

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No. 4g
Date of Meeting August 9, 2016

DATE: July 26, 2016
TO: Ted Fick, Chief Executive Officer
FROM: Wayne Grotheer, Director Aviation Project Management Group
Jeffrey Brown, Director, Aviation Facilities and Capital Programs
SUBJECT: Central Terminal Expansion Heating Ventilating and Air-Conditioning Upgrade
Construction Authorization (CIP #C800722)

Amount of This Request:	\$5,498,000	Source of Funds:	Airport Development Fund, Existing and Future Revenue Bonds
Est. Total Project Cost:	\$6,612,000		
Est. State and Local Taxes:	\$420,000		

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to (1) advertise and execute a major construction contract for the Central Terminal Expansion Heating Ventilating and Air-Conditioning (CTE HVAC) Upgrade Project at Seattle-Tacoma International Airport and (2) use Port crews and small works contracts to perform construction work. This authorization is for \$5,498,000 for a total project authorization of \$6,612,000.

SYNOPSIS

This request to move forward with construction follows the Commission's earlier review and approval of design for HVAC in order to expand dining opportunities on the mezzanine levels within the central terminal.

This construction project will install two new air handling units (AHUs) on the roof above the North and South mezzanine levels of the central terminal. The AHUs would provide HVAC infrastructure systems to support the development of the mezzanine spaces for use by the traveling public. Fast growing passenger volumes necessitate development of the mezzanines for passenger services. The central terminal mezzanine spaces are interior spaces that can be used for expansion and do not require weather protection. However, they do require added HVAC in order to be developed for passenger services. This project directly supports Airport Dining and Retail (ADR) Lease Group #3 authorized by Commission in June 2016. These HVAC improvements are necessary for the Central Terminal's long-term future and will not be impacted by future development recommended as part of the Sustainable Airport Master Plan (SAMP).

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BACKGROUND

The CTE project completed in 2005 included mezzanine spaces above the concourse level restaurants. These mezzanines were intended to be developed when passenger demand supported their use. A portion of the North mezzanine level is already in use as a prep-kitchen and service area for Anthony's restaurant. The demand analysis completed as part of the Airport Dining and Retail master plan forecasts increased passenger demand for food service that cannot be met without development of these spaces. The existing central terminal AHUs are already operating at peak capacity and cannot support the mezzanines. Other nearby spaces developed for the USO, a Starbucks venue, and the US Bank branch similarly needed to create their own HVAC.

This project will provide HVAC for the mezzanines by installing two new AHU's mounted on the roof, each within its own weather-tight enclosure. The addition of these AHU's will also improve the emergency smoke evacuation control systems within the central terminal. These new AHUs will be designed to offset the additional heat generated by passengers, employees and new equipment in these mezzanine spaces.

PROJECT JUSTIFICATION AND DETAILS

Project Objectives

- Provide needed HVAC capacity and smoke control in order to develop central terminal mezzanine level space to meet passenger demand for additional seating space and food service.

Scope of Work

This project will install two new AHU's on the roof of the CTE in support of the planned expansion of the mezzanine level spaces, provide the associated air distribution, and control system to support the new dining and retail spaces planned for the mezzanine level of the CTE. This project will also improve the smoke control in the CTE

Schedule

Design Complete	3 rd Quarter 2016
Advertise for Construction	4 th Quarter 2016
Substantial Construction Complete	4 th Quarter 2017

FINANCIAL IMPLICATIONS

Budget/Authorization Summary

	Capital	Expense	Total Project
Original Budget	\$6,589,000	\$23,000	\$6,612,000
Previous Authorizations	\$1,114,000	\$0	\$1,114,000
Current request for authorization	\$5,475,000	\$23,000	\$5,498,000
Total Authorizations, including this request	\$6,589,000	\$23,000	\$6,612,000
Remaining budget to be authorized	\$0	\$0	\$0
Total Estimated Project Cost	\$6,589,000	\$23,000	\$6,612,000

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Project Cost Breakdown

	This Request	Total Project
Design Phase	\$0	\$1,114,000
Construction Phase	\$5,078,000	\$5,078,000
State Tax	\$420,000	\$420,000
Total	\$5,498,000	\$6,612,000

Budget Status and Source of Funds

This project, CIP #C800722 was included in the 2016-2020 capital budget and plan of finance with a budget of \$6,589,000. The funding source will be the Airport Development Fund, existing revenue bonds and future revenue bonds.

Financial Analysis and Summary

CIP Category	Renewal and Replacement
Project Type	Infrastructure Upgrade
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	\$6,612,000
Business Unit (BU)	Terminal Building
Effect on business performance	NOI after depreciation will increase
IRR/NPV	N/A
CPE Impact	\$.02 in 2018

Lifecycle Cost and Savings

The major assets this project will install are the two air handling units and the associated electrical and mechanical devices. These assets have useful life spans of 20-30 years.

STRATEGIES AND OBJECTIVES

This project promotes the Port's Century Agenda objective of meeting the region's air transportation needs at the Airport for the next 30 years. This project will ensure that the new spaces on the mezzanine level of the CTE have proper HVAC and smoke control. These infrastructure systems are critical to the customer experience here at the Airport.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do not proceed with the project at this time.

Cost Implications: \$842,000 of design effort would need to be expensed. This project is at 100% design complete.

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Pros:

- (1) The need to invest in the existing HVAC systems could be deferred if the central terminal mezzanine spaces remain undeveloped for public use.

Cons:

- (1) Increasing passenger demand for food service in the central terminal cannot be met without expansion into undeveloped space on the mezzanine levels.
- (2) Existing HVAC systems cannot provide an acceptably comfortable environment if mezzanine level space is developed for public use.
- (3) The traveling public, airlines, tenants and employees may experience discomfort due to the existing HVAC system's inability to heat and cool parts of the central terminal during peak summer & winter weather.

This is not the recommended alternative.

Alternative 2) - Redesign of the planned use of the mezzanine spaces.

Cost Implications: \$842,000 of design effort would need to be expensed. This projects design is 100% complete. Optional uses for this space are unknown at this time but any occupancy of these spaces drives the need for HVAC.

Pros:

- (1) Could eliminate the need for this project if the proposed use of this mezzanine space was redesigned.

Cons:

- (1) This could cause significant delays in the program design schedule.
- (2) This would likely cause significant budget increases to the program.

This is not the recommended alternative.

Alternative 3) – Upgrade the CTE HVAC system to support the planned expansion of only the north or south mezzanine spaces of the CTE.

Cost Implications: \$421,000 of design effort would need to be expensed. This projects design is 100% complete. \$3,306,000 total estimated project cost

Pros:

- (1) Requires less capital investment by the Port of Seattle.
- (2) Provides adequate HVAC capacity for the planned expansion of one of the mezzanine spaces.
- (3) Enables expansion into spaces not currently used.
- (4) The traveling public, airlines, tenants and staff experience and expectations during peak summer & winter weather will be met in one of these mezzanine spaces given these improvements to the CTE infrastructure.
- (5) Estimated cost to expand only one of the mezzanine spaces is \$3,306,000.

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Cons:

- (1) This will require detailed design and complex construction in order support the planned expansion.
- (2) Only using one of the mezzanine spaces will not meet the service demands of the traveling public, airlines, tenants and staff.
- (3) \$421,000 in design costs would need to be expensed.

This is not the recommended alternative.

Alternative 4) – Upgrade the six existing AHU’s serving the CTE in order to support the planned expansion of the mezzanine spaces of the CTE

Cost Implications: \$842,000 in design effort would need to be expensed. Estimated \$20-\$30 million dollars

Pros:

- (1) This alternative would provide adequate HVAC capacity for the planned expansion of the mezzanine spaces.

Cons:

- (1) Requires a capital investment by the Port of Seattle of \$20-\$30 million dollars (this is only a conceptual estimate).
- (2) The entire CTE area would need to be closed for 2 years during the construction. Revenue losses during this closure period have not been estimated.
- (3) \$842,000 in design costs would need to be expensed.

This is not the recommended alternative.

Alternative 5) – Upgrade the CTE HVAC system to support the planned expansion of the north and south mezzanine spaces of the CTE.

Cost Implications: \$842,000 has been spent on this design. Construction Cost \$5,498,000

Pros:

- (1) Design for this project is 100% complete.
- (2) This would provide adequate HVAC capacity for the planned expansion of the mezzanine spaces.
- (3) Enables the expansion of CTE ADR Lease Group #3 facilities into spaces not currently being used.
- (4) The traveling public, airlines, tenants and staff experience and expectations during peak summer & winter weather will be met given these improvements to the CTE infrastructure.

Cons:

- (1) Requires a capital investment by the Port of Seattle.

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(2) This will require complex construction in order to support the planned expansion.

(3) Estimated cost to design and construct this project is \$6,612,300.

This is the recommended alternative.

ATTACHMENTS TO THIS REQUEST

- CTE HVAC Upgrade Presentation

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- May 26, 2015 – the Port Commission authorized the design and construction documents for the Central Terminal HVAC Upgrade project.
- October 28, 2014 – Authorization for Airport Dining and Retail Infrastructure Modifications (CIP #C800638)
- June 25, 2013 – Authorization for United Services Organization Northwest Lease and Associated Second Floor Utilities Preparations (CIP #C800615)
- January 22, 2008 – Authorization for the upgrade of the heating, ventilation, and air-conditioning (HVAC) system to the north side of the second floor of the Main Terminal Administration Building/CTE (CIP #C800249)