

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

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

**Item No.** 5b  
**Date of Meeting** March 26, 2013

**DATE:** March 15, 2013  
**TO:** Tay Yoshitani, Chief Executive Officer  
**FROM:** David Soike, Director, Aviation Facilities and Capital Programs  
Wayne Grotheer, Director, Aviation Project Management Group  
**SUBJECT:** North Satellite Renovation (NSAT) at Seattle-Tacoma International Airport  
(CIP#C800556)

**Amount of This Request:** \$577,000      **Source of Funds:** Existing and future revenue bonds  
**Est. State and Local Taxes:** \$12,880,900      **Est. Jobs Created:** TBD  
**Est. Total Project Cost:** \$210,706,957

**ACTION REQUESTED:**

Request Commission authorization for the Chief Executive Officer to (1) transfer design, scope and budget of \$12,076,401 for two elevators and eight escalators from the Vertical Conveyance Modernization Aero Projects Phase 1 (CIP #C800251) and Phase 2 (CIP #C800375) to the North Satellite Renovation (NSAT) project (CIP #C800556); and (2) authorize the design of one additional elevator located in the NSAT project for an additional amount not to exceed of \$577,000, bringing the total authorized amounts to \$32,718,056 capital and \$200,000 expense.

**SYNOPSIS:**

The Vertical Conveyance Modernization Projects were established to replace a significant number of the Airport's elevators and escalators that remain in use beyond their practical lives, including several at the North Satellite Terminal and within the Concourse C Satellite Transit System (STS) station. The NSAT project seeks to wholly renovate the North Satellite and the North STS loop lobbies, which include some of the above-mentioned elevators and escalators. The transfer of previously authorized scope and budget will result in a more efficient and integrated approach to complete this work.

All three CIPs were included in the 2013 - 2017 capital budget and plan of finance.

**BACKGROUND:**

Escalators NS-1 through NS-4 (located at the North Satellite) and C1 through C4 (located at the west end of Concourse C) were installed in 1970 when the satellite transit system was built. These eight escalators were modified in 1990-1991. The design for the upgrade and replacement

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of these escalators was recently authorized in December 2012 under the Vertical Conveyance Modernization Project Aero Phase 2 (CIP #C800375). This transfer request will move scope, authorized design and the remaining construction budget to the NSAT project to ensure a more efficient design and construction process.

Elevators NSCF, NSDF and C4 were installed in 1970 and 1971. Due to their age, the controls, drives, and door actuators of these elevators are costly to maintain. Freight elevators NSCF and NSDF have been out of service for several years. The unavailability of these NSAT freight elevators results in the incompatible use of passenger elevators to move both passengers and concession freight through smaller passenger elevators and a single under-sized and poorly located freight elevator. The design of elevators NSCF and C4 was recently authorized in December 2012 under the Vertical Conveyance Modernization Aero Project Phase 1 (CIP #C800251). This transfer request will move scope, authorized design and remaining construction budget to the NSAT project for a more efficient design and construction process.

It is uncertain if freight elevator NSDF, which is out of service and cannot be repaired, will be removed, or will remain in place but be enlarged, or be relocated. This decision can only be made during the NSAT design process. Staff determined it would be prudent to add the design and construction of this elevator into the NSAT project at this time. If the design process indicates this elevator is not needed, then any remaining authorized funds for its design will be deducted from the project and will not be used for any other work. If the design process indicates this elevator should be enlarged or be relocated, then any remaining authorized funds for its design and future construction authorization will be used for this purpose.

Below is a listing of the elevators and escalators to be added to the NSAT project:

<b>Elevator #</b>	<b>Location</b>	<b>Action</b>	<b>Year Installed</b>
NSCF	Freight Elevator at NSAT	Modernize and recommission	1971
NSDF	Freight Elevator at NSAT	Modernize and recommission	1971
C4	Passenger elevator at Concourse C end node	Modernize	1970

<b>Escalator #</b>	<b>Location</b>	<b>Action</b>	<b>Year Installed</b>	<b>Year Modified</b>
C1 thru C4	Concourse C, ticketing to/from STS Station	Widen tread from 24" to 32" Modernize	1970	1991
NS1 thru NS4	North Satellite, STS to/from Concourse	Modernize	1970	1990

In the case of all the escalators and elevators, staff will return and authorize the construction of these specific components as part of the authorization to proceed with NSAT construction estimated in September 2014.

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### **PROJECT JUSTIFICATION:**

The improvements planned under the Aero Projects Phases 1 and 2 represent a critical component of the Airport's vertical conveyance systems. Transferring the modernization of the two elevators and eight escalators into the NSAT scope is a more efficient means to accomplish this work and will integrate into the cohesive design of the North Satellite and Concourse C STS station scope. Adding elevator NSDF into the NSAT scope enables the NSAT team to comprehensively evaluate this elevator to determine if it should be modernized, removed or relocated.

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

- Upgrade North Satellite and North STS loop elevators and escalators to renew/replace aging infrastructure.
- Upgrade existing elevators and escalators to comply with applicable building code requirements.
- Improve elevator reliability and performance.
- Replace old components to ensure 20+ years of reliable service without the need for additional investments besides normal maintenance costs.
- Incorporate "sleep mode" operation to the escalators, further saving energy.
- Connect to the existing Port elevator/escalator electronic monitoring system.
- Improve passenger travel at North Satellite and Main Terminal by installing new ADA-compliant fixtures and signage.
- Potentially enlarge and/or relocate the NSAT freight elevators to increase the efficiency of concession deliveries and to decrease the negative impacts on passenger circulation.
- Integrate the renewal/replacement of these elevators and escalators into the design of the NSAT renovation.

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

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

Develop infrastructure to modernize three existing elevators and eight escalators. Infrastructure development will, at a minimum, include:

1. Site preparation for installation of new elevators and escalators.
2. Removal of regulated materials as required.
3. Installation of electrical power and control systems.
4. Installation of communication system.
5. Installation of elevator and escalator system monitoring equipment.
6. Installation and revisions to fire sprinkler systems.
7. Structural, electrical, and mechanical revisions to the base building.
8. Commissioning of elevator and escalator systems.
9. Testing of installed elevator and escalator systems.

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### *Schedule:*

- Authorize Design March 2013
- Complete Design September/October 2014
- Authorize and Advertise Construction Contract March 2015
- Construction Start July 2015
- Construction Complete September 2017

### FINANCIAL IMPLICATIONS:

#### *Budget/Authorization Summary:*

<b>CAPITAL</b>	<b>Aero 1</b>	<b>Aero 2</b>	<b>NSAT</b>
Original Budget	\$10,160,000	\$19,734,000	\$147,800,000
Prior Adjustments to Budget	\$5,543,000	(\$1,823,980)	\$43,836,556
Current Budget	\$15,703,000	\$17,910,020	\$191,636,556
Proposed Budget Increase	\$0	\$0	\$2,694,000
Proposed Budget Transfer	(\$2,200,789)	(\$9,075,612)	\$11,276,401
<b>Revised Budget</b>	<b>\$13,502,211</b>	<b>\$8,834,408</b>	<b>\$205,606,957</b>
Previous Authorizations	\$3,270,000	\$2,796,000	\$30,236,556
Current Request for Authorization	\$0	\$0	\$577,000
Proposed Transfer of Authorization	(\$371,400)	(\$1,533,100)	\$1,904,500
<b>Total Authorizations (incl. this request)</b>	<b>\$2,898,600</b>	<b>\$1,262,900</b>	<b>\$32,718,056</b>
Total Estimated Project Cost	\$13,502,211	\$8,834,408	\$205,606,957
Remaining budget to be authorized	\$10,603,611	\$7,571,508	\$172,888,901

<b>EXPENSE</b>	<b>Aero 1</b>	<b>Aero 2</b>	<b>NSAT</b>
Current Budget	\$1,210,000	\$1,323,000	\$4,300,000
Proposed Budget Transfer	(\$200,000)	(\$600,000)	\$800,000
<b>Revised Budget</b>	<b>\$1,010,000</b>	<b>\$723,000</b>	<b>\$5,100,000</b>
Previous Authorization	\$1,346,850	\$0	\$0
Current Request for Authorization	\$0	\$0	\$0
Proposed Transfer of Authorization	(\$200,000)	\$0	\$200,000
<b>Total Authorizations (incl. this request)</b>	<b>\$1,146,850</b>	<b>\$0</b>	<b>\$200,000</b>
Total Estimated Project Cost	\$1,010,000	\$723,000	\$5,100,000
Remaining budget to be authorized	\$0	\$723,000	\$4,900,000

<i>Project Cost Breakdown:</i>	<b>This Request</b>	<b>Transfers</b>	<b>Total - NSAT</b>
Construction		\$7,705,012	\$136,238,568
Construction Management		\$945,000	\$18,171,000
Design	\$377,000	\$969,000	\$18,775,000
Project Management & Art Program	\$200,000	\$826,489	\$13,104,489
Permitting		\$85,000	\$3,378,000
State & Local Taxes (estimated)		\$745,900	\$12,880,900
RMM – (Capital)			\$200,000
RMM – (Expense)		\$800,000	\$5,100,000
Undefined Cost – To Be Determined			\$2,859,000
<b>Total</b>	<b>\$577,000</b>	<b>\$12,076,401</b>	<b>\$210,706,957</b>

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The total budget transfer of \$12,076,401 is composed of a capital budget transfer of \$11,276,401 and an expense transfer of \$800,000.

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

The North Satellite Renovation (CIP #C800556) was included in the 2013-2017 capital budget and plan of finance. The transfer of the two elevators and eight escalators to the North Satellite project from the Vertical Conveyance Modernization Project Aero Phases 1 and 2 (CIP #C800251 and CIP #C800375) will result in a budget increase of \$12,076,401 to CIP #C800556, but no net change to the Aviation capital budget. Elevator NSDF is not in the scope for NSAT and will result in a budget increase of \$2,694,000 and a net increase to the Aviation capital budget of the same amount. The funding sources will include existing revenue bonds and future revenue bonds. As discussed at the plan of finance briefing on October 23, 2012, the Port plans to issue revenue bonds in 2014 to fund a number of projects included in the 2013-2017 capital budget.

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

<b>CIP Category</b>	Renewal/Enhancement
<b>Project Type</b>	Terminal Infrastructure
<b>Risk adjusted discount rate</b>	N/A
<b>Key risk factors</b>	N/A
<b>Project cost for analysis</b>	\$210,706,957
<b>Business Unit (BU)</b>	Terminal Cost Center
<b>Effect on business performance</b>	NOI after depreciation will increase
<b>IRR/NPV</b>	N/A
<b>CPE Impact</b>	\$0.80 in 2017, but no change from business plan forecast

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

The Port should not incur increased Operation and Maintenance (O&M) costs for the replacement elevators and escalators. The O&M costs of tools, supplies, routine maintenance, periodic component renewal, and energy use are expected to be offset by lower energy costs and decreased emergency and urgent repairs.

This project is in alignment with the Port's goal of improving the long-term sustainability of its facilities and operations. This project has a positive effect on the environment to the extent that the modernized equipment will use less energy and will allow the more efficient movement of passengers.

Incorporating the design, scope and budget for these elevators and escalators into the overall design and construction of the NSAT project will increase the efficiency of the design and construction process. These cost efficiencies will be achieved by the elimination of coordinating two independent designers and two separate contractors working within the same area of the satellite or STS stations.

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### **STRATEGIC OBJECTIVES:**

This project contributes to the Port's Century Agenda Goal of meeting the region's air transportation needs at Sea-Tac Airport for the next 25 years. The project increases the capacity and flexibility of critical terminal vertical circulation infrastructure, and enhances the proposed renovation of the NSAT and the STS lobbies. It also complements the Terminal Escalator Modernization (44 Escalators) Project, Vertical Conveyance Project Phase 1 (CIP #C800251) and Vertical Conveyance Project Phase 2 (CIP #C800375) that are currently underway.

### **ENVIRONMENTAL SUSTAINABILITY:**

This project demonstrates environmental sustainability by improving existing Port assets, better utilizing existing resources, and reducing energy consumption. The project aligns with the Port's goal of improving the long-term sustainability of its facilities and operations. This project also supports and encourages airline environmental initiatives.

### **BUSINESS PLAN OBJECTIVES:**

The anticipated growth in enplanements including those resulting from Alaska Air Group's sole use of the NSAT will require additional capacity in moving passengers and concession freight between the ramp, STS stations and Concourse levels. This supports the Aviation Division's strategic goal of operating a world-class international airport by anticipating and meeting the needs of our tenants, passengers, and the region's economy.

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

This project will increase the long-term ability of the Airport to serve a growing number of passengers and airlines. Long-term vitality of the Airport benefits the regional economy and nearby communities. The sustainable aspects of this project will benefit the local environment. Small business opportunities will be reviewed by the Office of Social Responsibility in accordance with established procedures.

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

Alternative 1: Do Nothing: Replace the authorized elevators and escalators as part of Vertical Conveyance Modernization Projects Aero Phase 1 and 2. Do not address abandoned elevator NSDF. This alternative results in more effort required to renovate the elevators and escalators in coordination with the design and construction of the NSAT and STS station renovations. This alternative also presents a potential conflict in the appearance, functionality and construction of the elevators and escalators within the North Satellite and STS stations. This is not the recommended alternative.

Alternative 2: Transfer the two elevators and eight escalators and add one elevator to the NSAT project scope. Add the design of elevator NSDF to the NSAT project. The modernization will be integrated into the renovation at the North Satellite and STS stations. **This is the recommended alternative.**

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

- Floor plans showing locations of the elevator and escalators included in this request.

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

- October 25, 2011 – The Commission authorized \$2,991,850 for the design of Vertical Conveyance Modernization Aero Phase 1.
- April 10, 2012 – The Commission authorized the execution of consultant contracts for design and construction support services, program management services, and the completion of regulated materials site surveys, in the amount of \$1,200,000 for the NorthSTAR program.
- June 26, 2012 – The Commission was briefed on the NorthSTAR program by Wayne Grotheer, Director Aviation Project Management Group.
- July 24, 2012 - The Commission authorized the execution of consultant contracts for design and construction support services, program management services, and overall project support in the amount of \$32,000,000 for the North Satellite Renovation project.
- December 11, 2012 - The Commission authorized the execution of consultant contracts for design and construction support services, program management services, and the completion of regulated materials site surveys for Vertical Conveyance Modernization Aero Phase 1 in the amount of \$1,625,000.
- December 11, 2012 - The Commission authorized the execution of consultant contracts for design and construction support services, program management services, and the completion of regulated materials site surveys for Vertical Conveyance Modernization Aero Phase 2 in the amount of \$2,796,000.
- December 11, 2012 – The Commission was briefed on the Vertical Conveyance Modernization Project Aero Phases 1 and 2 and the possibility of adding the specified elevators and escalators to the NorthSTAR program.