



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 4b

**ACTION ITEM**

**Date of Meeting** September 12, 2017

**DATE:** August 7, 2017

**TO:** Dave Soike, Interim Executive Director

**FROM:** Michael McLaughlin, Director, Cruise Operations  
Mark Longridge, Capital Project Manager, Seaport Project Management

**SUBJECT:** Authorization for procurement of additional Cruise Standoff Barges at Terminal 91 (CIP # C800910)

**Amount of this request:** \$1,050,000

**Total estimated project cost:** \$1,100,000

**ACTION REQUESTED**

Request Commission authorization for the Executive Director to advertise and award a contract for cruise standoff barges for use at Terminal 91 berths in an amount of \$1,050,000 for an estimated total project cost of \$1,100,000.

**EXECUTIVE SUMMARY**

This project procures five additional standoff barges to replace deteriorated barges, facilitate safety, and complement the existing fleet of barges providing standoff for cruise vessels at Terminal 91. These floating standoff barges are part of the fendering system for cruise ships. They are seasonally deployed at Terminal 91 along the face of the berth with flexible connections to the fender piles. This allows adequate space between the dock and the cruise ship for provisioning and servicing through the full tide cycle.

The current barge fleet used at Terminal 91 consists of ten newer style standoff barges designed by Port staff and procured in 2012 and 2014 (7 & 3 respectively), along with several older 'unifloat' style construction barges originally purchased second hand, then repurposed from the Terminal 30 Cruise Terminal for use at T-91. The newer style barges are longer, lighter, stronger, more stable, and superior in every respect to the unifloats. They were custom designed and built as part of the fendering system and have performed very well over the last several cruise seasons.

**JUSTIFICATION**

This project contributes to the Port's Century Agenda goal to advance the region as a leading tourism destination and business gateway and doubling the economic value of cruise traffic to Washington State by supporting the capacity to accommodate larger cruise vessels.

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The current remaining unifloat standoff barges were purchased used in 1999 and were not designed for the current class of cruise ships. While they have performed well over the last several years, they are now showing significant deterioration. With the addition of the newer design of standoff barge in 2013, these older floats are used as a backup or in secondary positions. The addition of five additional barges would provide a full complement of barges for berthing on the east and west sides of Terminal 91 for current and larger ships in the future and reduce reliance on these older barges.

### **DETAILS**

While the current fleet of unifloat standoff barges has served well, they have been having more difficulties in the last few years. Last year one of the barges sank while in service and needed to be replaced with another from the reserve fleet, and several have been showing wear, both from deployment in heavy weather incidents and general corrosion in the primary wall structure.

In 2010, these floats were nearing the end of their service life. The port included the design and procurement of replacement barges in the authorization for the replacement of the fender system on the east side of pier 91 and had seven barges built for that purpose.

The performance of these new barges was excellent and the Port exercised an option to purchase three more under the same contract in 2015, bringing the fleet total to ten. This configuration still relies on older unifloat barges for the largest of cruise ships currently berthing at the terminal, and the addition of five more barges would alleviate this reliance on the older style barge except in the case one of the newer barges was pulled from service.

The existing unifloat barges are at or near the end of their service lives. Continued use of these barges would require extensive repairs at considerable cost for limited additional service life. The addition of five newer style barges will allow for retirement of the remainder of the unifloat barges from regular service and allow for safe and efficient docking of the largest cruise vessels throughout the barge design life of 30 years.

### ***Scope of Work***

Procure five ladder frame pipe truss standoff barges, each 55 feet long by 10 feet wide by 5 feet deep and weighing approximately 36,000 pounds each. They are an open frame design to better resist wave forces and ride low in the water for stability and low windage. The materials used for this design are primarily epoxy coated steel pipe, ultra-high molecular weight (UHMW) plastic, and plastic lumber, all of which have high recycled content. The top surface of the barges carries a non-slip fiber reinforced plastic (FRP) grated decking for safe staff operations while deploying, if needed.

These barges have been designed specifically to withstand the loading of cruise ship berthing, wind, and line loads providing the necessary standoff distance required for servicing of the

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cruise ships while at port. There are no commercial off-the-shelf options available that provide the needed capability.

The barges will be seasonally deployed for use during the cruise season and have been designed with feet for dry storage on the terminal. The design also includes fork pockets for safe and simple movement with a forklift and the capability to be stacked for efficient storage. It is expected these barges will be shop fabricated and coated offsite and brought to the terminal by truck to be inspected and deployed.

Although this authorization is primarily a purchasing procurement of barges, the Port’s Seaport Project Management team is partnering with the small business group to identify possible small business opportunities within both goods and construction phases.

**Schedule**

The new standoff barges are scheduled to be fabricated and delivered for use before the next cruise season begins in May of 2018.

*Activity*

Division design authorization	2017 Quarter 1
Design start	2017 Quarter 1
Commission procurement authorization	2017 Quarter 3
Procurement start (advertise)	2017 Quarter 3
In-use date	2018 Quarter 2

**Cost Breakdown**

	This Request	Total Project
Design, Project Management	\$50,000	\$100,000
Construction	\$1,000,000	\$1,000,000
Total	\$1,050,000	\$1,100,000

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1** – Keep the existing older unifoats in service.

Cost Implications: Previous structural repairs and retrofitting of the unifoats in 2008 was approximately \$100,000 and provided a few years additional service life. Additional risk if barges fail in service, including potential damage to ships and/or terminal.

Pros:

1. No capital funding required and leaves capital funds available for other projects.

Cons:

1. Keeping the existing fleet in service presents significant risk of failure of one or more of the unifoat barges, resulting in possible disruption to cruise operations. To keep the

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current floats in service they would each need to be inspected repaired and retrofitted at significant expense.

2. Even in this upgraded condition these floats were never designed to take the berthing, weather and line loads presented at the cruise terminal, presenting more risk of potential failure.

This is not the recommended alternative.

**Alternative 2** – Procure additional standoff barges.

Cost Implications: \$1,100,000 (total project)

Pros:

1. Improved operations and pier protection from upgraded barge design.
2. Longer expected asset life and improved life cycle cost than repairing the current fleet (system is designed for a minimum 30 year life).
3. Provide immediate protection of Port assets.

Cons:

1. More expensive in initial capital outlay than extending the life of the existing barge fleet.

***This is the recommended alternative***

**FINANCIAL IMPLICATIONS**

***Cost Estimate/Authorization Summary***

	Capital	Expense	Total
<b>COST ESTIMATE</b>			
Original estimate	\$880,000	\$0	\$880,000
Current change	\$220,000	0	\$220,000
Revised estimate	\$1,100,000	0	\$1,100,000
<b>AUTHORIZATION</b>			
Previous authorizations	\$50,000	0	\$50,000
Current request for authorization	\$1,050,000	0	\$1,050,000
Total authorizations, including this request	\$1,100,000	0	\$1,100,000
Remaining amount to be authorized	\$0	\$0	\$0

***Annual Budget Status and Source of Funds***

This project was included in the 2017 Plan of Finance under CIP# C800910, T-91 Camel Replacements, in the amount of \$930,000. The additional \$170,000 will be available in C800002 Maritime Contingency.

The project will be funded from the General Fund.

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***Financial Analysis and Summary***

Project cost for analysis	\$1,100,000
Business Unit (BU)	Cruise Operations
Effect on business performance (NOI after depreciation)	At completion, incremental depreciation expense is estimated at \$36,666/year, based on a 30 year asset life.
IRR/NPV (if relevant)	No incremental revenue. NPV is present value of project cost.
CPE Impact	N/A

**ATTACHMENTS TO THIS REQUEST**

- (1) Presentation slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

June 14, 2011 – The Commission authorized construction of Phase II of the T91 fender system including the procurement of the current fleet of standoff barges.