



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8b

ACTION ITEM

Date of Meeting October 8, 2019

DATE: September 30, 2019

TO: Stephen P. Metruck, Executive Director

FROM: Jeffrey Brown, Director, Aviation Facility and Capital Program
Wayne Grotheer, Director, Aviation Project Management

SUBJECT: Airport Terminal Solid Waste Improvements Project (CIP #C800945)

Amount of this request: \$1,225,000

Total estimated project cost: \$6,400,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) prepare design and construction bid documents for the Terminal Solid Waste Improvements project at Seattle-Tacoma International Airport; (2) execute a long-term contract for standardized solid waste compactors through a competitive process for a period of up to 10 years; and (3) use Port crews for preconstruction activities. The amount of this request is \$1,225,000 for a total estimated project cost not to exceed \$6,400,000.

EXECUTIVE SUMMARY

The purpose of this project is to expand capacity and improve sanitary conditions of the Airport's terminal solid waste (garbage, recycling, and compost) infrastructure. Significant passenger growth in the past eight years has resulted in a 45 percent increase to the Terminal's solid waste volumes and requires the current solid waste systems to operate at or near maximum capacity with the occasional overages at peak times. The project supports the Airport's Environmental Strategy Action Plan goal to divert 60 percent of waste from landfills by ensuring enough throughput capacity is available for future recycling and composting volumes. The project supports solid waste redundancy through providing additional solid waste assets enabling operations to continue in peak times and inclement weather. The project further addresses sanitation concerns identified during the 2018 and 2019 site visits by the Food and Drug Administration.

Solid waste throughput and capacity are essential for Airport operations, passenger comfort, worker safety, pest control and overall sanitation. This project ensures operational integrity of the terminal solid waste operations through: (1) expansion of ramp level dedicated refuse collection and processing space; (2) addition of six sanitation and cart wash stations throughout the airport; (3) purchase of nine new high-capacity compactors and; (4) the standardization of compaction equipment through a competitively bid 10-year term contract.

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JUSTIFICATION

This action satisfies the business plan to operate a world-class international airport by ensuring adequate solid waste infrastructure is in place to meet operational, passenger comfort, pest control and worker safety needs. Solid waste generation is directly proportional to the number of passengers utilizing the Airport and the Airport's Dining and Retail services. From 2010 to 2018, terminal solid waste generation grew 45 percent from 5,500 to 8,000 tons annually and is forecast to continue to increase in the future; garbage volumes grew 20 percent increasing by 850 tons annually, recycling volumes grew 92 percent increasing by 752 tons annually, and composting volume grew 411 percent increasing by 797 tons annually, other diverted waste volumes grew 59 percent or 164 tons annually.

The Central Terminal core solid waste refuse collection and processing areas were constructed in 2003 and provided dedicated garbage and recycling spaces only or enough space for large scale two-stream operations. Composting operations began in 2006 and are handled by movable bins. The current facilities are at capacity, require attention due to long-deferred maintenance, and require additional space and infrastructure to meet future demands while remaining compliant with federal code and sanitation guidelines.

This project directly supports the Port's Century Agenda goal to be the greenest and most energy efficient Port in North America by expanding compost and recycling capacity, which enables the airport to meet its solid waste diversion goals. Diverting waste from the Cedar Hills Regional landfill reduces greenhouse gas emissions and reduces airport costs to dispose of solid waste. Expanding solid waste capacity through system changes and expanded capacity containers reduces the total number of vehicle trips required from the Airport to Solid Waste processing facilities which reduces vehicular traffic and the Port's overall carbon footprint.

Diversity in Contracting

Project staff is working with the Diversity in Contracting department to inform Woman and Minority Business Enterprises (WMBE) of this opportunity, and in the establishment of the WMBE aspirational goal for the construction contract.

DETAILS

Solid Waste throughput and capacity are essential for Airport operations, passenger comfort, worker safety, pest control and overall sanitation. The successful completion of this project will:

- Accommodate future passenger growth and the subsequent larger volume of solid waste generated. The project is informed by the Airport's 2016 Solid Waste Management Plan and Forecast and Capacity Study.
- Align solid waste management with Century Agenda Goal Number 4 to be the greenest and most energy efficient Port in North America and directly supports the Airport's goal to divert 60 percent of terminal solid waste from landfills.

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- Address sanitation and federal regulatory requirements identified during the 2018 and 2019 Food and Drug Administration site inspections.
- Improve worker safety through smart design to improve sanitation and maintainability of the refuse collection areas.
- Improve pricing and standardization of Solid Waste compactor assets through a long-term competed contract. Ensures interchangeability of assets for continuity of operations during scheduled and unscheduled maintenance.

Scope of Work

The main scope items include:

- Expand existing Central Terminal solid waste collection rooms by constructing two ramp level solid waste collection and processing spaces adjacent to the Central Terminal.
- Install six sanitation and cart wash stations at solid waste collection rooms throughout the airport.
- Purchase nine compactors.
- Execute a long-term contract to establish standards for compaction equipment through a competitively bid 10-year term contract.

Schedule

Activity

Design start	2019 Quarter 4
Commission construction authorization	2020 Quarter 4
Construction start	2021 Quarter 2
In-use date	2021 Quarter 4

Cost Breakdown

	This Request	Total Project
Design	\$1,225,000	\$1,400,000
Construction	\$0	\$5,000,000
Total	\$1,225,000	\$6,400,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do not authorize design of the project.

Cost Implications: Expense for preliminary work \$175,000

Pros:

- (1) No additional funding needed for the project

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Cons:

- (1) Does not meet current solid waste code requirements
- (2) Increases the potential of garbage/trash overflow conditions, increased rodent issues, unsafe worker conditions, and possible code findings and violations
- (3) Requires additional solid waste removal services and tipping fees to mitigate compactor breakdowns and haul times

This is not the recommended alternative.

Alternative 2 – This alternative adds approximately 1,600 square feet of additional ramp level space adjacent to the Central Terminal (CT); provides for 3 compactors (trash, recycling, and compost) at both CT North and South waste collection rooms; adds a trash compactor to the Service Tunnel loading dock; and adds Sanitation Stations to CT North and South, Concourses A and D, the Service Tunnel, and South Satellite.

Cost Implications: Capital Cost: \$5,500,000

Pros:

- (1) Provides capacity to meet projected average daily volumes
- (2) Improves Airport refuse area sanitation conditions

Cons:

- (1) Additional annual Operations and Maintenance contracts and labor expense costs to mitigate unforeseen breakdowns and compactor unavailability periods
- (2) Loss of operational ramp space for parking and airline overflow space
- (3) Lost revenue for dumpster usage verses compactor usage

This is not the recommended alternative.

Alternative 3 – This alternative adds approximately 2,400 square feet of additional ramp level space; provides for four compactors (trash, recycling, and compost) at both CT North and South waste collection rooms; adds a trash compactor to the Service Tunnel; and adds sanitation stations to CT North and South, Concourses A and D, the Service Tunnel and South Satellite and establishes a 10-year contract for the purchase of standardized compactors.

Cost Implications: \$6,400,000

Pros:

- (1) Meets all project objectives
- (2) Provides capacity to meet projected long-term waste volumes
- (3) Provides overflow capacity/flexibility to mitigate increased peak volume, missed pickups, daily haul downtime and equipment breakdowns
- (4) Supports emergency preparedness and improves safety when haulers cannot access the airfield due to winter or low visibility conditions
- (5) Improves Airport refuse area sanitation conditions

Cons:

- (1) Future gating flexibility of Gate C2

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- (2) Loss of Operational ramp space for parking and airline overflow maintenance space
- (3) Requires relocating Airport Dining and Retail Tenant refrigeration equipment

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$1,876,000	0	\$1,876,000
Estimate Increases	\$4,324,000	\$200,000	\$4,524,000
Revised Estimate	\$6,200,000	\$200,000	\$6,400,000
AUTHORIZATION			
Previous authorizations	\$175,000	\$0	\$175,000
Current request for authorization	\$1,175,000	\$50,000	\$1,225,000
Total authorizations, including this request	\$1,350,000	\$50,000	\$1,400,000
Remaining amount to be authorized	\$4,850,000	\$150,000	\$5,000,000

Annual Budget Status and Source of Funds

The project CIP C800945 was included in the 2019-2023 plan of Finance, in the amount of \$1,876,000. The total budget was increased by \$4,524,000 to address solid waste and sanitation shortfalls. The Capital estimate increase of \$4,324,000 includes additional solid waste capacity for the North Central Terminal, the expanded Central Terminal refuse area footprint and the addition of 6 sanitation stations. The current project estimate is \$6,200,000 of capital and \$200,000 of expense for a total project estimate of \$6,400,000. The capital budget increase will be transferred from the Aeronautical Reserve CIP (C800753), resulting in no net change to the airport capital budget. The \$200,000 of expense is to cover required tenant equipment relocation. The funding source will be the airport development fund and future revenue bonds.

Financial Analysis and Summary

Project cost for analysis	\$6,200,000
Business Unit (BU)	Terminal Building
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase
IRR/NPV (if relevant)	
CPE Impact	\$0.03 in 2023

Future Revenues and Expenses (Total cost of ownership)

The recommended solution is expected to yield a 10-year cost avoidance of \$9,600,000 to the solid waste program with a project payback of less than eight years. Cost avoidance is based on

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reduced tipping fees and costs to mitigate waste overages. Additional compactor equipment operations and maintenance costs will be \$45,000 annually.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None