



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 8e

**ACTION ITEM**

**Date of Meeting** October 12, 2021

**DATE:** September 20, 2021

**TO:** Stephen P. Metruck, Executive Director

**FROM:** Eileen Francisco, Interim Director, Facilities and Capital Programs  
Wayne Grotheer, Director, Aviation Project Management Group

**SUBJECT: Ratification of Critical Work for South Satellite Hot Water (C801271)**

**Amount of this request:** \$1,100,000

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

**ACTION REQUESTED**

Request Commission ratification of critical work authorization in the amount of \$302,537 for the hot water at Seattle-Tacoma International Airport's South Satellite and additional authorization for the Executive Director to complete construction of the project using a Job Order Contract in the amount of \$600,000, for a total authorization in the amount of \$1,100,000, and a total estimated project cost of \$1,100,000.

**EXECUTIVE SUMMARY**

Domestic hot water is required for both, restrooms and for airport dining and retail at the Seattle-Tacoma International Airport (Airport). Currently, two hot water tanks provide domestic hot water to the South Satellite facility (SSAT) - one for Airport Dining and Retail (ADR) locations and one for restrooms. One of the hot water tanks failed at the end of 2020 and is not repairable because of a leak in the shell of the tank. The redundancy in the system continues to provide hot water to the SSAT from the remaining tank. This project will replace the two existing hot water tanks with a new hot water system to ensure continued operations at the SSAT. This project was originally anticipated to be completed under a small works authorization; however, upon completion of design, it became clear that due to project complexity and materials cost the estimated project cost exceeded the small works threshold. Critical work was acknowledged by the Executive Director on September 7, 2021, to allow staff to move forward with a job order contract to procure long-lead items and start work to limit the risk of a disruption at the SSAT.

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### **JUSTIFICATION**

Both hot water tanks were installed in 2005. One hot water tank developed pinhole size leaks due to material failure from corrosion. As both tanks were installed at the same time, the second tank is at risk of failure. If the second tank fails, the SSAT will be without hot water for restrooms or ADR spaces until a temporary unit is provided. At a minimum the ADR spaces will be required to close; worst case the facility would need to be shut down until temporary hand washing units are provided for the restrooms. This project will ensure the domestic hot water system for the SSAT is returned to normal operations. In addition, the new system uses technology that is more energy efficient.

This project started in early 2021 as a small works project to replace the two hot water tanks with identical tanks. Staff determined that a replacement in kind was not possible because of multiple factors, with space constraints being the biggest impact. Engineering started the design in March 2021. Upon completion of the design, it was determined that using small works contracts to install was no longer feasible as thresholds would be exceeded.

Given the complex site conditions, estimated costs increased. The removal of the failing tanks will need to be cut up into smaller pieces. The installation of the newer tanks will require the tanks to be lowered into the mechanical room from a 20 ft high ramp access hatch. Material price increases and higher soft costs due to the complexity have also contributed to the higher estimated cost. Additionally, this project includes the amount of \$100,000 in contingency to install a temporary natural gas boiler as a mitigation should the remaining hot water tank show an indication of failure, which could render the SSAT inoperable.

### ***Diversity in Contracting***

The construction for this project will be completed using an existing Job Order Contract (JOC) contractor that has a Women/Minority Business Enterprise goal of 5%.

### **DETAILS**

This project will replace the existing domestic hot water tanks with two new hot water tanks.

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

Work will include the replacement of both domestic hot water tanks with new energy efficient semi-instantaneous hot water tanks. The new tanks are smaller than the existing tanks, which will require less modification to fit into the space and meet current code.

Other work will include:

- (1) Updating electrical wiring and connections
- (2) Programming and connecting direct digital controls
- (3) Modifying water and steam piping to fit new tanks
- (4) Commissioning and testing of new tanks and piping

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**Schedule**

Port of Seattle Engineering completed the design for the replacement of the hot water tanks when the project was initially proposed as a small works project. Once it was determined that the cost would be over the amount of \$300,000, a critical work memo was drafted in order for staff to continue moving the project forward without delaying the in-use date of Q1 2022.

**Activity**

Commission design authorization	N/A
Design start	2021 Quarter 1
Commission construction authorization	2021 Quarter 3
Construction start	2021 Quarter 4
In-use date	2022 Quarter 1

**Cost Breakdown**

	This Request	Total Project
Design	\$10,000	\$60,000
Construction	\$590,000	\$1,040,000
Total	\$600,000	\$1,100,000

**FINANCIAL IMPLICATIONS**

**Cost Estimate/Authorization Summary**

	Capital	Expense	Total
<b>COST ESTIMATE</b>			
Original estimate	\$1,100,000	\$0	\$1,100,000
<b>AUTHORIZATION</b>			
Previous authorizations	\$197,463	\$0	\$197,463
Critical Work Declaration	\$302,537	\$0	\$500,000
Authorization Increase	\$600,000	\$0	\$1,100,000
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, CIP C801271, was not included in the 2021-2025 capital budget and plan of finance. A budget transfer in the amount of \$1,100,000 was transferred from the Aeronautical Reserve CIP (C800753) resulting in zero net change to the Aviation capital budget. The funding source will be Airport Development Fund.

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***Financial Analysis and Summary***

Project cost for analysis	\$1,100,000
Business Unit (BU)	Terminal Building
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base.
IRR/NPV (if relevant)	N/A
CPE Impact	Less than \$.01 in 2023

***Future Revenues and Expenses (Total cost of ownership)*****ATTACHMENTS TO THIS REQUEST**

- (1) Presentation slides
- (2) Critical work authorization memo dated September 7, 2021

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

None