THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No. 8A, 9A, 9B

Date of Meeting November 2, 2021

DATE: October 20, 2021

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Tong Zhu, Chief Commercial & Strategy Officer

Project Managers:

Catherine Chu, Capital Program Manager V, Port of Seattle

Emma Del Vento, Capital Program Leader, Port of Seattle,

Arthur Kim, Capital Project Manager III, Port of Seattle

SUBJECT: 8A: Terminal 5 (T5) Modernization Program Quarterly Update;
9A: Acceptance of T5 MARAD 2020 PIDP Grant Agreement; and
9B: POS only vote for ERL funding for T5 uplands soil disposal.

A. BRIEFING REQUESTED

Regular Q3 2021 Terminal 5 Modernization Program Update.

B. ACTIONS REQUESTED

As referenced in NWSA Resolution No. 2020-02, Exhibit A, Delegation of Authority Master Policy, Paragraph 8.c.iii., states project costs exceeding $300,000 require approval from Managing Members.

The NWSA's Master Policy requires approval from Managing Members to accept grants in amounts greater than $300,000.

1. Request authorization to accept a Federal Maritime Administration (MARAD) 2020 PIDP Grant in the amount of $10,687,333 for the T5 Modernization Program.
2. **(POS Vote Only)** Request authorization for Environmental Remediation Liability (ERL) funds for upland soil disposal of T5 dredge material, Master Identification No. U00680.

C. BACKGROUND

In April 2019, The Northwest Seaport Alliance (NWSA) entered a long-term lease for the redevelopment of Terminal 5 in the Seattle 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.

D. SYNOPSIS QUARTERLY PROGRAM UPDATE TERMINAL 5 MODERNIZATION

Scope and Recent Updates

Program wide updates: Supply chain issues for materials and specialty parts delivery are impacting the schedule on some tasks and projects. Labor strikes have not impacted Terminal 5 execution to date.

Berth Modernization: There have been no scope changes to the Berth Modernization since the last briefing. The 3rd in-water work window for the Program started August 15 in both the North and South Berths.

Permit Conditions: All of the pre-occupancy permit conditions, with the exception of the Gate Queue Management Pan, have been met to start operations in January 2022.

Lease Obligations: NWSA's Lease Obligations are in progress per agreements with the Tenant.

Summary of 2021 scope increases include:

- Berth Pavement regrading
- NEW Q3: Tenant Upland Readiness (building repairs and test pile removal)
- NEW Q3: South Reefer Testing
- NEW Q3: North Reefer Design alignment with Tenant reefer layout
- NEW Q3: Water Line Repair

Summary for new Q3 items is below:

- Tenant Upland Readiness for additional total of approximately $1,200,000. This project relocates the timber pinch piles to make space for Terminal storage and makes Tenant requested upgrades to upland facilities.
- South Reefer Testing and repairs for additional total of approximately $42,000. This project tested the South Reefers during the cable repair as the continued turning on and off the system risked the system will not turn on. Small repairs are being executed.
- North Reefer Design reached bid advertisement in September. Greater coordination with the Tenant on technical and operational requirements led to the opportunity to holistically review the reefer layout for potential programmatic savings. Assessment of cost and schedule total impacts is underway.
- T-5 Water Line Repair: On October 2, 2021, a sinkhole was observed by construction and longshore to the southwest of the new North Marine Building on Terminal 5. A water main break had occurred and was undermining the substrate at the location. Repair and cleanup work began on October 5 and paving should be completed by end of October.

Budget

Program Budget of $340,000,000 was approved in April 2019. $50,000,000 was added in July 2021 for a total Program budget of $390,000,000.

Through September 30, 2021, the spent to date amounts of $211,500,000 are on track with forecast estimate at completion and progress.

Risk

Recent Stochastic Analysis and Risk Register updates indicate the program has an 85% probability of being sufficient with a value of $385.7M and a 100% probability of being sufficient with a value of $404.7M.

The primary drivers leading to the $1.3M decrease in P-85 value over last quarter are as follows:

1. Decrease – Soft Costs and Design forecast reduction
2. Decrease – Old gate complex repair
3. Decrease – Stormwater forecast reduction
4. Decrease – Bid items under runs
5. Decrease – Toe Wall risk impact
6. Increase – Paving Bid items over runs
7. Increase – N Reefer demarcation risk impact

Lease Obligations still have a wide cone of uncertainty and continue to carry the bulk of the program risk.

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 contract before March 2023. Contractors are working to complete Phase 1 (North Berth) by December 31, 2021, per the current agreement. The most significant element of risk to the Phase 1 schedule is the Toe Wall driving. More predictive progress rates of toe wall pile driving will be available in late October to narrow down the completion dates.

Safety

Orion Marine Contractors (T-5 Berth Modernization General Contractor) meets POS requirements with Health and Safety Plan, Site Specific Safety plans; and have led the way forward through the 18 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 this quarter there has been 1 positive case of COVID-19 on site. There have been no near misses and no recordable incidents this quarter for almost 30,000 hours worked.

Western Ventures (T5 North Marine Building General Contractor) meets POS requirements with Health and Safety Plan, Site Specific Safety plans. There have been no near misses and no recordable incidents this quarter for over 7,000 hours worked.

E. PROJECT PROGRESS AND SCHEDULE

The Program achieved three major milestones this quarter:

- Completion of the Permit Modification and Tribal Negotiations for the 3rd in water work window and start of the 3rd in water work window.
- Completion of the duct bank installation.
- Start of Stormwater Treatment Project construction.

Berth Modernization Project:

- North Berth: Shore Power and paving are the last elements that will be completed on the wharf. In water work for the toe wall is underway. Fender installation and dredging will follow the toe wall.
- South Berth: Activities are on schedule.
- Seattle City Light (SCL) on site work is mostly complete, pending final invoice in November.

Major milestones for Permit Conditions and Lease Obligations through end 2021 include:

- Permit Conditions Pre-Occupancy Conditions met – pending GQMP
- Quiet Zone – property acquisition approved by City Council
- Stormwater Treatment - Phase 1 construction underway; Phase 2 Bid advertisement
- N Marine Building – Complete
- S Marine Building – Complete Design; Start Bid Phase
- Clean Truck – on track, will be completed Q4 2021
- RPM and CBP utilities – on track, will be completed Q4 2021
- North Reefer Infrastructure – in review
- S Reefer Repair – testing done, repair will be completed Q4 2021
- Gate Repair – in construction, will be completed late October 2021
- New Gate (per Lease Amendment; Phase 2 deliverable) – project planning
- Other: PIDP Draft Grant Agreement received for $10.7M Federal match

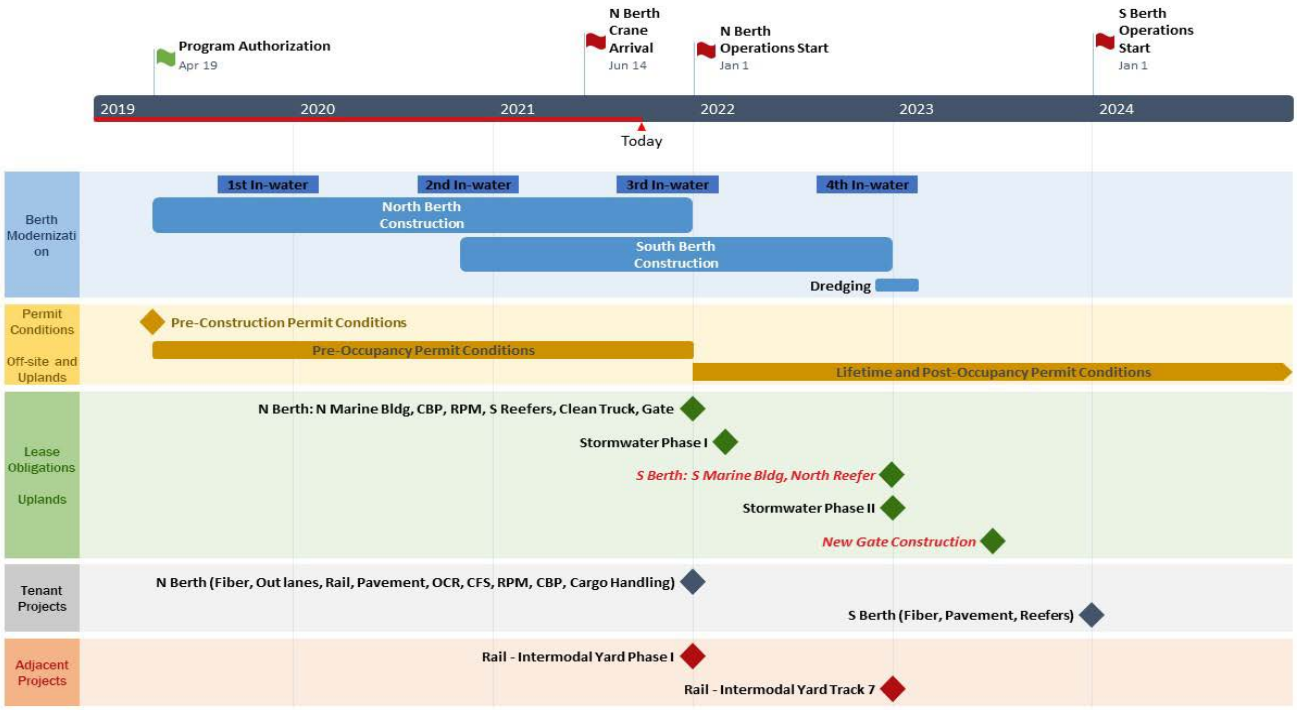
Schedule

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.

The elements in red are planned dates, schedule will be established at 30% design and confirmed at authorization milestones.

The most significant element of risk to the Phase 1 delivery schedule is the Toe Wall driving, more reliable production rates will be available in late October when the permit allows for continuous impact and vibratory driving of the piles.

The Program Master Schedule is illustrated below, projects in red are subject to schedule change for ongoing decision making and agreements.



F. BUDGET (TO SEPTEMBER 30, 2021)

Budget numbers are updated through September 30, 2021. Numbers including overhead are posted the 10th of every month.

- Program forecast currently exceeds the overall budget if all risks hit the Program at the high end.
- Construction is 79% spent and 71% complete (discrepancy is due to mobilization and early material purchase for Phases 1 and 2).

2021 Quarter 3 Program Budget	Authorized Budget	Quarter 3 Changes	Updated Budget	Spent to Date	Forecast at Completion	Remaining Authorized Budget
Design, Construction, Project Management	$290.7	$14.6	$305.3	$199.2	$318.3	$91.5
Permit Conditions	$14.0	$-	$14.0	$5.8	$14.1	$8.2
Stormwater Treatment	$32.0	$-	$32.0	$6.5	$32.0	$25.5
Management Reserve*	$3.3	$35.4	$38.7	$-	$21.3	$3.3
Total	$340.0	$50.0	$390.0	$211.5	$385.7	$128.5

* $14,600,000 moved out of Management Reserve this quarter and into construction for S Reefer Feeder Testing, RPM Power Supply, RPM Reimbursement to PNNL, N Reefer Budget, N Reefer Demarcation, Operational Readiness Expenses.

G. BUDGET BY PROJECT

The budget table below shows the budget breakdown for each project, or grouping of similar scopes (reefers, gate, permit conditions).

Total project costs are currently aligned with the authorizations. The gate scope, which shows an increase, is still subject to review and agreement.

	Original Authorized Project Cost	Current Authorized Project Cost	This Request	Total Project Cost	Cost to Date	Remaining Cost
T5 Berth + Design + SCL	$ 276,000,000	$ 276,450,000	$ -	$ 276,450,000	$ 193,332,076	$ 83,117,924
T5 Permit + Tribes	$ 14,000,000	$ 14,000,000	$ -	$ 14,000,000	$ 5,837,388	$ 8,162,612
T5 Stormwater	$ 30,000,000	$ 32,000,000	$ -	$ 32,000,000	$ 6,469,070	$ 25,530,930
T5 Mgmt Reserve/Risk	$ 20,000,000	$ 21,020,000	$ -	$ 18,020,000	$ -	$ 18,020,000
T5 Clean Truck	$ -	$ 100,000	$ -	$ 100,000	$ 16,748	$ 83,252
T5 Marine Buildings	$ -	$ 10,100,000	$ -	$ 10,100,000	$ 4,397,109	$ 5,702,891
T5 RPM + CBP	$ -	$ 3,000,000	$ -	$ 3,000,000	$ 156,588	$ 2,843,412
T5 Reefers	$ -	$ 19,130,000	$ -	$ 19,130,000	$ 1,085,974	$ 18,044,026
T5 Gate Complex	$ -	$ 13,000,000	$ -	$ 16,000,000	$ 188,163	$ 15,811,837
T5 Operational	$ -	$ 1,200,000	$ -	$ 1,200,000	$ 65,886	$ 1,134,114
Total	**$ 340,000,000**	**$ 390,000,000**	**$ -**	**$ 390,000,000**	**$ 211,549,002**	**$ 160,430,998**
Previously Authorized			**$ 50,000,000**			
Revised Tot Auth			**$ 390,000,000**			
MARAD PIDP Grant			$ 10,700,000			
WA DoE - Stormwater			$ 5,000,000			
WA DoC – Shore power			$ 4,268,000			
WA DoC - Reefers			$ 4,316,500			
Authorization - Grants			**$ 365,715,500**			
T5 ERL (POS Only)	$ -	$ -	$ 700,000	$ 700,000	$ -	$ 700,000

H. CONTINGENCY AND RISK

The contingency and risk section provide the Managing Members early visibility to emerging issues and associated costs in T5 Modernization Program implementation.

Contingency Funding – the program has three distinct forms of contingency funding to cover risk:

1. Typical construction contingency of 15%, which for the $160M Berth contract results in $24M. All construction projects (Reefers, Marine Buildings, Gate, etc.) have a similar construction contingency as part of the project budget.
2. A unique management reserve of $20M was established in April 2019 to cover both program unknowns, like pinch-pile issues, and knowns (but not budgeted for the initial management reserve calculation), like lease obligations (marine buildings, north reefer infrastructure, gate scanners for the clean truck program, power to CBP Booth and power to RPMs) and permit requirements. In July 2021 additional $50M was approved to be added to the management reserve.
3. A fortunate bid variance of $24M from original engineers estimate of the primary $160M construction contract.

While these forecasted costs are designed to be comprehensive, conservative, and cover all project phases, final program completion is 2 years out and inherent unknown risks may still emerge, and other risks may not occur.

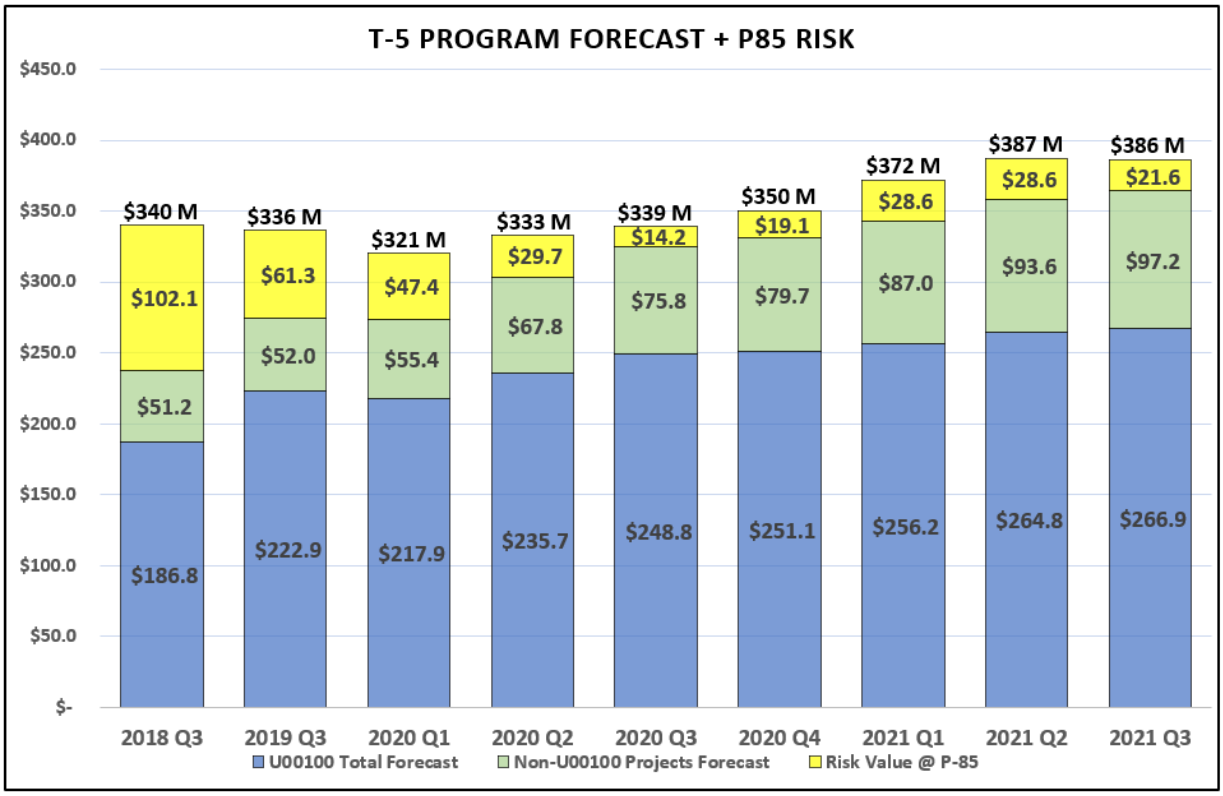
Stochastic Analysis and Risk Register (is being updated quarterly in 2021)

T5 key staff meet quarterly with the T-5 Program risk consultant to model variables around future T5 risk and update the risk register. Risks are identified by likelihood and impact to generate a score and are modelled into the forecast budget along with the actuals to date.

Recent Stochastic Analysis and Risk Register updates from October 2021 indicate:

- The program currently has a P-85 value (85% probability of being sufficient) of $385.7M
- The $390M program budget currently has a 95% probability of being sufficient

The current expected cost of the program is $361.42M (P-85 value $385.7M minus grant funding $24.28M).



Continuing risks:

- Encountering in-water obstructions for sheet piles and phase 2 in-water pile driving (reduced)
- Bid item over-runs related to paving
- Phase II damaged pile repairs
- Constrained site conflicts, primarily Orion with Stormwater
- Material more difficult to dredge than planned
- Further unknown COVID-19 (impacts have been reduced)
- Disputed financial obligation for project issues: S. Reefer repair, RPM installation, CBP booth utilities, scales replacement, N. Reefer demarcation
- Reefer allowance
- Quiet Zone Property Acquisition (reduced)
- Stormwater system (reduced by Lease Amendment)
- Unforeseen site conditions (have been reduced)
- Other external factors (West Seattle Bridge, wildfire smoke, etc.)
- Toe wall driving and dredging
- Pavement grading between the landside rail and the uplands
- Program coordination and soft costs

I. OPPORTUNITIES

The opportunities section provides a status update on the T5 grant agreements and

reimbursements to date.

Reimbursements for the Stormwater grant are on track for Phase 1 stormwater milestones.

Grant Name	Agency	Grant Amount	Agreement Date	Costs Submitted	Reimbursements Received	Notes
PIDP	MARAD	10.7	Pending	0	0	
Shore power	WA DoC	4.4 4.27 (net)	Negotiation	0	0	
Stormwater	WA DoE	5	07/01/20	0.0037	0.0028	Cashflow lag
Reefers	WA DoC	4.45 4.31 (net)	Negotiation	0	0	
TOTAL		**24.55 24.28 (net)**		**0.0037**	**0.0028**	

Costs are in $M

J. COMMUNITY OUTREACH

Sept 20: Georgetown Community Council
Sept 22: Highland Park Action Committee
Oct 06: District 1 Community Network (D1CN)
Oct 11: Pigeon Point
Oct 12: South Park Neighborhood Association
Nov: PCAT
TBD: West Seattle Transportation Coalition

K. Q4 2021 LOOK AHEAD

Berth Modernization Phase 1 Substantial Completion
Completion of Seattle City Light (SCL) work
Stormwater Phase 2 Bid Package advertisement
Pre-Occupancy Permit Conditions met
RPM and CBP Utilities done
S Marine Building design review done
S Reefer Repairs done
Clean Truck Program done
Gate Repairs done

L. REQUEST: ACCEPT A FEDERAL MARITIME ADMINISTRATION (MARAD) 2020 PIDP GRANT

The U.S. Department of Transportation (DOT) – Maritime Administration (MARAD) has awarded the NWSA a grant under the 2020 Port Infrastructure Development Program (PIDP) in the amount of $10,687,333 for the Final Phase of the Terminal 5 Uplands Modernization and Rehabilitation Project (PIDP Project). The PIDP Project includes the following four elements with an estimated total cost of $35,374,666 (including grant administration costs):

1. Surfacing, paving, and reinforcement (Paving);
2. Stormwater treatment (Stormwater);
3. Upsizing electric reefer plugs (Reefer);
4. On-dock rail improvements (Rail).

Project authorization is managed separately as part of the ongoing T5 Modernization Program. No additional project authorization is included in this request. The Stormwater and Rail projects are already authorized. The Paving and Reefer projects are not part of the T5 Program Modernization Authorization and are expected to be funded and performed by SSA Terminals (SSAT). The details of how that will be managed will be under a separate subrecipient agreement between NWSA and SSAT currently under negotiation and is expected to be finalized in the next several months. By accepting this grant from MARAD, NWSA will be responsible for performance, compliance, and funding obligation for the entire PIDP project, and the subrecipient agreement will ensure performance, compliance, and funding match by SSAT. If the tenant does not complete the reefer and paving work, the NWSA will be responsible for all the work.

PROJECT DESCRIPTION AND DETAILS

Scope of Work

The following projects will be partially funded by the MARAD 2020 PIDP grant:

Component 1 – Surfacing, Paving, and Reinforcement (Paving). Project includes site preparation, reinforce, pave, and resurface up to 50 acres of the terminal in the Phase 2 area to support stacked container handling operations. Specific activities will include design and engineering; permitting and environmental approvals; procurement and delivery of equipment and supplies; construction and installation; initiation of operation; and data collection/reporting.

Component 2 – Stormwater Treatment System (Stormwater). Project will install Phase 2 of a terminal-wide stormwater treatment system, including two of four on-terminal treatment locations. Specific activities under this final phase will include procurement and delivery of equipment and supplies; construction and installation; commissioning and initiate operations; and data collection/reporting.

Component 3 – Upsizing Reefer Plug Capacity (Reefer). Project will install electrical conduit, infrastructure, and plugs to support the grid-tied storage of 1,500 refrigerated containers on the terminal. Specific activities will include initial planning; design and engineering; permitting

and environmental approvals; procurement and delivery; construction and installation; commissioning and initiate operation; and data collection/reporting.

Component 4 – On-Terminal Rail Improvements (Rail). Project will evaluate necessary repairs to Track 7 and the intermodal yard and undertake all required rehabilitation to enable full operation of the on-terminal rail system. Improvements include replacing ballast, repairing rail ties, rehabilitating the control system, and installing radiation portal monitors and other electrical upgrades. Specific activities will include design and engineering; permitting and environmental approvals; procurement and delivery; construction and installation; commissioning and initiate operation; and data collection/reporting.

Component 5 – Contract Administration (Grant Admin). This includes activities and costs associated with the administration of this FY 2020 PIDP Grant.

Schedule

All component projects currently have a Substantial Completion date of December 31, 2023, but the schedule will be updated as needed. The grant will have the following deadlines:

- Budget Period End Date: October 30, 2024
- Period of Performance End Date: October 1, 2027
- Estimated Closeout Date: October 1, 2028

MARAD is expecting NWSA to execute the agreement in November 2021, and we are expecting MARAD to execute the agreement before the end of 2021.

Budget

The table below is budget breakdown by component:

Component	Local Match (70%)		PIDP grant (30%)	Total
	Expected NWSA Match	Expected SSAT Match		
1. Paving		$7,621,043	$3,299,207	$10,920,250
2. Stormwater	$7,484,782		$3,240,218	$10,725,000
3. Reefer		$6,096,834	$2,639,366	$8,736,200
4. Rail	$2,992,668		$1,295,548	$4,288,216
5. Grant Admin	$492,007		$212,993	$705,000
Total	**$10,969,456**	**$13,717,877**	**$10,687,333**	**$35,374,666**

Note: SSAT match is pending a subrecipient agreement for the paving and the reefer projects.

M. REQUEST: AUTHORIZATION FOR ENVIRONMENTAL REMEDIATION LIABILITY (ERL) FUNDS FOR UPLAND SOIL DISPOSAL OF T5 DREDGE MATERIAL

For Port of Seattle Commission only to vote:

Request Port of Seattle Commission project authorization in the amount of $700,000 for the Terminal 5 Environmental Remediation Liability – Project Authorization for Upland Disposal of Sediment from Dredging, Master Identification No. U00680.

Synopsis

Authorization is requested to issue a change order to Orion Construction to dispose of approximately 3,200 cubic yards of sediment at an authorized uplands disposal facility.

Background

To prepare for the T5 Modernization project, the sediment for the berth deepening near T5 was sampled and the results came back satisfactory to dredge and dispose of in open water in 2015. The project was paused due to tenant vacancies but was started up again with SSA signing a new lease for T5.

The original 2015 test results were valid for 3 years. When the sediment was tested again in 2020, approximately 3,200 cubic yards of sediment tested unsuitable for open water disposal and now must be disposed of at an approved uplands facility.

The determination to move this project forward as a POS ERL cost is based on two factors: 1. High sediment testing cost, and 2. Low likelihood of a definitive outcome from the testing to ascertain if the soil contamination is from legacy or recent activities.

PROJECT DESCRIPTION AND DETAILS

Scope of Work

A change order will be issued to Orion Marine Contractors, Inc. to take approximately 3,200 cubic yards of contaminated sediment that is not suitable for in-water disposal and have it disposed upland at an approved disposal facility.

Schedule

Activity	Timeframe
Execute Change Order	November 2021
Work Begins	December 2021
Substantial Completion	February 15, 2023
Final Completion	March 6, 2023

Project Cost Details

	This Request	Total Project Cost	Cost to Date	Remaining Cost
Design	$ 50,000	$ 50,000	$ -	$ 50,000
Construction	$ 650,000	$ 650,000	$ -	$ 650,000

Source of Funds

The Port of Seattle's Environmental Remediation Liability (ERL) fund has allocated $700,000.00 for this project.

Environmental impacts/review

Permitting: All permitting for dredging was approved in 2020. Contractors will coordinate with regulators before work begins as part of the permit conditions.

Remediation: Dredged materials will need to be disposed at an approved uplands facility.

Water Quality: Contractors will be required to follow the water quality management plan as set forth in the permit conditions by the Washington Dept. of Ecology.

Air Quality: N/A for dredging projects.

N. ATTACHMENTS TO THIS REQUEST

- MARAD FY 2020 PIDP Grant No. 693JF72140018

O. PREVIOUS ACTIONS OR BRIEFINGS

Date	Action	Amount
September 8, 2021	Terminal 5 ILA for Shore Power Grant with Department of Commerce	$0
July 7, 2021	T-5 Program Update, Increased Authorization and N Reefer Construction Authorization	$50,000,000
June 1, 2021	First Amendment to T-5 Lease authorization by MMs	$0
April 6, 2021	Quiet Zone MOU	$0
March 2, 2021	T-5 Modernization - Program Update	$0
February 2, 2021	Approval for Construction of RPM, S Reefers, Clean Truck	$0
October 6, 2020	T-5 Modernization - Program Update	$0
September 1, 2020	T-5 Modernization - Tribal Agreement Update	$0
August 4, 2020	T-5 Marine Building - Approval to advertise for North Building construction only	$0
July 2, 2020	T-5 Marine Building - Authorization to advertise for North and South Buildings construction request	$0
July 2, 2020	T-5 Modernization - Program Update	$0
April 7, 2020	T-5 Modernization - Program Update	$0
January 14, 2020	T-5 Modernization - Program Update	$0
October 1, 2019	T-5 Modernization - Program Update	$0
August 6, 2019	T-5 Modernization - Program Update	$0
June 4, 2019	T-5 Program Update	$0
May 20, 2019	Authorization for Construction of Berth Modernization Program	$0
April 2, 2019	Additional Program Funding and Authorization to Fund T-5 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 docs 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, and Proj 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
July 14, 2015	Additional Design Authorization	$5,000,000
June 3, 2014	Initial Design Authorization	$4,700,000
May 13, 2014	T-5 Berth Modernization Briefing	$0
March 12, 2014	Additional Pre-Design Authorization	$150,000
October 27, 2013	Initial Pre-Design Authorization	$150,000
TOTAL		**$390,000,000**