



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 8c

**ACTION ITEM**

**Date of Meeting** July 27, 2021

**DATE:** July 19, 2021

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

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

**SUBJECT: Communication Enhancement – Design Authorization C801161**

**Amount of this request:** \$3,000,000

**Total estimated project cost:** \$11,000,000

**ACTION REQUESTED**

Request Commission authorization for the Executive Director to (1) prepare design and construction bid documents for the Communication Enhancement Project, and (2) utilize Port of Seattle crews and small works contracts for pre-construction work. This request is for \$3,000,000 to increase the total authorized amount to \$3,200,000 with an estimated total project cost of \$11,000,000.

**EXECUTIVE SUMMARY**

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

**JUSTIFICATION**

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 that these connections will support are WIFI access points, people counter sensors for check points, airline check in and gate operations, security cameras, and ADR business transactions.

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The last major telecommunication infrastructure upgrade was completed in the early 2000’s with the installation of the Communication Infrastructure Backbone System (CIBS), which established the MDR and outlying communication ERs. 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 process, the team, with the assistance of Port Construction Crews, will access the trays and inspect the current fill and determine if new trays or conduits will be needed. The project will also install the equipment needed to terminate and test the fiber connections for immediate use. These rooms were also identified to support planned future projects to provide the data connections needed.

***Diversity in Contracting***

The design work will be completed using an existing IDIQ contract that was established in 2017 which has 100% Small Business Enterprise utilization. This contract was established prior to the Diversity in Contracting Policy Directive in 2018 in setting WMBE aspirational goals.

**DETAILS**

***Scope of Work***

Communications Enhancement:

- (1) Design services will evaluate the Port identified Comm ER needing additional connections.
- (2) Design services will provide communication and electrical drawings required for installing new connections between MDR and selected ER.
- (3) Construction services will install cabling innerducts and fiber cables within the existing CIBS infrastructure.
- (4) Construction services will install the fiber optic patch panels (FOPP) to accommodate the new fiber strands. Each strand will be terminated and tested for connectivity.

***Schedule***

Design start	2021 Quarter 3
Commission construction authorization	2023 Quarter 2
Construction start	2023 Quarter 4
In-use date	2025 Quarter 3

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<b>Cost Breakdown</b>	<b>This Request</b>	<b>Total Project</b>
Design	\$3,000,000	\$3,417,500
Construction	\$0	\$7,582,500
<b>Total</b>	<b>\$3,000,000</b>	<b>\$11,000,000</b>

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1** – Cancel or defer the project

Cost Implications: approximately \$150,000 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) Other projects may require additional time to complete because they will need to install additional connections
- (4) Complicated connection pathways would be required to meet project needs and may slow progress to establish those paths

This is not the recommended alternative.

**Alternative 2** – Critical rooms

Cost Implications: \$7,000,000

Pros:

- (1) Lower capital investment
- (2) Project will provide connections to 23 rooms identified as critical (100% full)
- (3) Addresses most critical comm rooms

Cons:

- (1) Other projects may require additional time and cost to complete because they will need additional connections
- (2) A future project will be needed to address the 12 high priority rooms (≥ 85% full)
- (3) A combined project that addresses all the proposed comms room can optimize the fiber pulls to use the minimum space required to complete the project

This is not the recommended alternative.

**Alternative 3** – Status 2 Scope

Cost Implications: \$11,000,000

Pros:

- (1) Addresses the critical and high priority Comm ER rooms

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- (2) Maximizes the use of the CIBS tray space by pulling multiple bundles in each pull
- (3) This work provides available connections for both current and future projects

**Cons:**

- (1) Highest capital investment.

***This is the recommended alternative.***

**FINANCIAL IMPLICATIONS**

<b><i>Cost Estimate/Authorization Summary</i></b>	<b>Capital</b>	<b>Expense</b>	<b>Total</b>
<b>COST ESTIMATE</b>			
Original estimate	\$11,000,000	\$0	\$11,000,000
<b>AUTHORIZATION</b>			
Previous authorizations	\$200,000	\$0	\$200,000
Current request for authorization	\$3,000,000	\$0	\$3,000,000
Total authorizations, including this request	\$3,200,000	\$0	\$3,200,000
Remaining amount to be authorized	\$7,800,000	\$0	\$7,800,000

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

This project, CIP C8011161, was included in the 2021-2025 capital budget and plan of finance with a budget of \$11,000,000. The funding source will be Airport Development Fund (ADF) and 2021 revenue bond.

***Financial Analysis and Summary***

Project cost for analysis	\$11,000,000
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	\$.03 in 2026

**ATTACHMENTS TO THIS REQUEST**

- (1) Presentation slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

None