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COMMISSION

AGENDA MEMORANDUM Item No. 8c
ACTION ITEM Date of Meeting March 14, 2023

DATE: March 3, 2023
TO: Stephen P. Metruck, Executive Director
FROM: Keri Stephens, Director, AV Facilities & Capital Programs
Eileen Francisco, Director Aviation Project Management
SUBJECT: Communication Enhancement – Construction Authorization C801161
Amount of this request: \$7,840,000
Total estimated project cost: \$11,000,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) advertise, award, and execute a major works construction contract for the Communication Enhancement Project at Seattle-Tacoma International Airport, and (2) use Port of Seattle Crews for construction activities. The amount of this request is \$7,840,000 which will fully authorize the estimated project budget of \$11,000,000.

EXECUTIVE SUMMARY

The Airport is continuing to grow and upgrade the capabilities and services that are offered to travelers, tenants, and employees. As projects are completed, there is a need for faster and more data connections to support the expansion. The fiber connections that will be added by this project will support the growing need and allow for smooth transitions as the Port continues to optimize its layout and connection plans. Some of the systems these connections will support are WIFI access points, people counter sensors for check points, airline check in and gate operations, security cameras, Airport Dining and Retail business transactions, and life safety communications.

JUSTIFICATION

The Communication Enhancement (CE) project will install new fiber connections between the Main Distribution Rooms (MDR) and the communications Equipment Rooms. The fiber will be installed using the existing Communications Infrastructure Backbone System (CIBS) that had established the equipment room in the early 2000's. The equipment room connections were reviewed, and the rooms identified as critical (100% capacity) and high priority (? 85% capacity)

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were selected for the new connections. The project will also be installing specialized 2-hour fire rated cables between the MDRs and equipment rooms identified to support life safety communications.

The last major telecommunication infrastructure upgrade was completed in the early 2000's with the installation of the CIBS, which established the MDR and outlying communication equipment rooms. The CIBS project also installed trays specifically for communications cabling between the rooms. Since the completion of CIBS, the installed cabling has been near fully allocated to Port processes and tenant needs.

This project will install new fiber optic cabling within the existing CIBS cable trays to establish new connections for use. During the design phase the team inspected the fill of the tray system and determined that some additional tray and conduit sections are needed to add the planned fiber and leave space for future growth. The project will also install the equipment needed to terminate and test the fiber connections for immediate use.

Diversity in Contracting

The project staff, in coordination with the Diversity in Contracting Department, have set a 5% woman and minority business enterprise (WMBE) goal for the Communication Enhancement project.

DETAILS

Scope of Work

Communications Enhancement:

(1) Design services will evaluate the Port identified communication equipment rooms needing additional connections.

- (2) Design services will provide communication and electrical drawings required for installing new connections between MDR and selected communication equipment rooms.
- (3) Construction services will procure and provide the fiber optic cabling and termination connectors to install and test the cables for connectivity.
- (4) Construction services will install cabling innerducts and fiber cables within the existing CIBS infrastructure.
- (5) Construction services will install the fiber optic patch panels to accommodate the new fiber strands. Each strand will be terminated and tested for connectivity.

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Schedule

Activity

Bid Advertisement 2 Quarter 2023

Construction start 1 Quarter 2024

In-use date 2 Quarter 2025

Cost Breakdown This Request Total Project

Design \$0 \$3,160,000

Construction \$7,840,000 \$7,840,000

Total \$7,840,000 \$11,000,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Cancel or defer the project.

Cost Implications: approximately \$450,000 would need to be expensed.

Pros:

(1) No capital investment currently.

Cons:

(1) Deferred projects are subject to escalation costs.

(2) Risk of failing infrastructure and data capacity limitations.

(3) Future and current projects may require additional time and budget to complete because they will need to install additional connections. If no connections are available at the nearest communication equipment room, project will need to bring connections from the project space back to a MDR. This is inefficient and consumes the remaining fiber pathway which is space constrained by other systems installed in the ceiling space. This is not the recommended alternative.

Alternative 2 – Proceed with construction of designed scope.

Cost Implications: \$11,000,000

Pros:

(1) This work will prioritize rooms that are at or near capacity and connections are needed for planned expansions and renovations.

(2) The design will install a high fiber strand count cables to efficiently use the existing CIBS tray space and add tray pathway where capacity is used up.

(3) This work provides available connections for both current and future projects.

(4) This work will extend the 2-hour fire rated communication network to 28 communication equipment rooms for life safety systems.

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Cons:

(1) Highest capital investment.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary Capital Expense Total

COST ESTIMATE

Original estimate \$11,000,000 \$0 \$11,000,000

AUTHORIZATION

Previous authorizations \$3,160,000 0 \$3,160,000

Current request for authorization \$7,840,000 0 \$7,840,000

Total authorizations, including this request \$11,000,000 0 \$11,000,000

Remaining amount to be authorized \$0 \$0 \$0

Annual Budget Status and Source of Funds

This project, CIP C801161, was included in the 2023-2027 capital budget and plan of finance with a budget of \$11,000,000. The funding source will be Airport Development Fund (ADF) and revenue bonds.

Financial Analysis and Summary

Project cost for analysis \$11,000,000

Business Unit (BU) Terminal Building

Effect on business performance NOI after depreciation will increase due to inclusion of (NOI after depreciation) capital (and operating) costs in airline rate base

IRR/NPV (if relevant) N/A

CPE Impact \$0.03 in 2026

ATTACHMENTS TO THIS REQUEST

(1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

July 27, 2021 – The Commission authorized \$3,000,000 in design funding.

Template revised June 27, 2019 (Diversity in Contracting).