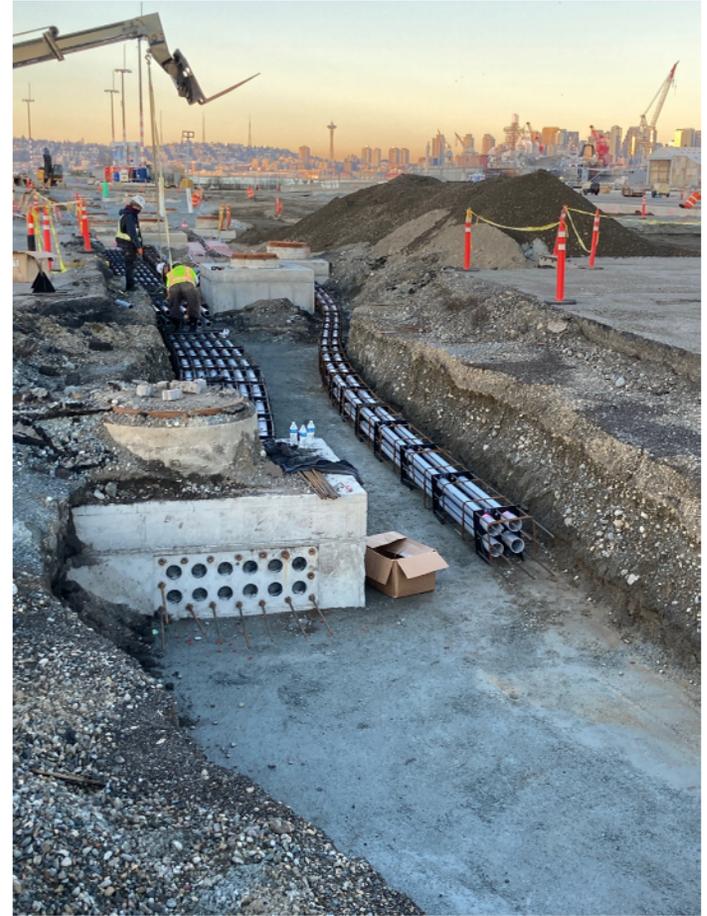
- 11/19: West Seattle Transportation Coalition
- Ongoing City engagement highlighting the importance of T5 through the context of WSB work and other areas of collaboration
 - Led to Mayor Durkan’s acknowledgement of the positive significance of the T5 project during the WSB repair announcement Q4 2020
- Outreach planning underway for multiple community group visits Q1 and Q2 2021, in advance of crane arrival in Q2



LSCR – stop work

Terminal 5 – Look Ahead

- **Q1 2021**
 - Marine Building Execution and start of construction
 - Completion of Seattle City Light work
 - Stormwater Bid Pkg advertisement and award
 - Rail Quiet Zone 100% design
 - Occupancy Permit Conditions being finalized
- **Q2 2021**
 - North Berth Crane Delivery
 - Targeting Phase 1 Occupancy Permit Conditions Approval
 - Phase 1 Lease Obligations in construction
 - Next MMs Briefing July 2021



Secondary ductbank at substation