



**COMMISSION
AGENDA MEMORANDUM**

Item No. 10c

ACTION ITEM

Date of Meeting June 25, 2024

DATE: June 17, 2024

TO: Stephen P. Metruck, Executive Director

FROM: Levi Clark, Manager Fleet & Transportation, Marine Maintenance Fleet
Julie Yun, Capital Project Manager, Waterfront Project Management

SUBJECT: C801248 Phase 1 Waterfront Fleet EV Charging

Amount of this request: \$5,000,000

Total estimated project cost: \$5,300,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) approve funding to complete design and permitting; (2) advertise, award, and execute owner-furnished equipment contract; and (3) authorize use of Port of Seattle crews and small works contracts to support the design development and construction execution for the installation of Electric Vehicle (EV) charging stations for Waterfront fleet vehicles. This request is for \$5,000,000 of a total estimated cost of \$5,300,000.

EXECUTIVE SUMMARY

This program supports the installation of EV chargers at various Waterfront facilities that will fuel electrified Waterfront Fleet assets. Phase 1 of this program includes Waterfront facilities that are implementation-ready for EV charging installation, i.e. allow for EV charging installation within each facility's existing electrical capacity. The seven project sites in Phase 1 include Marine Maintenance South (MMSO), Marine Maintenance North (MMNO), Pier 69 apron, Pier 66 apron, Pier 66 garage, Shilshole Bay Marina (SBM), and the Maritime Industrial Center (MIC). This effort will drive forward the Port's Sustainable Fleet Plan, Fleet Goals within the Maritime Clean Air Action Plan (MCAAP), as well as the Port's Century Agenda Goal to reduce greenhouse gas (GHG) emissions by 2040.

JUSTIFICATION

This project supports the following regional and Port-wide priorities:

- (1) Northwest Ports Clean Air Strategy:
 - a. Adopt zero-emission vehicles or use renewable fuels for passenger fleets by 2030;
 - b. Adopt zero-emissions vehicles, equipment, and vessel fleets by 2050.
- (2) Port Scope 1 & 2 Greenhouse Gas Reduction targets:

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- a. 50% reduction of 2005 by 2030
 - b. Net Zero by 2040
- (3) Maritime Climate and Action Plan (MCAAP)
 - (4) 2021 Sustainable Fleet Plan recommendation implementation
 - (5) RCW 70a.30.010 New Zero Emission Vehicle Requirements

To meet the long-term Fleet sustainability goals, the Port plans to transition as many Internal Combustion Engine (ICE) vehicles to Battery Electric Vehicles (BEV) as practicable by 2040. Reducing Port reliance on liquid fuels and carbon-based fuels will drastically reduce the Scope 1 emissions caused by Port fleet vehicles and equipment, and in turn reduce harmful greenhouse gas output (GHG) and emitted particulate matter (PM_{2.5}). According to analysis in the MCAAP, electrification of light duty assets in the Ports maritime fleet can reduce at least 250 metric tons of GHG per year. The transition to locally sourced renewable energy will also minimize the Port's susceptibility to the financial impacts of fluctuating liquefied petroleum fuel prices.

Phase 1 of the Waterfront Fleet EV Charging program will implement installation of up to (20) Level 2 (L2) and (2) Level 3 (L3) EV charging stations within each facility's existing electrical capacity. The L2 chargers will allow for full charging of light-duty fleet vehicles such as sedans, small SUV's, personnel lifts, and small forklifts. A small SUV can be fully charged in 3-7 hours using a L2 charger, depending on the power output of the charger installed. Level 3 chargers require more power than L2 chargers and will be used to charge medium- or heavy-duty vehicles and equipment such as Class 8 trucks and large forklifts, or for rapid charging of smaller assets.

Phase 2 of this program will include Fleet EV Charging installation at Terminal 91, Fishermen's Terminal, and remaining scope to meet Fleet EV charging needs at MMNO and MMSO. Electrical service upgrades at these Port properties will be required to implement Phase 2 and fully meet the Waterfront Fleet electrification goals. The modernization of waterfront electrical infrastructure is currently under Planning development and will be addressed as a capital project(s) independent and upstream of the Phase 2 Fleet EV Charging project.

Diversity in Contracting

This project will utilize Port Engineering Design services for design development of the 7 project locations. The project team will work with the Diversity in Contracting Department and Port Construction Services (performing the Construction Management role) to determine women-and-minority-owned business enterprise (WMBE) participation opportunities and appropriate aspirational goals for WMBE for the construction phase of the project.

DETAILS

This request authorization will allow for individual design and permitting to be completed for EV charging station installation at the following seven proposed Waterfront facilities:

- (1) N10372 Marine Maintenance South
- (2) N10372 Marine Maintenance North
- (3) N10373 Shilshole Bay Marina

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- (4) N10375 Pier 66 apron
- (5) N10376 Pier 69 Apron
- (6) N10374 Pier 66 Garage
- (7) N10377 Maritime Industrial Center

Scope of Work

Each project site will install EV charging stations to support electrification of Port Fleet vehicles. The program scope includes the following elements:

- (1) Demolition of existing non-EV charging parking stalls as appropriate and conduit trenching.
- (2) Electrical power and conduit installation from electrical panels to charging equipment.
- (3) Signage as required by code.
- (4) Striping for parking stalls and as appropriate for each facility.
- (5) Bollards or equivalent to protect the charging equipment.
- (6) Foundations for charging pedestals.
- (7) Charging equipment and software package; and
- (8) All other necessary work to ensure the charging stations work as intended.

Schedule

This program will be executed on a rolling schedule through the seven project sites in order of priority, starting with Marine Maintenance South. The project schedule is preliminary, based on assumptions for long-lead equipment delivery of the Level 3 Chargers, in-water work permit review for EV-related work, and coordination to minimize impacts to tenants, facility operations, and tribal fishery as applicable.

Activity

Design start	2023 Quarter 4
Commission design & construction authorization	2024 Quarter 2
Equipment contract advertisement	2024 Quarter 3
Construction Start	2025 Quarter 1
In-use date	2026 Quarter 2

Cost Breakdown

	This Request	Total Project
Design	\$300,000	\$600,000
EV Charging equipment procurement	\$1,200,000	\$1,200,000
Construction	\$3,500,000	\$3,500,000
Total	\$5,000,000	\$5,300,000

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ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do nothing; no EV charging capability will be installed at any Waterfront facility.

Cost Implications: Expense \$300,000 seed money authorization to date.

Pros:

- (1) Preserve Port staff resources and capital funds for other priority projects and financial initiatives.
- (2) No construction impacts to facility operations or public use of facilities.

Cons:

- (1) Schedule delay in meeting Port goals and commitments toward GHG reduction.
- (2) No sustainable charging solution available for EV Fleet that will be delivered per Sustainable Fleet Plan.

This is not the recommended alternative.

Alternative 2 – Proceed with design and construction of 2 critical priority project sites only (Marine Maintenance South and Marine Maintenance North).

Cost Implications: Allocation of \$2,400,000 in the Capital Plan.

Pros:

- (1) Preserve capital funds for other priority projects and financial initiatives.
- (2) Limited construction impacts to facility operations at critical priority sites only.

Cons:

- (1) Schedule delay in meeting Port goals and commitments for GHG reduction.
- (2) No sustainable charging solution available for EV Fleet being delivered at remaining 5 project sites.
- (3) Lost efficiencies due to multiple piece-meal design, procurement, and construction efforts.

This is not the recommended alternative.

Alternative 3 – Proceed with design and construction of entire program scope as proposed.

Cost Implications: Allocation of \$5,300,000 in the Capital Plan.

Pros:

- (1) Follow-through on Port commitment and goals toward GHG reduction and Fleet electrification.
- (2) Schedule and cost efficiencies gained from coordinated design, procurement, and construction efforts.
- (3) Mitigate financial impacts of fluctuating liquefied petroleum fuel prices.

Cons:

- (1) Capital expenditure of \$5,300,000 for full program (7 projects).

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- (2) Temporary construction impacts to Waterfront facilities, to be mitigated through early engagement planning and appropriate phasing.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

The original program scope presented at project initiation included five sites only. Since then, the program scope has increased to 1. absorb two additional facilities (MMSO absorbed from a previous small capital project; and MMNO driven by a grant opportunity to purchase 2 electric forklifts), and 2. include smart dynamic loading capacity to utilize existing electrical resources as efficiently as possible.

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$2,900,000	\$0	\$2,900,000
Current change	\$2,400,000	0	\$2,400,000
Revised estimate	\$5,300,000	0	\$5,300,000
AUTHORIZATION			
Previous authorizations	\$300,000	0	\$300,000
Current request for authorization	\$5,000,000	0	\$5,000,000
Total authorizations, including this request	\$5,300,000	0	\$5,300,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

This project was included in the 2024 Capital Plan under C801248 Waterfront EV Fleet Charging Phase I with a total estimated cost of \$4.8 million. Additional funding for this project will be covered by C80002 MD Management Reserve.

This project is funded by the General Fund.

Financial Analysis and Summary

Project cost for analysis	\$5,300,000
Business Unit (BU)	Marine Maintenance
Effect on business performance (NOI after depreciation)	This project will increase annual depreciation by approximately \$265K.
IRR/NPV (if relevant)	NA
CPE Impact	NA

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Future Revenues and Expenses (Total cost of ownership)

This project will allow for replacement of high-use fleet vehicles with electric vehicles and equipment. This will save approximately \$108,000 annually in fuel costs. The chargers will be supported by Waterfront Marine Maintenance.

ADDITIONAL BACKGROUND

This program will provide a sustainable charging solution as a condition of the Zero-Emission Vehicles grant awarded by the Washington State Department of Ecology. This grant has been awarded to the Port of Seattle Marine Maintenance Fleet for the electrification of 2 diesel forklifts at Terminal 91 (Marine Maintenance North). Installation of the charger(s) supporting this grant scope must be completed by 6/30/2026.

ATTACHMENTS TO THIS REQUEST

(1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None.