



**COMMISSION
AGENDA MEMORANDUM**

Item No.

8f

ACTION ITEM

Date of Meeting

January 26, 2021

DATE: December 21, 2020

TO: Stephen P. Metruck, Executive Director

FROM: Kenneth Lyles, Director, Maritime Operations and Security
Jo Woods, Senior Manager, Recreational Boating
Mark Longridge, Capital Project Manager

SUBJECT: Authorization for Design and Permitting of the Shilshole Bay Marina X-Dock Rehabilitation (CIP # C800570)

Amount of this request: \$400,000

Total estimated project cost: \$1,670,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to complete design and permitting for the rehabilitation of the X dock fixed pier at Shilshole Bay Marina (SBM) in the amount of \$400,000 of a total preliminary estimated project cost of \$1,670,000

EXECUTIVE SUMMARY

Shilshole Bay Marina serves a broad range of recreational boating customers including moorage tenants, a liveaboard community, youth sailing education, dry boat storage and the general public. Use of the north end pier at X Dock with its vessel hoists provides access to the water for those with boats in the dry storage area and for the public as well. The X Dock facility is located adjacent to the dry boat storage yard and consists of a fixed pier made of timber piles, two jib cranes for launching vessels, a gangway, and a floating dock structure.

This project will remove and replace the current creosote timber piles supporting the fixed pier and replace them with a steel pile system. The current plan is to retain the current superstructure as it is in serviceable condition and retaining it provides the best lifecycle use of the asset.

The floating docks at the north end of Shilshole Bay Marina were replaced in 2008 as part of the major waterside capital development, and while they are performing well, the wooden fixed pier from the docks to the seawall is the original wooden structure built in 1966 as a pair of finger piers, then revised to one solid pier in the mid-seventies. The pier has several piles in poor and deteriorated condition. A project to replace or repair the pier has been included in the capital plan since at least 2012.

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This pier is used by the dry moorage customers to launch and retrieve boats, as well as by racing fleets at Shilshole, and is also available to the public to launch vessels when renting the jib crane. In addition, research vessels use the facility to off-load instruments.

The current plan is to replace the piles and retain the existing superstructure under the Port's Pile Systems Repair & Maintenance Programmatic permit, substantially shortening the local, state and federal permitting time required for the work. A building permit from the City of Seattle SDCI is still expected to be required under any option. The design will include provisions to replace the superstructure at a later date when the existing deck and stringers reach the end of their serviceable life.

JUSTIFICATION

The jib cranes and fixed pier are used by the over 80 north-end dry storage tenants to launch vessels and also by seasonal racing fleets participating in races hosted at the marina, along with the public renting the jib crane. Rehabilitation of the structure will allow continued use of the jib cranes for water access and maintain the viability of the facility.

Throughout the last several years, the Port has been replacing aging treated timber systems at many of our facilities as they reach the end of their life and replacing them with steel systems that are longer lasting, more environmentally friendly and stronger than the timber systems they replace.

The current structure is supported by the original 20 creosote timber piles which are now reaching the end of their service life. Several have been previously repaired or show section loss and deterioration. By replacing this support system with steel piles, it is expected we can reduce the total number of piles, improve environmental conditions, and provide a significantly increased life of over 30 years. The current superstructure and decking are in good condition and will be retained to get full use out of the structure. The design will account for the eventual full replacement of the structure.

Diversity in Contracting

Project team is leveraging an existing IDIQ contract that has an overall WMBE aspirational goal of 10%.

Stakeholder Communication and Outreach

The project team will coordinate with External Relations and marina operations to provide project updates to moorage customers, upland tenants and marina neighbors regarding construction activities.

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DETAILS

Scope of Work

Overall project scope will include the replacement of 20 existing creosote support piles with a steel pile frame to support the existing wooden superstructure. It is expected that fewer piles may be needed which will be confirmed during design.

Design and permitting scope under this authorization will include preparation of plans, specifications and estimates for completing this work, and coordination of all applicable permits required for in-water work to complete the work.

Schedule

All in-water work for the installation of the new piles must be completed within the permitted fish window between July 16 and February 15th of each year, while above water work may continue after this time period (braces, cross beams etc.). While a significant portion of the construction window occurs during the off-peak season for the facility, the project team will work closely with operations staff to minimize impacts to tenants and users.

Initial Schedule assumptions:

Notebook Completion	December 2020
Commission Design Authorization	January 2021
Consultant design service directive executed – Design begins	January 2021
Design & Permitting Complete –	September 2021
Advertise construction	October 2021

This work will require a Seattle Department of Construction & Inspections (SDCI) building permit for replacement of the load bearing piles. Review times for this permit process have been lengthening and will likely be the critical path for this work schedule.

Cost Breakdown

	This Request	Total Project
Design	\$400,000	\$450,000
Construction	\$0	1,220,000
Total	\$400,000	\$1,670,000

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ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Defer rehabilitation of X dock and continue to monitor its condition.

Cost Implications: Low initial cost to monitor condition alone. This would not include any potential damage to structure which would be considerably more expensive to repair.

Pros:

- (1) Lower initial capital cost.
- (2) Allows continued use without construction shutdowns.

Cons:

- (1) Increasing risk to the structure if kept in use.
- (2) Significant risk of needing further load restriction up to and including full closure, heavily impacting Shilshole North Dry Storage lot tenants.
- (3) If the structure fails or needs to be closed it would not be able to reopen until fully redesigned and permitted (approx. 18 months).
- (4) Construction costs continue to escalate so replacement would likely cost more in the future, and still may require shutdowns of the facility in the meantime.

This is not the recommended alternative.

Alternative 2 – Full rehabilitation of the entire structure starting design in 2021.

Cost Implications: \$3,000,000 (planning level estimate)

Pros:

- (1) Addresses structural concerns before they become an emergency.
- (2) Replacement would likely be steel deck supported by steel piles with longer life expectancy than timber (2-3x)

Cons:

- (1) Significantly higher capital cost.
- (2) Longer construction duration would keep facility out of service for tenants longer
- (3) Full replacement could not be achieved under the existing programmatic permit and would take significantly longer (12-15 months). Construction would not be viable until the 2022-3 fish window

This is not the recommended alternative.

Alternative 3 – Full rehabilitation of the supporting structure starting design in 2021.

Cost Implications: \$1,670,000

Pros:

- (3) Addresses structural concerns before they become an emergency.

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- (4) Replacement will likely be supported by steel piles with longer life expectancy than timber (2-3x)
- (5) Reuse of superstructure allows for maximum utility of existing structure.

Cons:

- (4) Higher capital cost.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$1,670,000	\$0	\$1,670,000
AUTHORIZATION			
Previous authorizations	\$50,000	0	\$50,000
Current request for authorization	\$400,000	0	\$400,000
Total authorizations, including this request	\$450,000	0	\$450,000
Remaining amount to be authorized	\$1,220,000	\$0	\$1,220,000

Annual Budget Status and Source of Funds

This project is included in the 2021 Capital Plan under C800570 SBM Dock X Pier Replacement with a total project cost of \$1,670,000.

This project will be funded by the General Fund.

Financial Analysis and Summary

Project cost for analysis	\$1,670,000
Business Unit (BU)	Recreational Boating
Effect on business performance (NOI after depreciation)	This project is not expected to generate any incremental revenue and will increase depreciation expense by approximately \$56K per year.
IRR/NPV (if relevant)	N/A
CPE Impact	N/A

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None.