

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No. 4d
Date of Meeting February 23, 2016

DATE: February 17, 2016
TO: Ted Fick, Chief Executive Officer
FROM: Dave Soike, Director Aviation Facilities and Capital Programs
Peter Garlock, Chief Information Officer
SUBJECT: Airport Telecommunications Network Capacity Increase (CIP #C800827)

| | | | |
|------------------------------------|-----------|------------------|---------------------|
| Amount of This Request: | \$565,000 | Source of | Airport Development |
| Est. Total Project Cost: | \$565,000 | Funds: | Fund |
| Est. State and Local Taxes: | \$24,000 | | |

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to (1) proceed with the Telecommunication Infrastructure Capacity Increase project at Seattle-Tacoma International Airport; (2) procure required hardware, software, and vendor services; and (3) use Port staff for implementation, for a total project cost not to exceed \$565,000.

SYNOPSIS

The telecommunications cable infrastructure at Sea-Tac Airport was originally installed fifteen years ago to provide shared voice and data connectivity for airport operations and airline communications needs. Prior to this Port provided cabling and circuit infrastructure, airlines and tenants installed their own dedicated telecommunications networks, causing considerable disruption and inefficiencies, because cabling and circuits could not be reused if an airline relocate within the terminal. While much more efficient since its implementation, the Port provided shared network infrastructure has now reached its capacity in Concourses B and D. In order to accommodate new airline, tenant, and airport operational needs, additional fiber and copper cabling must be installed.

The purpose of this project is to install much needed additional fiber optic and copper cabling in Sea-Tac Concourses B and D. Information & Communication Technology (ICT) and Port Construction Services (PCS) resources will complete the project. Total project costs are estimated to be \$565,000. Funding for this project was not included in the 2016-2020 capital budget and plan of finance. The budget for this project (C800827) will be transferred from the aeronautical allowance CIP (C800404) resulting in no net change to the Aviation Division capital budget.

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

February 17, 2016

Page 2 of 5

BACKGROUND

The telecommunications cable network is utilized by the Port of Seattle, Airlines, Transportation Security Administration (TSA), and airport tenants. It consists of a fiber optic and copper backbone cable system and a wiring cross-connect and distribution system covering all of the airport's twenty six communications rooms. This cabling system is designed with diverse routes to the communications rooms from separate main distribution rooms.

PROJECT JUSTIFICATION AND DETAILS

The telecommunication cable infrastructure for Sea-Tac Concourses B and D are currently at 99% capacity. To fulfill new requests, ICT Network Engineers are patching together lengthy alternative routes through a number of communication rooms, instead of direct routes to the nearest connection point. In addition to inefficiently using up valuable and scarce capacity to other locations, these alternative routes often exceed the network manufacturer's maximum recommended distance limitations, thus reducing performance and increasing interference. This "band aided" approach is inefficient and no longer viable.

Project Objectives

- Increase the capacity of the airport telecommunications infrastructure supporting the B and D concourses in order to efficiently fulfill new requests for data connectivity and telecommunications services for the next several years.

Scope of Work

- Install additional fiber optic and copper cabling from the main distribution room to Concourse B and D.

Schedule

| | |
|-----------------------|---------------|
| Commission Approval | February 2016 |
| Design Complete | May 2016 |
| Installation Complete | December 2016 |

FINANCIAL IMPLICATIONS

Budget/Authorization Summary

| | Capital | Expense | Total Project |
|--|-----------|---------|---------------|
| Original Budget | \$565,000 | \$0 | \$565,000 |
| Previous Authorizations | \$0 | \$0 | \$0 |
| Current request for authorization | \$565,000 | \$0 | \$565,000 |
| Total Authorizations, including this request | \$565,000 | \$0 | \$565,000 |
| Remaining budget to be authorized | \$0 | \$0 | \$0 |
| Total Estimated Project Cost | \$565,000 | \$0 | \$565,000 |

Project Cost Breakdown

| | This Request | Total Project |
|----------|--------------|---------------|
| Hardware | \$250,000 | \$250,000 |

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

February 17, 2016

Page 3 of 5

| | | |
|---------------------------------|-----------|-----------|
| Port Labor | \$158,500 | \$158,500 |
| Contracted Labor | \$132,500 | \$132,500 |
| State & Local Taxes (estimated) | \$24,000 | \$24,000 |
| Total | \$565,000 | \$565,000 |

Budget Status and Source of Funds

Funding for this project was not included in the 2016-2020 capital budget and plan of finance. The budget for this project (C800827) will be transferred from the aeronautical allowance CIP (C800404) resulting in no net change to the Aviation Division capital budget. The source of funds is the Airport Development Fund.

Financial Analysis and Summary

| | |
|---------------------------------------|---------------------|
| CIP Category | Renewal/Enhancement |
| Project Type | Technology |
| Risk adjusted discount rate | N/A |
| Key risk factors | N/A |
| Project cost for analysis | \$565,000 |
| Business Unit (BU) | Terminal Building |
| Effect on business performance | N/A |
| IRR/NPV | N/A |
| CPE Impact | \$.01 |

Lifecycle Cost and Savings

There is no estimated change in support costs as a result of this project.

STRATEGIES AND OBJECTIVES

This project will support the following Century Agenda and Aviation Strategic Goals.

- Advance this region as a leading tourism destination and business getaway
- Meet the region's air transportation needs at Sea-Tac Airport for the next 25 years
- Position the Puget Sound region as a premier international logistics hub

Port and tenant operations rely on the availability of data connectivity and telecommunication services to operate efficiently. This project ensures the availability of the infrastructure to meet critical needs.

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

February 17, 2016

Page 4 of 5

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) – Allow tenants to procure and install their own communications infrastructure.

Pros:

- Capital costs are avoided.

Cons:

- If dedicated, point to point communication infrastructure is installed separately by individual tenants and airlines, every gate move, relocation, or new tenant connectivity would be significantly more costly (\$50k to \$100k per connection, vs. the shared, reusable infrastructure of alternative 3).
- Aside from being significantly more expensive, independently installed, dedicated point to point cabling is almost impossible to manage, or ensure adherence to quality and documentation standards. It can also easily cause unexpected disruptions in service to other tenants and critical Port operations.
- The physical footprint of communication infrastructure for multiple individual organizations would be much larger, plus it would add significant complexity and delays to construction and relocation projects.

This is not the recommended alternative.

Alternative 2) – An airport-wide, full capacity build out to accommodate growth over the next 5-10 years.

Pros:

- An airport-wide, full capacity build out to accommodate growth for the next 5-10 years will eliminate the need for additional capacity projects in the near future.
- This approach might provide some economies of scale, depending upon the amount of cable acquired to support the longer future.

Cons:

- This alternative will require extensive design, planning, and review to project the requirements and related costs, and it cannot be accomplished in the timeframe required to support our current capacity needs in the B and D concourses.

This is not the recommended alternative.

Alternative 3) – Add communication infrastructure capacity to Concourse B and D only.

Pros:

- This alternative allows us to quickly deliver relief to the immediate capacity problems and only pay for what is needed.

Cons:

- Quickly addressing only the needs in the B and C concourses may require us to address other potential capacity issues as they occur in the future.

COMMISSION AGENDA

Ted Fick, Chief Executive Officer

February 17, 2016

Page 5 of 5

This is the recommended alternative.

ATTACHMENTS TO THIS REQUEST

- None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- None