PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA **Item No.** 6b

Date of Meeting February 28, 2012

DATE: February 17, 2012

TO: Tay Yoshitani, Chief Executive Officer

FROM: John Christianson, General Manager, Aviation Maintenance
Wayne Grotheer, Director, Aviation Project Management Group

SUBJECT: Port Owned Aircraft Loading Bridge Renewal and Replacement (C800267)

Amount of This Request: $2,405,000 **Source of Funds:** Airport Development Fund

Est. State and Local Taxes: $128,000 **Est. Construction Jobs Generated:** 8

Total Project Cost: $2,405,000

ACTION REQUESTED:

Request Port Commission authorization for the Chief Executive Officer to: (1) proceed with design and installation of replacement and/or refurbishment of Airport-owned passenger loading bridges (PLBs) that are at or beyond their useful life; (2) authorize execution of contacts to purchase new PLBs and replacement PLB components for refurbishment; and (3) approve the use of Port crews to perform work related to (a) modification/refurbishment of an existing PLB and (b) installation of new PLBs at Seattle-Tacoma International Airport (Airport). The amount of this request is $2,405,000. It is anticipated that one PLB will be replaced and up to three PLBs will be refurbished under this scope of work.

SYNOPSIS:

The Airport finds it increasingly necessary to expand gate availability in order to meet growing operational needs and when responding to contingency situations.

PLBs are considered to have a service life of 25 years before major refurbishment or replacement is required. The bridges included within this scope of work will all be at the end of or beyond their service life by the time replacement or refurbishment takes place.

The Project Management Group has worked in conjunction with Operations, Planning and Maintenance to generate a prioritized list of Airport-owned PLBs that have been deemed good candidates for replacement or refurbishment. This project was included in the 2012-2016 capital plan and plan of finance as a business plan prospective project.

The PLB installation will provide the potential for participation by small business contractors and suppliers via Port Construction Services under existing small works contracting and purchasing opportunities.

PROJECT JUSTIFICATION:

This project will allow the Airport to replace or refurbish its PLBs that have reached the end of their service life or that are at high risk for failure. Key justifications include:

- The Airport owns several non-standard Mitsubishi PLBs that are no longer supported by the manufacturer and that should be replaced due to the scarcity of replacement parts and the increasing risk of failure.
- Operational failure of a PLB causes a serious ripple effect, negatively affecting operations and airline service while significantly inconveniencing the traveling public.
- Given the current economic climate, the refurbishment of Airport-owned PLBs becomes a more attractive option than outright replacement since approximately two PLBs can be refurbished for the price of one PLB replacement while significantly extending useful life. This allows the Airport to more cost effectively provide upgraded equipment at more gates.
- New or refurbished PLBs typically experience longer lifespans resulting in deferred future capital expenditures. Refurbished PLBs have an estimated service life extension of approximately 20 years.
- Refurbishing PLBs as opposed to replacing them keeps approximately 20 tons of demolition debris per refurbished PLB out of the waste stream.

PROJECT STATEMENT AND OBJECTIVES:

Project Statement:

The PLBs currently being considered for action under this CIP are N3, S3, S4, S12; however, this list is necessarily subject to change in order to reflect ongoing contingency and unpredictable operational requirements.

Gate	Mfg. Year (Age)	Manufacturer	Recommendation
S12	1983 (29 years old)	JBT AeroTech/Jetway	Refurbish
S3	1974 (38 years old)	JBT AeroTech/Jetway	Refurbish
S4	1988 (24 years old)	JBT AeroTech/Jetway	Refurbish
N3	1985 (27 years old)	Mitsubishi	Replace

The PLBs at the South Satellite have been assigned a higher priority for action due to increased international traffic volume and limited gate space with access to the Federal Inspection Service International Arrivals facility level.

The PLB at Gate N3 is scheduled for replacement because of its age and the fact that it is a non-standard Mitsubishi model that is no longer supported by the manufacturer.

The other three PLBs (S3, S4, and S12) are JBT AeroTech/Jetway models that are considered to be good candidates for refurbishment rather than replacement.

Project Objectives:

The refurbishment and/or replacement of Port-owned PLBs that have reached the end of their service life will result in decreased maintenance costs and PLB downtime and will greatly reduce the likelihood of total PLB failure. If a PLB fails, the affected gate positions could not be used to their fullest potential until it is repaired or replaced, both at considerable cost to the Port and significant impact to airline operations. This would result in lost revenue, reduced ability to accommodate flights, and negative impact to major tenants by forcing airlines to ground-load passengers.

PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

The PLBs currently identified for this CIP are N3, S3, S4, and S12. The work will take place at both the North and South Satellites. The anticipated scope of work includes:

- Demolition and replacement of PLBs at affected gates that have been determined to be ready for replacement by Maintenance and Operations.
- Refurbishment work by Port Crews will renew/replace primary PLB systems, equipment, components and finishes in order to extend the useful life of existing PLBs not judged ready for replacement by the Port.
- Purchase and installation of a new PLB and associated equipment and components, to include modification or replacement of existing PLB foundations at affected gates along with necessary architectural, electrical, data and mechanical infrastructure upgrades to meet new PLB standards and current code requirements. The Port executed a sole source waiver on July 9, 2010, authorizing purchase of passenger loading bridges and support parts and equipment.
- PCS will perform work associated with preparing the foundations for the PLB replacement and construction management services.
- A small works contractor will be responsible for installing and commissioning a new PLB provided as owner-furnished equipment.
- A PLB design services IDIQ professional services contract was competitively procured and is in place (P-00317063) and the intent is to use this contract to handle the design requirements for the PLBs that will be replaced or refurbished in this scope of work.

Schedule:

	Start	**Finish**
PLB Design	April 2012	March 2013
PLB Refurbishment/Replacement	July 2012	December 2014

FINANCIAL IMPLICATIONS:

Budget/Authorization Summary

Original Budget	$6,000,000
Budget Reduction	$3,595,000
Revised Budget	$2,405,000

Previous Authorizations	$0
Current request for authorization	$2,405,000
Total Authorizations, including this request	$2,405,000
Remaining budget to be authorized	$0
Total Estimated Project Cost	$2,405,000

Project Cost Breakdown

Construction Costs	$938,000
Port Furnished Equipment (1 new PLB)	$405,000
Sales Tax	$128,000
Outside Professional Services	$175,000
Aviation PMG and Other Soft Costs	$708,000
Environmental/HAZMAT/RMM	$51,000
Total	$2,405,000

Budget Status and Source of Funds

This project was included in the 2012-16 capital budget and plan of finance as a business plan prospective project within CIP #C800267 with a budget of $6.0 million. Due to the PLB replacements planned in connection with the airline realignment in the terminal, the scope of this CIP was reduced. The funding source will be the Airport Development Fund.

Financial Analysis Summary:

CIP Category	Renewal/Enhancement
Project Type	Renewal & Replacement
Risk adjusted Discount rate	N/A
Key risk factors	N/A
Project cost for analysis	$2,405,000
Business Unit (BU)	Terminal – Airline Equipment
Effect on business performance	NOI after depreciation will increase
IRR/NPV	N/A
CPE Impact	CPE will increase by $.01 in 2014, but no change to business plan forecast as this project was included.

ECONOMIC IMPACTS AND BUSINESS PLAN OBJECTIVES:

Replacement or refurbishment of aging PLBs considered to be at high risk for failure will provide reliable, high quality facilities for passengers and airlines. This translates into reduced maintenance costs, increased operational reliability and deferred future capital expenditures.

Providing improved PLBs supports the Port's strategy to ensure Airport vitality by ensuring that airlines are provided with reliable and efficient PLB services.

STRATEGIC OBJECTIVES:

By replacing or refurbishing PLBs that are at the end of their useful operational life, this CIP advances the Airport's objectives of:

- operating a world-class Airport by managing our assets to minimize the long-term cost of ownership and
- leading the U.S. airport industry in environmental innovation and minimizing the Airport's environmental impacts.

ENVIRONMENTAL SUSTAINABILITY AND COMMUNITY BENEFITS:

This project will install new and refurbish existing PLBs to replace aging, less energy efficient equipment at existing gate locations.

Refurbishing PLBs instead of replacing them prevents up to 20 tons of demolition debris per bridge from entering the waste stream.

New and refurbished PLBs employ the use of advanced electronics, materials and finishes that provide enhanced energy efficiency and improved air quality through:

- Installation of EnergyStar compliant equipment/components where applicable.
- Use of up to 30% pre-consumer recycled content in PLB flooring.
- Use of repurposed rubber from spent aircraft tires for PLB control cab bogies (under-cab assemblies)
- Use of No/Low VOC (volatile organic compound) paints, adhesives and finishes wherever possible.
- Use of LED light fixture lamps in place of fluorescent lamps.
- Provision for increased passive ventilation in newly manufactured PLBs over older models.

TRIPLE BOTTOM LINE:

This project demonstrates environmental sustainability by replacing outdated, inefficient and unreliable PLBs and refurbishing viable existing PLBs. This will allow the Port to provide our tenants and the general public with the updated, dependable and more efficient equipment that they need to support and grow their business. The resulting improvement to the Port's PLB inventory will promote net operating income through ongoing gate leases to airlines with a corresponding decrease in maintenance and capital expenditures.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

Alternative #1: Replace or Refurbish PLBs at High Risk of Failure
Replacement of aging PLBs not deemed suitable for refurbishment will provide high quality facilities for Airport passengers, reduced maintenance costs and increased operational reliability. Rehabilitation of aging PLBs deemed suitable for refurbishment is a cost effective alternative to outright replacement and will provide approximately 20 years of additional service life. **This is the preferred alternative.**

Alternative #2: Continue to Operate Aging, Port-Owned PLBs As-Is
Delaying the replacement and/or refurbishment of Port-owned PLBs that have reached the end of their service life will result in ever increasing maintenance costs, PLB downtime and the risk of total PLB failure. When a PLB fails, the affected gate positions cannot be used to their fullest potential until repaired or replaced, both at considerable cost to the Port and significant impact to airline operations. This would result in lost revenue, reduced ability to accommodate flights, and negative impact to major tenants by forcing airlines to ground-load passengers.

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

Graphic – Passenger Loading Bridge Improvements – IDIQ, 1 pp.

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

None.