

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No. 5b
Date of Meeting January 28, 2014

DATE: January 21, 2014
TO: Tay Yoshitani, Chief Executive Officer
FROM: Wayne Grotheer, Director, Aviation Project Management Group
David Soike, Director, Aviation Facilities and Capital Program
SUBJECT: Concourse D Roof Replacement Project (CIP #C800550)

Amount of This Request:	\$3,197,000	Source of Funds:	Airport Development Fund and Future Revenue Bonds
Est. Total Project Cost:	\$3,727,000		
Est. State and Local Taxes:	\$227,000		

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to advertise for construction bids, award, execute contract, and construct a new roofing system on Concourse D at Seattle-Tacoma International Airport in an amount not to exceed \$3,197,000. The total cost of the project is estimated to be \$3,727,000.

SYNOPSIS

This project will remove and replace the current roofing system on Concourse D of the main terminal building at the Airport in order to avoid leaks that cause damage to the underlying infrastructure, equipment, and interior facilities. The portions of the roof being replaced were installed in 1991 and 1994 and will be beyond their useful life expectancy when replacement takes place. This is the third of a series of necessary progressive design and construction steps to accomplish re-roofing the Airport facilities over the next several years. Warranties on existing roofs have expired and testing of roof membranes by Airport maintenance staff indicates they are deteriorating. The replacement roof will be Energy Star rated and will save energy over its lifetime. Staff expects to seek Commission authorization annually over the next five years as part of a long-term roofing maintenance program. This project is included in the 2014 – 2018 capital budget and plan of finance.

BACKGROUND

In 1991, the Airport began a major terminal facility re-roofing program that was completed in 1997. Since 1997, some Airport roofs have been replaced on a project- or area-specific basis.

COMMISSION AGENDA

Tay Yoshitani, Chief Executive Officer

January 21, 2014

Page 2 of 5

The first phase of the cycle of completed roof replacements included sections on the south end of the Main Terminal. The second phase of the cycle included the Fire Station, which was replaced in 2012, and sections on the north end of the Main Terminal that were replaced in 2013.

This project is the third phase of the cycle of roof replacement projects at the Airport. It includes numerous sections of the Concourse D roof. When originally built, the Airport's current roofs had a 15-year life expectancy that has expired.

PROJECT JUSTIFICATION AND DETAILS

Maintaining Airport roofing systems supports the Port's objective to provide safe and functional facilities. As a critical system, the Concourse D roof must be replaced as has aged beyond its dependable, leak-free, lifespan. When a roofing system fails and leaks emerge, they must be corrected on an emergency basis in order to preserve underlying infrastructure and provide good customer service. Delaying repairs until leaks require emergency attention tends to be more expensive due to scheduling pressures. In addition, repairing damage from leaks inside the terminal can be extensive and expensive. Proceeding with replacement of the Concourse D roof will preserve the Airport's infrastructure investments and support outstanding customer experience for travelers and tenants.

Project Objectives

This project will remove and replace existing roof systems on Concourse D of the Airport.

Scope of Work

- Remove and replace the existing roof system on Concourse D at the Airport and install a new 65 millimeter elastomeric roofing system.
- Remove and replace two skylights and make repairs to existing skylight window/walls. The Concourse D roof system is approximately 70,100 square feet.
- Add permanent safety ladders.

Schedule

Commission Authorization to Design:	July 2013
Commission Authorization for Construction:	January 2014
Issue Notice to Proceed:	June 2014
Construction Complete:	September 2014

FINANCIAL IMPLICATIONS

Budget/Authorization Summary

	Capital	Expense	Total Project
Original Budget	\$1,927,750	\$0	\$1,927,750
Budget Increase Authorized July 9, 2013	\$1,325,050	\$474,200	\$1,799,250
Revised Budget	\$3,252,800	\$474,200	\$3,727,000
Previous Authorizations	\$501,800	\$28,200	\$530,000

COMMISSION AGENDA

Tay Yoshitani, Chief Executive Officer

January 21, 2014

Page 3 of 5

Current request for authorization	\$2,751,000	\$446,000	\$3,197,000
Total Authorizations, including this request	\$3,252,800	\$474,200	\$3,727,000
Remaining budget to be authorized	\$0	\$0	\$0
Total Estimated Project Cost	\$3,252,800	\$474,200	\$3,727,000

Project Cost Breakdown

	This Request	Total Project
Construction	\$2,388,000	\$2,388,000
Construction Management	\$359,000	\$359,000
Design	\$0	\$430,000
Project Management	\$187,000	\$287,000
Permitting	\$36,000	\$36,000
State & Local Taxes (estimated)	\$227,000	\$227,000
Total	\$3,197,000	\$3,727,000

Budget Status and Source of Funds

This project is included in the 2014 – 2018 capital budget and plan of finance. The funding source will be the Airport Development Fund and future revenue bonds. The Port plans to issue revenue bonds in 2014 to fund a number of projects.

Financial Analysis and Summary

CIP Category	Renewal/Enhancement
Project Type	Renewal & Replacement
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	\$3,727,000
Business Unit (BU)	Terminal
Effect on business performance	NOI after depreciation will increase
IRR/NPV	N/A
CPE Impact	CPE will increase by \$.02 in 2014 due to expense elements of the project and by \$.01 in 2015 due to ongoing capital costs, but no change compared to 2014 budget or business plan forecast as this project was included.

Lifecycle Cost and Savings

The existing roof has reached its life expectancy of 15 years. Repair costs have increased since year 10. The new roof in this section is not expected to have significant repair costs for the first five years. Preventive maintenance costs will be consistent with the current maintenance program. It is expected that the newer roofing system will have a greater life expectancy than the original system by at approximately 15%.

COMMISSION AGENDA

Tay Yoshitani, Chief Executive Officer

January 21, 2014

Page 4 of 5

STRATEGIES AND 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. The Airport must maintain its existing terminal to accommodate current as well as future passenger and cargo levels.

Replacing the most distressed Airport roofs in order of importance supports the objectives identified in the Aviation Division's Strategy of operating a World Class International Airport by: ensuring safe and secure operation; meeting needs of our tenants, passengers and the region's economy; and managing our assets to minimize the long-term total cost of ownership.

The Project Manager will work with the Office of Social Responsibility to determine small business participation opportunities, in accordance with small business Resolution No. 3618.

TRIPLE BOTTOM LINE

Economic Development

This roof replacement project represents an investment in our current facility and supports the long-term vitality of the Airport, businesses within the Airport, and the traveling public.

Environmental Responsibility

The new roof will be Energy Star rated and have a minimum solar reflective index that exceeds 78, which is the value required to obtain the LEED Credit NC7.2. This will reduce air conditioning loads and save energy. The insulating value of the new roof will be greater than that of the existing roof. By replacing the roof and preventing damage to the underlying building systems, the life of the existing building systems will be prolonged.

Community Benefits

Replacing the roof will prevent water leak damage to other building systems, disruption of airport operations and will improve customer service.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) – Continue to patch and repair leaks, risking continued retrogressive deterioration throughout the entire roof system. This alternative increases maintenance and emergency repair response and costs, not only due to the continual patching of the existing roof system but also due to ceiling, floor, and equipment damage caused by the leaks. This could also increase the Port's liability should customers slip and fall. This is not the recommended alternative.

Alternative 2) – Install a green roof system. Green roofs are complete roof systems comprised of vegetation, soil, drainage and waterproof membrane, requiring specific additional structural integrity not currently in place as part of the Airport structure. This alternative would create an environment that would attract birds, insects and other wildlife, increase bird strike hazards, and escalate nuisance-wildlife control. Installing a green roof would be in direct conflict with the Airport's Wildlife Hazard Mitigation and Wildlife Conservation Program and the Federal

COMMISSION AGENDA

Tay Yoshitani, Chief Executive Officer

January 21, 2014

Page 5 of 5

Aviation Administration approved Airport Certification Manual. This is not the recommended alternative.

Some airports have begun to use green roof systems on new construction (thereby avoiding the extensive redesign and structural strengthening retrofit issue for existing structures) using plants that do not attract birds or wildlife. Staff has been in communication with Portland International Airport (PDX) which has installed a green roofing system. PDX's green roof system has attracted insects and birds, which conflicts with the requirements in the FAA's Airport Certification Manual.

Alternative 3) – Develop a systematic replacement program for the Airport's roof systems. Phase the replacement program over multiple years, which allows the Airport to sustain serviceable roof systems and provide safe and productive environments for our business partners and passengers. Through roof inspection and analysis, the third phase of the roof replacement program has identified 70,100 square feet of roof on Concourse D. **This is the recommended alternative.**

ATTACHMENTS TO THIS REQUEST

- Roof Replacement Planning Map

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- July 9, 2013 – the Commission voted to authorize design funds for the Concourse D roof replacement.
- January 24, 2013 – the Commission voted to authorize construction funds for the Fire Station roof replacement.
- January 8, 2013 – the Commission voted to authorize construction funds for the North End Main terminal roof replacement.
- July 26, 2011 – the Commission voted to approve design funds for the second phase of the Airport re-roofing programs including design of the Fire Station and North End Main Terminal roofing systems.
- November 30, 2010 – the Commission voted to authorize construction funds for the first phase of the Airport re-roofing program.
- April 27, 2010 – the Commission voted to approve design funds for the first phase of the Airport re-roofing program.
- September 22, 2009 – the Commission was briefed on facility renewal projects that were necessary in future years. The Airport re-roofing program was included in the presentation.