

**PORT OF SEATTLE**  
**MEMORANDUM**

**COMMISSION AGENDA**  
**ACTION ITEM**

<b>Item No.</b>	<u>5f</u>
<b>Date of Meeting</b>	<u>July 9, 2013</u>

**DATE:** June 28, 2013  
**TO:** Tay Yoshitani, Chief Executive Officer  
**FROM:** Michael Ehl, Director, Airport Operations  
Wayne Grotheer, Director, Aviation Project Management  
**SUBJECT:** Airport Fiber to Backstands project at Seattle Tacoma International Airport  
(CIP#800464)

**Amount of This Request:** \$789,000      **Source of Funds:** Airport Development Fund  
**Est. State and Local Taxes:** \$166,000      **Est. Jobs Created:** N/A  
**Est. Total Project Cost:** \$3,284,000

**ACTION REQUESTED:**

Request Commission authorization for the Chief Executive Officer to authorize design of the Airport Fiber to Backstands project and the purchase of supporting technology and equipment. This authorization is for \$789,000 out of a total estimated project cost of \$3,284,000.

**SYNOPSIS:**

Two recent capital improvement projects, the South Satellite Common Use and the Concourse D Common Use projects, have installed Airport-provided data infrastructure at check-in podiums in gate hold-rooms. This project is a continuation of the Port's successful implementation of that program. Airport-provided data infrastructure allows several airlines to utilize the same fiber optic and copper wire data infrastructure for gate operations. Installation of this infrastructure creates flexible gating opportunities and reduces future capital improvement airline relocation costs at four Concourse A gates, nine Concourse B gates and all current gates on Concourse C. Equally important, this infrastructure also provides an opportunity to improve wireless data or "Wi-Fi" coverage at these gates for air travelers. Travelers rank fast access to the Internet as one of their most important "must haves" at the Airport.

This project was included in the 2013 capital budget and plan of finance as a business plan prospective project with a budget of \$2,302,000. The budget increase is due to adding additional WiFi equipment, data infrastructure and redundant network pathways to the project.

**BACKGROUND:**

The Airport has recently installed Airport-provided data infrastructure at several locations that can be used interchangeably by the Port for common-use equipment, and by airlines for proprietary equipment, as a flexible cost-savings initiative. This flexibility affords the Airport

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

June 28, 2013

Page 2 of 5

the ability to provide an agile, quickly configurable system that is adaptable to changing airline needs. This multi-user infrastructure may be shared, preventing each airline, or the Port, from having to provide separate and costly data infrastructure systems.

Installation of a multi-user infrastructure system has been completed on Concourse D and the South Satellite and has been partially completed on Concourse A and Concourse B via previous capital projects. American Airlines, Alaska Air Group, JetBlue, Virgin America, and United Airlines are all successfully using the infrastructure today in various locations across the airport. The North Satellite will be covered as part of the NorthSTAR program.

One of the stated goals of the Airport is to provide an extraordinary customer experience. Current strategic goals include operating a world class airport by anticipating the needs of our customers and becoming one of the top ten airports in the world by 2015 (as measured by the Airports Council International Airport Service Quality index, or "ASQ"). The use of laptops, tablets, and smart phones, by passengers waiting in hold-rooms continues to increase and our customers have made it clear that having a fast connection to the Internet in these areas is very important to them. Our current Wi-Fi antenna system can't keep up with growing passenger demand for internet access. Adding multiple, faster Wi-Fi antennas in each hold-room will improve wireless coverage and access speed for travelers. Installation of Airport provided infrastructure to the gates makes adding more Wi-Fi access points in the hold-rooms more cost effective than ever before and allows the Port to respond to this ever-growing need.

### **PROJECT JUSTIFICATION:**

The purpose of this project is to provide an expansion of Airport provided infrastructure through a program of Port-sponsored projects that will support operational goals to provide multi-user infrastructure to more gates at the Airport and support customer service goals to improve the effectiveness and availability of the terminal-wide Wi-Fi antenna system.

#### ***Project Objectives:***

- Provide adaptable and agile data infrastructure to meet the ever-changing needs of the Airport community without investing in new facilities
- Minimize air carriers' and Airport costs as they relocate within the existing terminal facilities.
- Improve coverage and speed of the Airport's Wi-Fi antenna system

### **PROJECT SCOPE OF WORK AND SCHEDULE:**

#### ***Scope of Work:***

The physical elements of this project include extension of Port standard fiber optic and copper wire infrastructure (12 single mode fiber, 12 multi-mode fiber and 12 CAT6 cables) from existing Port communications rooms to a communications rack in retrofitted gate check-in backstands. Project scope will also include new communications racks and backstand casework modifications. Equipment will include network switches, patch panels and gate information displays, but no other equipment. Power will be added to the modified backstands. The construction and installation of a second or redundant network connection between two Airport communication rooms on Concourse A will also be included.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

June 28, 2013

Page 3 of 5

Project scope will also include the addition of Wi-Fi access points in close proximity to each gate backstand in the hold rooms. Access points will connect to the new Port standard network infrastructure installed at the gates by this project. The placement and number of access points will be determined during design, but generally they will be installed on the wall or ceiling with two access points per gate. Access point equipment will conform to existing standards and support, at a minimum, the Port's current Wi-Fi network standards.

### Concourse A scope of work:

- Airport provided data infrastructure to four gates.
- Gate information displays and digital display controllers at all gates.
- Additional Wi-Fi access points at all gates.
- Fiber redundancy between Port communications rooms.

### Concourse B:

- Airport provided data infrastructure to nine gates.
- Gate information displays and digital display controllers at all gates.
- Additional access points at all gates.

### Concourse C:

- Airport provided fiber and copper to all current gates.
- Access points at all gates.

### *Schedule:*

- Design begins: August 2013
- Design complete: January 2014
- Construction begins: May 2014
- Construction complete: December 2014

## **FINANCIAL IMPLICATIONS:**

<b><i>Budget/Authorization Summary:</i></b>	Capital	Expense	Total Project
Original Budget	\$2,302,000	\$0	\$2,302,000
Current Budget Increase	\$982,000		\$982,000
Revised Budget	\$3,284,000		\$3,284,000
Previous Authorizations	\$0	\$0	\$0
Current request for authorization	\$789,000	\$0	\$789,000
Total Authorizations, including this request	\$789,000	\$0	\$789,000
Remaining budget to be authorized	\$2,495,000	\$0	\$2,495,000
Total Estimated Project Cost	\$3,284,000	\$0	\$3,284,000

<b><i>Project Cost Breakdown:</i></b>	This Request	Total Project
Construction	\$0	\$1,530,000
Construction Management	\$165,000	\$330,000
Design	\$432,000	\$432,000

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

June 28, 2013

Page 4 of 5

Project Management	\$120,000	\$240,000
Permitting	\$10,000	\$20,000
IT Equipment	\$28,000	\$504,000
ICT Project Management	\$31,000	\$62,000
State & Local Taxes (estimated)	\$3,000	\$166,000
Total	\$789,000	\$3,284,000

### ***Budget Status and Source of Funds:***

This project (CIP #C800464) was included in the 2013 – 2017 capital budget and plan of finance as a business plan prospective project with a budget of \$2,302,000. The budget increase is due to project scope added during notebook development; including, for example, added Wi-Fi equipment, additional data infrastructure and redundant network pathways. The increased budget will be transferred from the Aeronautical Allowance CIP (C800404) resulting in no net change to the capital budget. The funding source will be the Airport Development Fund.

### ***Financial Analysis and Summary:***

<b>CIP Category</b>	New/Enhancement
<b>Project Type</b>	Renewal & Replacement
<b>Risk adjusted discount rate</b>	N/A
<b>Key risk factors</b>	N/A
<b>Project cost for analysis</b>	\$3,284,000
<b>Business Unit (BU)</b>	Terminal
<b>Effect on business performance</b>	NOI after depreciation will increase
<b>IRR/NPV</b>	N/A
<b>CPE Impact</b>	CPE will increase by \$.02 by 2015. However, no change to business plan forecast as this project was included.

### ***Lifecycle Cost and Savings:***

The Port Information & Communication Technology and Aviation Maintenance departments estimate that operations and maintenance cost increases associated with the necessary support plan/contract for the switches and access points included in this project is approximately \$550 per gate, per year. For the 26 gates included in the project scope, ICT annual operations and maintenance expenses are estimated to increase by approximately \$14,000 per year.

### **STRATEGIC OBJECTIVES:**

This project supports the Port's Century Agenda objective of meeting the region's air transportation needs at the Airport for the next 25 years by providing the Airport and airlines with greater facility agility and flexibility. Creating a flexible multi-user data network environment allows carriers and the Airport to spend fewer capital dollars when airlines move or expand. More carriers are able to utilize the same facilities without redesign and construction to customize the operating environment to their specific proprietary needs.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

June 28, 2013

Page 5 of 5

### **ENVIRONMENTAL SUSTAINABILITY:**

This project demonstrates environmental sustainability by improving existing Port assets and better utilizing existing resources. Airport provided infrastructure will facilitate greater utilization of Concourse A, Concourse B and Concourse C gates. This reduces the potential environmental impact of major new construction.

### **BUSINESS PLAN OBJECTIVES:**

This project helps the Airport meet the needs of our airline customers and helps the Port reach one of the Airport's stated goals to provide an extraordinary customer experience. Installation of Airport-provided infrastructure to the gates minimizes construction by making new operational improvements with technology. This helps to minimize costs to the airlines. Adding more Wi-Fi access points in the hold-rooms connected to this new infrastructure allows the Port to respond to the ever growing WiFi demand in a more cost effective way than before.

### **ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:**

Alternative 1) Airlines install proprietary infrastructure: Airlines on Concourses A, B and C could install proprietary communications technology resulting in a less flexible gate use environment. This will not allow the Port or other carriers to benefit from the rapid-convertibility and flexibility of the airport-provided data infrastructure for growth and operational requirements. This is not the recommended alternative.

Alternative 2) Do nothing: This would not provide flexibility for future moves or improve Wi-Fi coverage at the Airport. This is not the recommended alternative.

Alternative 3) The Port installs multiple user infrastructure: The Port installs airport-provided data infrastructure and new Wi-Fi access points at Concourses A, B and C, utilizing the latest technology, to respond to our passengers' most popular requests, optimize flexibility and accommodate growth and operational requirements by all carriers that use these facilities. **This is the recommended alternative.**

### **OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:**

- None

### **PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:**

- None.