PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No. 6b

Date of Meeting February 25, 2014

DATE: February 18, 2014

TO: Tay Yoshitani, Chief Executive Officer

FROM: Nick Milos, Manager, Corporate Facilities
Rod Jackson, Capital Construction Project Manager

SUBJECT: Pier 69 Built-Up Roof Project Construction (CIP #C880314)

Amount of This Request:	$2,973,000	**Source of Funds:**	General Fund (Seaport), Tax Levy (Real Estate), and Airport Development Fund
Est. Total Project Cost:	$3,418,000		

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to advertise for construction bids, execute construction contracts, and fund the construction phase to complete the Pier 69 Built-Up Roof Project for a total estimated project cost of $3,418,000.

SYNOPSIS

Approval of this authorization request will move the Pier 69 Built-Up Roof Project into its construction phase. The roof at Pier 69 consists of three different roofing systems: built-up, metal, and membrane. The built-up and metal systems cover approximately the same area: 32,394 each. The built-up section has been developing an increasing number of blisters; water ponding has increased; and several minor leaks have occurred in the past few years. A 2008 condition assessment indicated the built-up system was near the end of its serviceable life, and an additional assessment in 2012 concluded it was beyond its useful life. Design for replacement of the built-up system is complete, and the project is ready to move into the construction phase. This project is included in the 2014 budget and plan of finance.

BACKGROUND

The Pier 69 building is the corporate headquarters for the Port of Seattle. In addition, the building has several tenants including Clipper Navigation, Inc., Arctic Storm Management Group, the U.S. Coast Guard, and Concourse Concessions. The building underwent a major renovation in the early 1990s and is in good condition. The roof is approximately 22 years old. The built-up section is in poor condition, while the metal and membrane roof systems have performed quite well and have had no leaks.

A roofing consultant was retained in 2008 to evaluate the condition of the roofing systems. The condition assessment provided approximations for the remaining service life and maintenance

suggestions for both systems. The suggested maintenance was performed and an ongoing maintenance program is in place. A 2012 assessment concluded that the built-up section should be replaced within two years.

PROJECT JUSTIFICATION AND DETAILS

The built-up roof system is at the end of the design service life. Replacing the system now will prevent leaks, potential damage to other building systems, and disruption of operations. Installation of a fall protection system will allow maintenance workers to perform work in a safe manner in compliance with Department of Labor and Industries requirements.

Project Objectives

- Install a new roofing system on a Port-owned asset
- Preserve the structural integrity of the building structure
- Complete the project on time and within budget
- Incorporate environmentally sustainable practices during construction where practical
- Minimize disruptions to facility operations and occupants

Scope of Work

- Remove existing asphalt roofing, cover-board, and insulation
- Remove existing base flashings and install parapet cladding
- Install a new built-up roofing system to replace the existing system
- Install additional roof insulation and tapered insulation in compliance with current building codes and requirements, bringing insulation values to a minimum of R-38
- Install a fluid membrane on the walkway in the saw-tooth valleys
- Clean exposed concrete beams and install stainless steel flashings
- Repair coating delamination on several sections of the metal roof
- Repair several skylights
- Include environmentally sustainable components and construction methods such as increased insulation value, reflective cap sheets, and specification of a longer lasting roof system.
- Install new fall protection system.

Schedule

The anticipated schedule for the project will include construction during the summer of 2014. The following table contains the major schedule elements.

	Start	**Finish**
Commission Authorization for Construction	February 2014	February 2014
Advertise and Award	February 2014	April 2014
Construction	May 2014	October 2014
Closeout	October 2014	March 2015

FINANCIAL IMPLICATIONS

Budget/Authorization Summary

	Capital	Expense	Total Project
Original Budget	$0	$0	$0
Previous Authorizations	$445,000	$0	$445,000
Current request for authorization	$2,973,000	$0	$2,973,000
Total Authorizations, including this request	$3,418,000	$0	$3,418,000
Remaining budget to be authorized	$0	$0	$0
Total Estimated Project Cost	$3,418,000	$0	$3,418,000

Project Cost Breakdown

	This Request	Total Project
Construction	$2,655,000	$2,657,000
Construction Management	$67,000	$213,000
Design	$0	$200,000
Project Management	$0	$85,000
Permitting	$0	$12,000
State & Local Taxes (estimated)	$251,000	$251,000
Total	$2,973,000	$3,418,000

Budget Status and Source of Funds

The Pier 69 Built-up Roof Replacement project (CIP #C800314) was included in the 2014 Draft Plan of Finance as a committed project in the amount of $2,012,000 including actual and forecasted amounts expended in 2012 and 2013, respectively. The estimated additional $1,406,000 needed to complete this project will be available due to timing delays in other projects as well as budget amounts included in other contingency projects.

Since Pier 69 is the corporate headquarters for the Port, the funding for the project is allocated between the General Fund (Seaport), Tax Levy (Real Estate), and the Airport Development Fund.

Financial Analysis and Summary

CIP Category	Renewal/Enhancement
Project Type	Renewal & Replacement
Risk adjusted discount rate	N/A
Key risk factors	Project cost could vary from current estimate.
Project cost for analysis	$3,418,000
Business Unit (BU)	Aviation, Seaport, and Real Estate Divisions

Effect on business performance	This asset replacement project will not generate any incremental revenue. Incremental depreciation expense from this project is estimated at $113,933 per year, based on a 30-year asset life. Net Operating Income will decrease by the associated depreciation from this project.
IRR/NPV	NPV is the present value of the project cost.

Lifecycle Cost and Savings

A lifecycle cost analysis was performed using the Whole Building Design Guide (www.wbdg.org) and a design life ranging from 20-30 years. The analysis indicated that the best return on investment is a roof with a 30-year service life.

STRATEGIES AND OBJECTIVES

The project is consistent with Century Agenda objectives to optimize infrastructure investment and financial stewardship by preserving the life of a Port asset. It supports economic growth and vitality by preserving existing jobs and commerce. It also advances the objective of becoming the greenest and most energy-efficient North American port by reducing pollutants and increasing energy efficiency.

Economic Development

Replacing the roof protects the asset and maintains the expected service life of the building with minimal disruption to Port and tenant operations. The project allows Port and tenant operations to function relatively uninterrupted thereby maintaining jobs, commerce, and revenues.

Environmental Responsibility

The following environmentally sustainable components and activities investigated during the design phase will be incorporated into the new roof system.

- ***Increase Insulation Value:*** Existing insulation base level on the roof is R-21. This project will increase the insulation value by R-17, bringing the value to a code-required R-38. In addition, the project will add tapered insulation, which will increase the total value to approximately R-50 at the high points, which will reduce energy costs.
- ***Reflective Capsheets:*** The project will specify the utilization of reflective cap sheets that are rated by the Cool Roof Rating Council or are Energy Star certified. This will reduce energy costs.
- ***Recycling Demolished Material:*** The bid documents will specify that the contractor recycle the existing metal copings, viable gypsum roof board, and insulation. This will divert valuable materials from landfills.

- ***Stainless Steel:*** All roof copings will be passivated stainless steel instead of prefinished galvanized steel to eliminate zinc leachate into the water via runoff.

Community Benefits

The project manager and Central Procurement Office will coordinate with the Office of Social Responsibility to determine opportunities for small business participation in support of Resolution No. 3618.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) – Wait to replace the roof until leaks increase or failure occurs. The risk of this approach is that emergency repairs would likely cause significant disruption to Port and tenant operations. Damage to insulation, roof support structure, and interior equipment and finishes could also occur, further increasing the replacement cost. This is not the recommended alternative.

Alternative 2) – Delay the replacement for one to two years to extend the existing service. During this time, additional monitoring and spot repairs would be performed as needed. The risk of selecting this alternative is threefold: (1) increased costs for inspection and maintenance; (2) potential damage to insulation and roof support structure; and (3) potential escalation of construction costs that may exceed the savings gained by attempting to extend the service life of the roof. In addition there is the risk that certain elements of the design may no longer be valid due to potential changes in the building code and construction materials. This is not the recommended alternative.

Alternative 3) – Total lifecycle costs were analyzed for roof systems with design lives ranging from 20 to 30 years. The roof system with a 30-year design life has the lowest total cost of ownership and is the recommended replacement roof system. Replacement of the roof now will reduce the risk of a major roofing system failure, improve the energy efficiency of the roof, and reduce the risk of emergency repair costs and disruption of operations.
This is the recommended alternative.

ATTACHMENTS TO THIS REQUEST

- PowerPoint presentation

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- On June 26, 2012, the Port Commission approved $404,000 for the design and permitting phase of the Pier 69 Built-Up Roof Replacement project (CIP #800314) for a total authorization of $445,000.