

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

**COMMISSION AGENDA**

**Item No.** 6b

**ACTION ITEM**

**Date of Meeting** March 27, 2012

**DATE:** March 20, 2012

**TO:** Tay Yoshitani, Chief Executive Officer

**FROM:** Mike Ehl, Director, Airport Operations  
Wayne Grotheer, Director, Aviation Project Management Group

**SUBJECT:** Cargo 5 Hardstand at Seattle-Tacoma International Airport (CIP C800254)

**Amount of This Request:** \$3,230,000      **Source of Funds:** Existing Revenue Bonds

**Total Project Estimated Cost:** \$45,906,000

**ACTION REQUESTED:**

Request Port Commission authorization for the Chief Executive Officer to prepare 100% design for the Cargo 5 Hardstand at Seattle-Tacoma International Airport (STIA) to provide additional parking for aircraft remaining overnight at the Airport. The amount of this request is \$3,230,000. The estimated total cost of the project is \$45,906,000.

**SYNOPSIS:**

This project will provide additional remain-over-night (RON) parking positions that are critical to meeting capacity demand, operational efficiency and safety at STIA.

STIA's geographic location has traditionally been a determining factor in the accommodation of RON aircraft by airline operators. Despite a reduction in overall aircraft operations of approximately 30% over the past decade, demand for RON parking has not decreased, and is not projected to do so in the future. To accommodate anticipated future growth in RON demand within the very limited space available, the Airport must convert underutilized airfield assets to the highest and best use.

The recommended site for additional RON development is the former United States Postal Service (USPS) site. The Commission previously authorized both lease termination and building demolition on this site. This project will design and construct the Cargo 5 RON hardstand to provide additional RON parking positions needed to meet the anticipated demand and to provide flexibility to accommodate irregular schedules of passenger aircraft. At least eight, with the possibility of ten, additional RON parking positions will be created by this project.

The design will be done primarily in-house by Port staff with assistance of consultants for specialty items.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 20, 2012

Page 2 of 7

### **BACKGROUND:**

By virtue of being located in the northwest corner of the continental United States, a high number of departures are scheduled by the airlines to leave early in the morning in order to reach their connections and destinations at desirable times. Many of the morning departure aircraft return to STIA at night to fuel and prepare for the next day's early morning flight. As a result of the high number of morning departures, more passenger aircraft remain overnight at STIA than there are terminal gates available. Off-gate hardstand positions are needed to accommodate these RON aircraft so they are available for the morning peak traffic demand. After the first wave of early departures from the terminal gates is complete, the off-gate RON aircraft are moved to the vacant gates for a second wave of morning departures. Without additional hardstands, to accommodate off-gate RON aircraft, airlines would have to park these aircraft at another airport and fly them in for the early morning departures, which is a costly and inefficient proposition. In the absence of sufficient RON parking capacity, airlines would most likely not schedule additional morning departures. Without sufficient available RON hardstands, STIA cannot meet the demands of the airline customers.

Factors influencing the supply and demand of RON positions are difficult to manage and predict as airline flight and aircraft maintenance schedules change frequently throughout the peak travel season and occasionally unscheduled or irregular operations also occur. Until now, STIA has met RON demand, with increasing difficulty, by managing more frequent parking and towing of aircraft onto and off STIA controlled common use gates and hardstands. This includes the hardstands in the cargo area which are prioritized for cargo use and are becoming increasingly less available. Agreements between airlines can be negotiated to allow RON parking of one airline's aircraft within the lease area of a second airline. These lease agreements between airlines do not provide STIA with sufficient control over these areas to guarantee the availability of RON when needed.

The existing E-100 security gate and the Midfield Checkpoint will both be relocated to the north side of Cargo 5 as a result of this project. Relocating E-100 will provide a more efficient entrance to the airfield and enhance safety by moving the vehicle access to the airfield away from the areas of high aircraft movement. Relocating the Midfield Checkpoint will provide for proper grading for the project, and will also allow for faster vehicle access between the hardstand and the terminal area. The Cargo 5 RON is being accomplished in three phases. The first phase was the termination of the lease with the USPS and this has been accomplished. The second phase is to demolish the USPS building. A contract to demolish the USPS building has been awarded and the demolition work is scheduled to be complete by mid-2012. The third and final phase is the design and construction of the hardstand.

A Part 150 Noise and Land Use Compatibility Study, of which the feasibility of a ground run-up enclosure (GRE) is one element, is currently underway. Several potential sites have been identified for a GRE, should it be warranted, including Cargo 5. The development of the hardstand facility is compatible with the GRE, if it were to be built at this location, but would likely result in the loss of two to three RON parking positions. Some pavement removal would likely be required in order to construct wall foundations for the GRE. The cost for pavement removal, replacement of RON, and other associated items for a GRE is not included in the development of Cargo 5 RON.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 20, 2012

Page 3 of 7

### **PROJECT JUSTIFICATION:**

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

The project objective is to construct a Cargo 5 hardstand for additional RON parking positions in order to meet the expected demand and to provide flexibility to accommodate irregular schedules of passenger aircraft.

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

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

The hardstand will include the following items:

- Full access across hardstand to and from Taxiway A
- Grading modifications of existing service road including new entrance to Swissport Cargo
- Retention walls on the north and south sides of Cargo 5
- New airfield guidance signs
- Adjacent taxiway lighting improvements as required
- Fuel truck parking on east end of hardstand
- Applicable fuel system components
- Ramp lighting
- Flush gutter system
- Flush fire hydrants
- In ground 400Hz system power source for each RON position
- New security gate and guard shack to replace current E-100
- Relocation of midfield security access point

#### ***Schedule:***

Commission Authorization for Hardstand Design	March	2012
Commission Authorization to Advertise	March	2013
Advertise	April	2013
Notice to Proceed	July	2013
Construction Complete	August	2014

### **FINANCIAL IMPLICATIONS:**

<b>Budget/Authorization Summary:</b>	<b>Capital</b>	<b>Expense</b>	<b>Total</b>
Original Preliminary Budget	\$ 28,097,000	\$ 0	\$ 28,097,000
Current Budget	\$ 45,906,000	\$ 0	\$ 45,906,000
Previous Authorizations	\$ 11,831,213	\$ 0	\$ 11,831,213
<b>Current Request for Authorization</b>	<b>\$ 3,230,000</b>	<b>\$ 0</b>	<b>\$ 3,230,000</b>
Total Authorizations, including this Request	\$ 15,061,213	\$ 0	\$ 15,061,213
<b>Remaining Budget to be authorized</b>	<b>\$ 30,844,787</b>	<b>\$ 0</b>	<b>\$ 30,844,787</b>

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 20, 2012

Page 4 of 7

<b>Project Cost Breakdown:</b>	<b>This Request</b>	<b>Total Project</b>
Construction	\$ 0	\$ 30,316,246
Construction Management	\$ 305,000	\$ 3,121,979
Design	\$ 1,525,000	\$ 1,979,652
Project Management	\$ 1,270,000	\$ 1,705,598
Administrative and Soft Costs	\$122,000	\$ 905,498
Lease Buy-out	\$ 0	\$ 4,995,000
State & Local Taxes (estimated)	\$ 0	\$112,000
Total	\$ 3,230,000	\$ 45,906,000

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

Aircraft RON Parking USPS Site (CIP #C800254) is included in the 2012-2016 capital budget and plan of finance. The source of funds for this project will be existing revenue bonds and future revenue bonds.

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

<b>CIP Category</b>	Revenue/Capacity Growth
<b>Project Type</b>	Business Expansion
<b>Risk adjusted Discount rate</b>	N/A
<b>Key risk factors</b>	N/A
<b>Project cost for analysis</b>	\$45,906,000
<b>Business Unit (BU)</b>	Airfield
<b>Effect on business performance</b>	NOI after depreciation will increase since capital and operating costs will be recovered through landing fees
<b>IRR/NPV</b>	N/A
<b>CPE Impact</b>	\$0.19 in 2015; however, no change from business plan forecast as this project was included in the plan

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

The estimated life expectancy for this project is 20 years for pavements, 15-20 years for the security guard shack, 40 years for utilities, 20 years for 400 MHz power system and 30 years for electrical panels and transformers.

The preliminary annual operation and maintenance cost for Cargo 5 Hardstand is \$150,000 for the first year with a 3% increase per year thereafter.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 20, 2012

Page 5 of 7

### **STRATEGIC OBJECTIVES:**

This project supports the Port's strategy to "Ensure Airport and Seaport Vitality."

### **ENVIRONMENT AND SUSTAINABILITY:**

Benefits include the following:

- Energy conservation lighting may be used to reduce energy use, as well as benefits for off-airport glare, and light pollution.
- Utilizing 400 Hz power, versus auxiliary power units (APUs) or ground power units, supports the Port's Century Agenda Goal to *Reduce carbon emissions from all Port operations by 50% from 2005 levels and reduce aircraft-related carbon emissions at Sea-Tac by 25%*. Using 400 Hz power at RON positions is consistent with previous decisions to reduce noise and emissions.

The estimated annual emission savings of utilizing 400 Hz power, versus APUs, for a cumulative 14,600 hours of 737 operations is:

Hydrocarbon	1.8 tons/yr.
Carbon Monoxide	31 tons/yr.
Nitrous Oxides	8 tons/yr.
Carbon Dioxide	5,300 tons/yr.

The emissions reductions result in 500,000 gallons of fuel being saved. These reductions are estimated assuming eight RONs per night, with each aircraft using 400 Hz power (in lieu of APUs) for five hours per night.

- Existing guard shack may be reused and green construction may be used to build the new guard shack.
- Alternative materials may be used in concrete, such as fly ash and slag.
- During periods of non-peak activity, the new hardstand may reduce the need for passenger aircraft to RON at the distant north cargo hardstands, which are designed and utilized for air cargo operations. This improved proximity to the terminal will reduce the travel distance from RON spaces to the terminal, reducing cost and carbon emissions, and will be a more efficient and safe operation for the airlines.

### **BUSINESS PLAN OBJECTIVES:**

Additional hardstand capacity is in alignment with the future goals of the Airport to anticipate and increase both passenger and cargo aircraft growth and demand. This is part of the Airport's goal in having a world class airport that meets the needs of customers.

### **TRIPLE BOTTOM LINE SUMMARY:**

The development of the hardstand will provide a long-term solution for RON operations at the Airport. It will increase airline efficiency and reduce emissions.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 20, 2012

Page 6 of 7

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

1. Alternative 1 – Do Nothing: Operational alternatives include the airlines not adding morning departure flights, foregoing market share, or parking aircraft at another airport overnight. None of these support the strategic objective to ensure Airport vitality, and would either increase the cost of additional morning departures for the operating airlines or result in lost opportunity for additional revenue from additional morning departures. This is not a practical or recommended alternative.
2. Alternative 2 – Build RON Elsewhere: An additional capital alternative considered was the construction of additional passenger terminal facilities with aircraft gates to accommodate additional on-gate RON positions. Airport staff conducted a decision analysis to determine the best location for the construction of new RON hardstands. Six sites were compared (Air Cargo IV, Delta Air Lines Cargo, USPS, Fire Station, United Airlines Maintenance Building, United Airlines Cargo Building) against nine criteria including cost, long-term plan compatibility, operational flexibility, and tenant impact. All sites considered are currently occupied by an existing facility and the USPS site was determined to be the best location for RON hardstand. This alternative is not recommended.
3. Alternative 3 – Build RON at the USPS Site: The USPS site was chosen over the other sites, primarily because it is a sufficiently large site, the use of which for RON parking is consistent with the Comprehensive Development Plan (CDP) and because the USPS is an older building with diminished reuse value in comparison to the other sites at the Airport. In addition, the USPS site provides the most number of RON positions, and it is less expensive to develop per RON position than the other sites analyzed. The USPS lease termination and buyout has already occurred and the building is currently being demolished. The construction of RON at this site is consistent with previous Commission actions. **Therefore, development of RON positions at the USPS site is the recommended alternative.**

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

Attachment A – Overview of the Cargo 5 Hardstand site.

### **PREVIOUS COMMISSION ACTION:**

On July 26, 2011, the Port Commission authorized the Chief Executive Officer to advertise and execute a construction contract for the USPS Building Demolition. The estimate for construction work is \$5,536,000 and for Port Construction Services (PCS) to self-perform the work in conjunction with small works contractors and issue small works contracts in support of the USPS Demolition Project at Seattle-Tacoma International Airport (Airport). The estimate for the PCS construction work was \$67,000.

## **COMMISSION AGENDA**

Tay Yoshitani, Chief Executive Officer

March 20, 2012

Page 7 of 7

On August 26, 2008, the Port Commission authorized the Chief Executive Office to direct staff to amend the USPS lease to develop a cell phone lot, prepare 100% demolition design of the USPS Air Mail Center Facility at Seattle-Tacoma International Airport, 15% design of RON aircraft parking positions and terminate USPS building lease. The amount authorized was \$6,226,213. The total amount of the previous authorizations \$11,831,213.