



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8e

ACTION ITEM

Date of Meeting March 26, 2024

DATE: February 23, 2023

TO: Stephen P. Metruck, Executive Director

FROM: Kelly Purnell, Capital Project Manager
Jennifer Maietta, Director, Real Estate Asset Management
Kenneth Lyles, Director of Maritime Operations and Security

SUBJECT: Maritime Industrial Center Electric Equipment Procurement (C801241)

Amount of this request: \$7,948,000

Total estimated project cost: \$12,408,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to approve construction funding in the amount of \$7,948,000 for a Design-Build construction contract for the Maritime Industrial Center Electrical Infrastructure Replacement project.

EXECUTIVE SUMMARY

The Maritime Industrial Center (MIC) Electrical Infrastructure Replacement project has reached approximately 60% design. Throughout the course of the discovery phase of the design, including extensive due diligence in surveying, archival research, and field investigation, it has become apparent that the MIC property has complex and at-risk site conditions, and is severely operationally constrained. The risk to operational continuity at the site, constrained site access for industry equipment and large trucks, and aging site infrastructure that must be addressed and worked around during construction are challenging to overcome without early direct input from a general contractor that can apply valuable input to the design and construction methodology for the project. Additionally, an overlapping project to improve storm water management on the leased eastern portion of the site further complicates and adds risk to the electrical project due to location and timing.

Late Q4 2023, the MIC Electrical Infrastructure Replacement project delivery method of Design-Bid-Build with Owner Furnished Equipment was reevaluated by the project team and leadership in Waterfront Project Management, Engineering, and the Central Procurement Office. At that time, the decision was made to transition the project delivery method to a Design-Build contract.

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This action will authorize all remaining design and construction funding for the project as a Design-Build project delivery.

Background

The MIC site, located just west of Fishermen’s Terminal, currently has a tenant mix of storage, warehouse, maintenance and repair shops, boatyard and marine services, and fishing vessel support operations. A large majority of the electrical infrastructure that serves the tenants is approximately 25 years old. Though electrical systems generally last 20 to 30 years, their proximity to water has caused it to deteriorate at an expedited rate. An arc flash study and condition assessment were performed on the property in 2020 and determined that several pieces of equipment need replacement for safety reasons as they are not compliant with National Electrical Code (NEC) standards and are too dangerous to service properly.

The replacement of the infrastructure is critical to maintaining reliable and resilient operations for the MIC facilities, ensure that the Port meets its tenant obligations, and continues to leverage the economic opportunities that result in well managed and maintained assets. Transitioning this project to a Design-Build project delivery will provide the necessary upgrade to the overall site to meet these obligations, and reduce risks associated with the constraints of the site during construction.

In October 2022 the Port Commission authorized staff to proceed with the design and permitting phase of the project, and to proceed on long lead material procurement in March 2023. Additional funds were authorized in October 2023 to supplement the electrical equipment procurement for higher than anticipated bids.

JUSTIFICATION

This project supports the following Century Agenda and Maritime Division strategic goals:

Century Agenda:

1. Responsibly Invest in the Economic Growth of the Region and All Its Communities.
2. Be a Highly Effective Public Agency.

Maritime Division:

1. Asset Management
2. Sustainability

The project will include necessary upgrades to the electrical system by replacing current equipment that is dangerous to work on and at risk of failure. This investment will increase the asset value of the MIC by ensuring that the site facilities are functioning well and efficiently, removing dangerous water intrusion into electrical areas, and increasing the reliability of power to the Port’s tenants. Additionally, the upgraded electrical equipment will provide the flexibility

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to utilize electrical capacity for additional future sustainable EV charging capabilities and potential additional shore power that is not currently possible with the existing equipment.

Diversity in Contracting

WMBE goals will be established for the larger general construction contract that will be solicited when the project is ready to be advertised for the Design-Build contract.

DETAILS

Maritime Industrial Center – 2700 Commodore Way, Seattle, WA 98199

Electrical Infrastructure Replacement – C801241

The project consists of demolishing existing switchboards and structural concrete pads; decommissioning conduits and wire; and replacing all with new structural infrastructure, conduits, wires, switchboards, and associated equipment. The switchboards will be upsized from existing capacity of between 400 and 600 amps to 2000 amps for the smaller switchboards and from 2500 Amps to 4000 Amps for the main switchboard for future capacity needs (e.g., EV chargers, shore power). This project will not increase the electrical load at the site at this time.

Scope of Work

The following electrical equipment will be replaced:

1. Switchboard 4SP and 2SPN (service entry to site)
2. Switchboard 4W and 2W (wharf)
3. Switchboard 4P and 2P (NE side of Building A-1)
4. Switchboard EY4 (east side of Building A-1)
5. Switchboard SEY4 (lighting connection for east lot)
6. Switchboards EY4 and SEY4 will be consolidated with 4P and 2P in one location that has better access. Additionally, this will eliminate a stormwater intrusion point at EY4.

Site work:

1. Provide new conduits and conductors from Seattle City Light to new MIC main distribution switchgear.
2. Provide new conduits and conductors from new MIC main distribution switchgear to:
 - a. New electrical switchboard at Mooring Pier
 - b. New electrical switchboard at Wharf
3. Provide new electrical vaults.

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Schedule

Activity

Commission design authorization	October 11, 2022
Design start	October 21, 2022
Commission authorization for major electrical equipment procurement	March 28, 2023
Commission authorization for additional electrical equipment procurement funds	November 14, 2023
Commission construction authorization for Design-Build contract – this request	2024 Quarter 1
Construction Start	2025 Quarter 2
In-Use Date	2026 Quarter 1

*Change in project delivery delays in-use date 4-6 months due to the time needed to prepare the Request for Qualifications (RFQ) and Request for Proposals (RFP) required for the Design-Build procurement process. The schedule impact is accepted to mitigate key project risks using Design-Build.

Cost Breakdown

	This Request	Total Project
Design	\$888,000	\$1,738,000
Electric Equipment Procurement – C801241	\$0	\$3,610,000
Construction	\$7,060,000	\$7,060,000
Total	\$7,948,000	\$12,408,000

Previous authorizations included estimated design costs and procurement costs of the major electrical equipment. This authorization includes all remaining funds for design and construction as a Design-Build project delivery. Estimated Costs have increased on C801241 – MIC Electrical Infrastructure Replacement project by 44% since the last authorization request. Increases over previous estimate are based on additional design work completed since the last authorization. Additionally, while Design-Build is more efficient and mitigates construction risk, upfront costs are often higher due to designer fee allowances, costs to develop the Basis of Design (BOD) and the RFQ/RFP documents. Additionally, there are sunk costs in developing the current design to 60%. However, site conditions research and verification and design to the 60% level are valuable tools that will be used as reference documents to inform and streamline a Design-Build contractor’s development of the final design and construction approach to mitigate the risks associated with operational impacts.

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ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Defer the electrical replacement project: maintain the current state and delay electrical upgrades and repairs.

Cost Implications:

Assuming a 6% escalation is applied to the project over the next four years delaying the project would cost an additional \$250,000 for each year it is delayed. Current maintenance has been minimal, and the equipment cannot be safely worked on by Port Electricians; therefore, costs to maintain are not included.

Pros:

- (1) Lower initial capital cost.

Cons:

- (1) The equipment cannot currently be serviced safely.
- (2) The equipment is already in a state of advanced disrepair due to the proximity to maritime environment and areas of stormwater intrusion.
- (3) If the equipment fails, a long-term diesel generator will be required to provide power to the tenants. This will impact air quality and cost significantly more over time, in large part due to high fuel costs.
- (4) Major electrical equipment is on order and would need to be stored long-term until project is built.
- (5) Does not allow for streamlining of design and construction of the of the project. Creates more risk for change orders during construction.

This is not the recommended alternative.

Alternative 2 – Continue with electrical replacement project as a Design-Bid-Build project.

Cost Implications: \$1M

Pros:

- (1) Avoids delays to the project for 4 months necessary to transition the project to Design-Build
- (2) Advances Century Agenda goals of investing in maritime industries.
- (3) Is initially less expensive.

Cons:

- (1) This alternative will be difficult to implement the needed conduit and vault system replacement resulting in complex logistics and planning due to overlapping location of with other projects, and operational constraints.
- (2) Adds risk of expensive change orders during construction due to significant risks of complex site conditions and severe operational constraints.

This is not the recommended alternative.

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Alternative 3 – Transition electrical replacement project to Design-Build project delivery.

Cost Implications: \$3.6M

Pros:

- (1) Advances Century Agenda goals and Maritime Division strategic goals.
- (2) Upgrades and replaces degraded electrical infrastructure that is not safe to maintain and does not meet current National Electrical Code (NEC) standards.
- (3) Reduces potential construction escalation costs.
- (4) Will provide for a stronger tenant experience by increasing power reliability and resiliency.
- (5) Will provide for additional electrical capacity for additional future EV charging and possible increased shore power.
- (6) Streamlines construction logistics between for the electrical replacement and provides construction risk mitigation due to complex site conditions and operational constraints.
- (7) Minimizes operational impacts by having a Design-Build contractor engage earlier in the project to plan the best construction methodology prior to construction.

Cons:

- (1) This alternative will have an initial higher upfront cost.
- (2) Delays electrical project 4-6 months to transition the project to Design-Build.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary

COST ESTIMATE	Capital	Expense	Total
Original estimate	\$1,500,000	\$0	\$1,500,000
Previous Changes - Net	\$7,090,000	\$0	\$7,090,000
Current Change	\$3,818,000	\$0	\$3,818,000
Revised estimate	\$12,408,000	\$0	\$12,408,000
AUTHORIZATION			
Previous authorizations	\$4,460,000	\$0	\$4,460,000
• Design	\$850,000	\$0	\$850,000
• Electrical Equipment Procurement	\$3,610,000	\$0	\$3,610,000
Current request for authorization	\$7,948,000	\$0	\$7,948,000
Total authorizations, including this request	\$12,408,000	\$0	\$12,408,000
Remaining amount to be authorized	\$0	\$0	\$0

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Annual Budget Status and Source of Funds

This project was included in the 2024 Capital Plan under Maritime Industrial Center Electrical Infrastructure Replacement (C801241) at an estimated total project cost of \$7,179,000. The additional cost of the project will be covered by the Maritime Management Reserve (C800002).

This project will be funded by the General Fund.

Financial Analysis and Summary

Project cost for analysis	\$12,408,000
Business Unit (BU)	Maritime Portfolio Management, and Ship Canal Fishing & Commercial
Effect on business performance (NOI after depreciation)	Annual depreciation will increase by approximately \$414K based on estimated 30-year service life, thereby reducing the NOI by the same amount.
IRR/NPV (if relevant)	NA
CPE Impact	NA

Future Revenues and Expenses (Total cost of ownership)

This project will provide for reliable and resilient electrical power to the MIC facilities for the next 25-30 years. These upgrades will provide protection of Port assets and extend their useful life, provide for additional future electrical capacity to support Port sustainability goals, and increase economic development potential. Maintaining existing assets will preserve the economic vitality of our operations and serve the Port, tenants, and their customers well by providing a safe and sustainable working environment.

ADDITIONAL BACKGROUND

n/a

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

October 11, 2022 – The Commission authorized design for design-bid-build.

March 28, 2023 – The Commission authorized procurement of the electrical equipment for \$1,800,000.

November 14, 2023 – The Commission authorized additional funds for the electrical equipment procurement in the amount of \$1,810,000.