

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No. 5C

Date of Meeting September 1, 2020

DATE: August 19, 2020

TO: Managing Members

FROM: John Wolfe, CEO
Sponsor: Don Esterbrook, Deputy Chief Executive Officer
Project Manager: Hughes Wike, Engineering Project Manager II

SUBJECT: Terminal 3 & Terminal 4 Shore Power Project

A. ACTION 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.

Requesting project design authorization in the amount \$330,000 for a total authorized amount of \$530,000, for work associated with the Terminal 3 & Terminal 4 Shore Power Project, Master Identification No. 201100.01.

B. BACKGROUND

The NWSA has set significant goals to reduce air pollutant and greenhouse gas (GHG) emissions including the Northwest Ports Clean Air Strategy and the Managing Members' 2017 Greenhouse Gas Resolution, which sets targets of 50% and 80% reductions in GHG emissions by 2030 and 2050, respectively. Shore power is one of the many measures necessary to meet these targets and demonstrate our commitment to sustainable development. The current gateway-wide Shore Power Program focuses on the NWSA's major international container terminals (T5, T18, T3/T4, WUT, PCT) and considers installation of shore power systems at a total of ten berths.

Terminal 3 was upgraded in 2014 and the Terminal 4 wharf was re-constructed in 2018. Within each terminal's existing electrical substation, one (1) 13.8KV electrical house is installed with adequate capacity to serve shore to ship power connections. Open space also remains available in each substation to accommodate new electrical houses and shore to ship power equipment. Existing vaults and conduits are located in the wharves to accommodate ship connection receptacles, and a power monitoring system is in place with the capability to record electrical usage by ships when connected to shore power.

To establish functional shore power systems on Terminals 3 & 4, major equipment must be procured, installed, and connected to the existing electrical system. The total cost to accomplish this work, including all project stages, is estimated at \$5,661,000.

C. PROJECT DESCRIPTION AND DETAILS

Project Objectives

Install safe and functional shore power systems at Terminals 3 & 4. Reduce marine shipping emissions and improve air quality by eliminating the need for international container ships to run diesel engines while at berth.

Scope of Work

The scope of work will include:

- Design, specifications, and permitting for public works contracting.
- Project and construction management.
- Installation of major electrical equipment such as transformers, switchgear assemblies, power factor correction components, conduit and wiring.
- Wharf modification and trenching work.
- Tacoma Public Utilities metering upgrades.
- Inspection, testing, and commissioning.

Scope of Work for this Request

Authorization for this project includes all tasks necessary for the completion of the design stage, including the use of internal and external engineering and environmental services.

Schedule

Begin Design	July 2020
Complete Design	February 2021
Bid Advertisement	Q2 2021
Begin Construction	Q3 2021
Project Completion	Q4 2022

D. FINANCIAL IMPLICATIONS

Estimated Cost of Project

The total project cost including all stages is estimated at \$5,661,000.

Estimated Cost for This Request

The total estimated cost to complete the design for this project is \$530,000. If the cost of this estimate is anticipated to exceed the authorized amount, additional Commission authorization will be requested.

Estimated Sales Tax

The total estimated sales tax to be paid to local and state governments for this project is \$401,189.

Project Cost Details

Phase	This Request	Total Previous Requests	Total Project Cost	Cost to Date	Remaining Cost
Design	\$330,000	\$200,000	\$530,000	\$8,939	\$521,061
Construction	\$0	\$0	\$5,131,000	\$0	\$5,131,000
Total	\$330,000	\$200,000	\$5,661,000	\$8,939	\$5,652,061

Source of Funds

The current Capital Investment Plan (CIP) allocates \$5,431,000 for this project. Additional budget will be requested as part of the 2021 budget process.

In support of the T3/T4 shore power project, Managing Members accepted a \$1 million grant from the Diesel Emission Reduction Act (DERA) grant fund in November 2019, and a \$1 million grant from the TransAlta Coal Transition Energy Technology Fund in January 2020. Staff are currently negotiating a reallocation of \$1.1 million in unused grant funds from the closed Clean Truck Fund to this project. Grant income will be recorded as non-operating revenue at the time reimbursement is requested.

Financial Impact

Project costs will be capitalized and depreciated over an estimated useful life of 15 years. Estimated annual depreciation expense will be \$377,000.

E. ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS

Alternative 1: Do not proceed with T3/T4 shore power project at this time. Declining to move forward with this project could result in a loss of \$2 million in grant funding for the T3/T4 project. Shore power-related infrastructure established by past Pier 3/Pier 4 reconfiguration projects would remain unused and the environmental benefits of shore power implementation would remain unrealized.

Alternative 2: Proceed with design and installation of T3/T4 shore power systems. Potential reduction of GHGs and diesel particulate matter by greater than 3,000 tons per year and 1 ton per year, respectively.

Alternative 2 is the recommended course.

F. ENVIRONMENTAL IMPACTS/REVIEW

Permitting:

Based on our present understanding of the project, the work is already covered under the Port's existing programmatic terminal and shoreline area routine maintenance and repair permit, which includes utilities. A SEPA categorical exemption was issued in 2014. No new environmental permits are anticipated to be needed and Permitting will confirm this as the project design advances. It is, however, expected the project will require Site Development and Electrical permits through the City of Tacoma.

Remediation:

Any ground disturbance will need to be reviewed by a remediation team member during design to evaluate the potential for encountering legacy contamination.

Stormwater:

The water quality team will be consulted on any site disturbance that occurs during the project to ensure compliance with all regulations, policies, and procedures.

Air Quality:

The T3/T4 shore power project is a critical component of the NWSA's 10-year plan to install shore power at our major international container terminals, supporting achievement of our GHG Resolution and Northwest Ports Clean Air Strategy goals.

G. ATTACHMENTS TO THIS REQUEST

- Computer slide presentation.

H. PREVIOUS ACTIONS OR BRIEFINGS

<u>Date</u>	<u>Action</u>	<u>Amount</u>
February 14, 2020	Executive Authorization	\$200,000
TOTAL		\$200,000



Item No: 5C
Date of Meeting: September 1, 2020

Project Authorization for Terminal 3 & Terminal 4 Shore Power Project

Presenter: Hughes Wike
Title: Engineering Project Manager II

Action Requested

Terminal 3 & Terminal 4 Shore Power Project

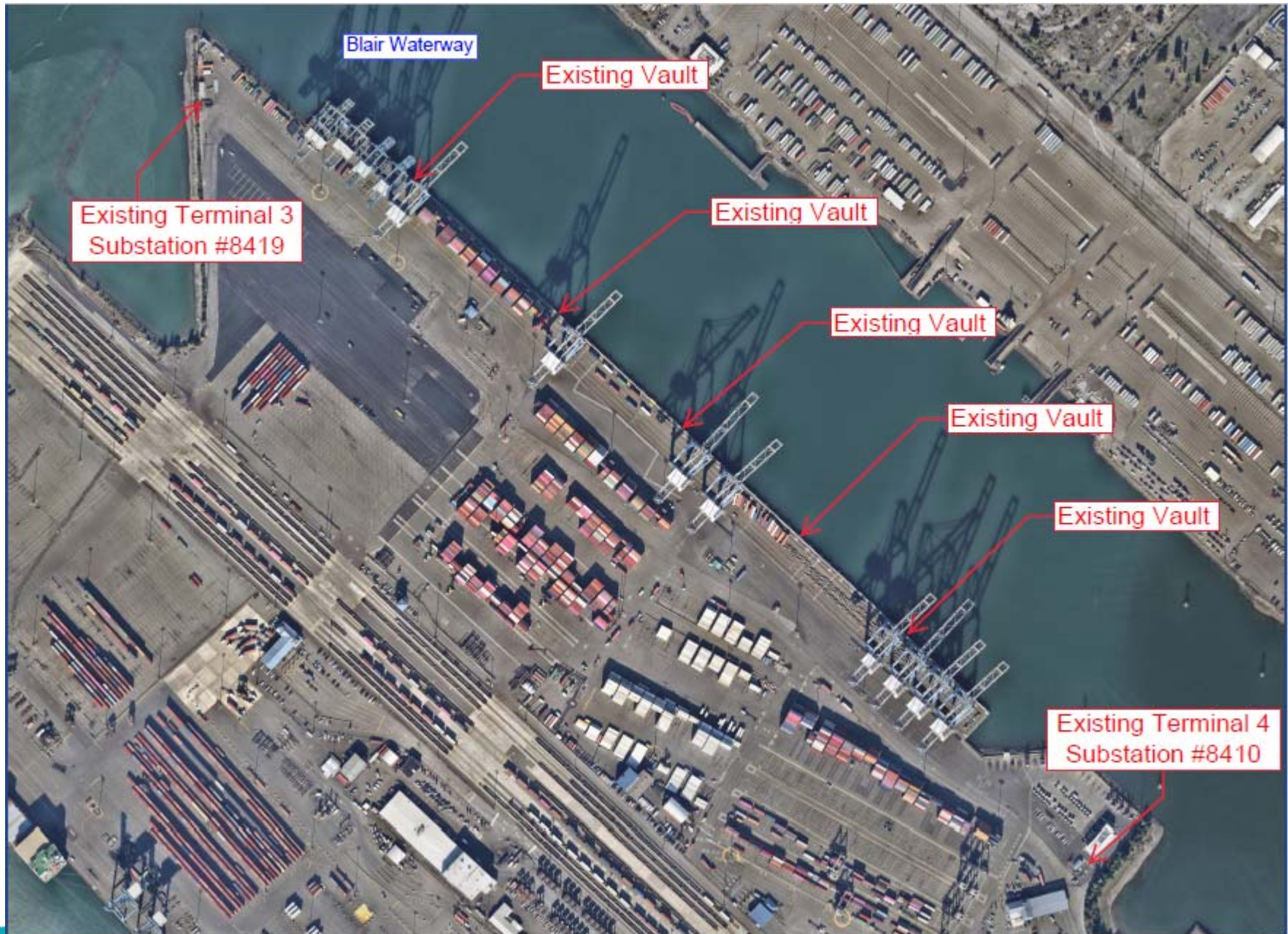
As referenced in NWSA Resolution No. 2020-02, Exhibit A, Delegation of Authority Master Policy, Paragraph 8.c.iii., states project costs exceeding \$300,000 require approval from Managing Members.

Request project design authorization in the amount \$330,000, for a total authorized amount of \$530,000, for the Terminal 3 & Terminal 4 Shore Power Project, Master Identification No. 201100.01.

Background

Terminal 3 & Terminal 4 Shore Power Project

- NWSA has set significant goals to reduce air pollutant and greenhouse gas (GHG) emissions including the Northwest Ports Clean Air Strategy and the Managing Members' 2017 Greenhouse Gas Resolution.
- Shore power is one of the many measures necessary to meet these targets and demonstrate our commitment to sustainable development.
- Terminal 3 was upgraded in 2014 and the Terminal 4 wharf was re-constructed in 2018. Electrical infrastructure installed and space allocated to accommodate future shore power systems.



Background

Terminal 3 & Terminal 4 Shore Power Project

PROJECT OBJECTIVES

- Install safe and functional shore power systems at Terminals 3 & 4.
- Reduce marine shipping emissions and improve air quality by eliminating the need for international container ships to run diesel engines while at berth.

EXISTING TERMINAL 4 INFRASTRUCTURE



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**EXISTING TERMINAL 4
INFRASTRUCTURE**



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Project Description and Details

Terminal 3 & Terminal 4 Shore Power Project

- **The scope of work includes the following:**
 - Design, specifications, and permitting for public works contracting.
 - Project and construction management.
 - Installation of major electrical equipment such as transformers, switchgear assemblies, power factor correction components, conduit and wiring.
 - Wharf modification and trenching work.
 - Tacoma Public Utilities metering upgrades.
 - Inspection, testing, and commissioning.

Project Schedule

Terminal 3 & Terminal 4 Shore Power Project

Activity	Timeframe
Begin Design	July 2020
Complete Design	February 2021
Bid Advertisement	Q2 2021
Begin Construction	Q3 2021
Project Completion	Q4 2022

Financial Implications

Terminal 3 & Terminal 4 Shore Power Project

- The estimated cost of the Design for this project is \$530,000.
- The estimated budget for this project is \$5,661,000.
- The current Capital Investment Plan (CIP) allocates \$5,431,000 for this project. Additional budget will be requested as part of the 2021 budget process.
- This work and associated budget is consistent with the NWSA valuation.

Project Benefit

Terminal 3 & Terminal 4 Shore Power Project

- Potential reduction of GHGs and diesel particulate matter by greater than 3,000 tons per year and 1 ton per year, respectively.
- Utilizes electrical infrastructure installed and space allocated for shore power systems during implementation of Pier 3 and Pier 4 reconfiguration projects.
- Leverages over \$2 million in grant funding opportunities.

Financial Summary

Terminal 3 & Terminal 4 Shore Power Project

Phase	This Request	Total Previous Requests	Total Project Cost	Cost to Date	Remaining Cost
Design	\$330,000	\$200,000	\$530,000	\$8,939	\$521,061
Construction	\$0	\$0	\$5,131,000	\$0	\$5,131,000
Total	\$330,000	\$200,000	\$5,661,000	\$8,939	\$5,652,061

Environmental Impacts/Review

Terminal 3 & Terminal 4 Shore Power Project

Permitting:

- Project falls under existing programmatic permits to maintain, repair and replace existing infrastructure within 200 feet of the marine shoreline. Site Development and Electrical permits required through the City of Tacoma.

Remediation:

- As Terminals 3 & 4 are relatively new facilities, no contaminated soil is anticipated.

Environmental Impacts/Review

Terminal 3 & Terminal 4 Shore Power Project

Stormwater:

- Stormwater Best Management Practices (BMPs) and project-specific Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented.

Air Quality:

- Project supports achievement of GHG Resolution and Northwest Ports Clean Air Strategy goals.

Conclusion

Terminal 3 & Terminal 4 Shore Power Project

Request project design authorization in the amount \$330,000, for a total authorized amount of \$530,000, for the Terminal 3 & Terminal 4 Shore Power Project, Master Identification No. 201100.01.

