

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA

ACTION ITEM

Item No. 5c

Date of Meeting June 25, 2013

DATE: June 17, 2013

TO: Tay Yoshitani, Chief Executive Officer

FROM: David Soike, Director, Aviation Facilities and Capital Program
Wayne Grotheer, Director, Aviation Project Management Group

SUBJECT: Parking Garage Emergency Lights Project at Seattle-Tacoma International Airport
(CIP #800230)

Amount of This Request: \$1,595,319

Source of Funds: Airport
Development Fund,
Grants and Future
Revenue Bonds

Est. Total Project Cost: \$4,683,370

**Est. State and Local
Taxes:** \$215,213

Est. Jobs Created: 40

ACTION REQUESTED:

Request Commission authorization for the Chief Executive Officer to (1) advertise and execute a major construction contract in an amount not to exceed \$1,595,319 for the Parking Garage Emergency Lights Project at Seattle-Tacoma International Airport and (2) authorize the use of Port crews to perform construction services. The total cost of the project, including expense, is \$4,683,370.

SYNOPSIS:

The parking garage has light fixtures throughout the parking areas and stairwells that allow for 24-hour operations. A portion of them have dual functions serving as emergency light fixtures when normal power is lost. The current emergency lighting system is an interim fix after a system failure occurred in 2007. This interim solution is not compliant with current code. In addition, this project will eliminate the need for battery-powered emergency lights currently in use, thereby avoiding the continuing need to both purchase batteries and pay associated disposal fees. This authorization will bring the parking garage emergency light system up to current life/safety code compliance.

This overall project won a State of Washington Department of Commerce grant for energy efficiency and is included in the 2013-2017 capital budget and plan of finance. It is currently projected to be under budget. The new system will reduce energy consumption by approximately 50%, or \$135,000 annually.

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BACKGROUND:

The overall Parking Garage Emergency Light project consists of two major components – infrastructure and lights:

- On July 6, 2012, the Port of Seattle Commission authorized design of the infrastructure that will ensure the Port continues to meet applicable life/safety code requirements for egress. The infrastructure provides the foundation to install new light fixtures that will reduce energy consumption.
- On March 18, 2013, the Port of Seattle Commission authorized the design and construction of the new light fixtures. The new lights will utilize new technology that reduces energy consumption and have a longer lifecycle, therefore decreasing maintenance and operations costs. The new light fixtures will provide reliable egress lighting and comply with code requirements.

This authorization will allow the project to move forward with the construction of the electrical infrastructure that will bring the emergency lighting system into compliance and utilize the new energy efficient lights.

PROJECT JUSTIFICATION:

The purpose of this project is to replace a non-compliant interim solution and to provide the electrical infrastructure for a new source of emergency power to feed the parking garage emergency lighting circuits in order to ensure that code-required level-of-egress illumination is provided for the safety of customers.

Project Objectives:

- Satisfy applicable code requirements for emergency lighting.
- Provide proper egress lighting for the safety of customers.
- Decrease electrical loads on the emergency circuits by installing current lighting technology in fixtures that require less power.
- Decrease maintenance and operations costs by using current lighting technology in fixtures with longer lamp life.

PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

- Construction of four new electrical ‘closets’ to house new electrical equipment for the emergency system, which is required by code to be segregated from normal power equipment.
- Installation of a new distribution panel and automatic transfer switch to enable the switch-over to generator power upon the loss of normal power to egress lighting circuits.
- Installation of electrical meters in each of four transfer switches to record both real-time and historical data for power usage on emergency circuits.
- Installation of conduit and electrical wiring to connect new emergency distribution equipment to existing egress lighting circuits and to the existing generator distribution board.

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- Removal and proper disposal of existing temporary bug-eye battery-powered fixtures by Port crews and small works electrical contracts after the project is completed and tested.

Schedule:

Commission Authorization	June 2013
Notice to Proceed	September 2013
Construction Complete	September 2014

FINANCIAL IMPLICATIONS:

<i>Budget/Authorization Summary:</i>	Capital	Expense	Total Project
Original Budget	\$750,000	\$0	\$750,000
Previous Budget Increase	\$4,519,600	\$0	\$5,269,600
Current Budget Reduction	\$(586,230)	\$0	\$(586,230)
Revised Budget	\$4,683,370	\$0	\$4,683,370
Previous Authorizations	\$3,088,051	\$0	\$3,088,051
Current request for authorization	\$1,595,319	\$0	\$1,595,319
Total Authorizations, including this request	\$4,683,370	\$0	\$4,683,370
Remaining budget to be authorized	\$0	\$0	\$0
Total Estimated Project Cost	\$4,683,370	\$0	\$4,683,370

<i>Project Cost Breakdown:</i>	This Request	Total Project
Construction	\$949,511	\$2,315,348
Construction Management	\$355,339	\$469,946
Design	\$0	\$972,703
Project Management	\$200,000	\$677,550
Permitting	\$0	\$32,610
State & Local Taxes (estimated)	\$90,469	\$215,213
Total	\$1,595,319	\$4,683,370

Budget Status and Source of Funds:

The Parking Garage Emergency Lights project (CIP #C800230) is included in the 2013-2017 capital budget and plan of finance in the amount of \$5,269,000. The budget reduction of \$586,230 is due to updated project cost estimates. The source of funds for this project is the Airport Development Fund, Department of Commerce grant, and future revenue bonds. The 2013 – 2017 plan of finance assumed the Port would issue revenue bonds in 2014 to fund a number of projects. While this authorization deals with the emergency power supply and support infrastructure, it should be noted that the Airport will receive a grant for \$384,450 from the Washington State Department of Commerce. The Department of Commerce recognized the garage emergency lighting project as a top infrastructure improvement, and this grant will reduce the net cost of this project to the Port. In 2014, the Port will incur approximately \$20,000 in training costs for Aviation Maintenance staff. This cost will be included in the 2014 operating budget.

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Financial Analysis and Summary:

CIP Category	Electrical Infrastructure
Project Type	Renewal & Replacement
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	\$4,683,370
Business Unit (BU)	Landside, parking
Effect on business performance	NOI after depreciation will increase as operating cost savings will more than offset increased depreciation.
IRR/NPV	N/A
CPE Impact	N/A

Lifecycle Cost and Savings:

The estimated life expectancy for this project is 40 years for the electrical panels and electrical closets. This project will reduce energy consumption by \$135,000 per year, approximately a 50% energy savings.

STRATEGIC OBJECTIVES:

This project aligns with the Port's Century Agenda objective to be the greenest, most energy efficient port in North America by meeting all increased energy needs through conservation and renewable sources.

ENVIRONMENTAL SUSTAINABILITY:

This project will provide the infrastructure to apply environmental sustainability principles primarily through the use of energy-efficient light fixtures. These will reduce energy use by an estimated 50% while providing more than an estimated four times the lamp operating life compared to what is currently installed. This authorization repurposes existing and available generator capacity for emergency back-up power rather than acquiring an entirely new generator.

BUSINESS PLAN OBJECTIVES:

This project aligns with the Port's objective to minimize the Airport's environmental impacts and reduce energy demand through conservation while operating a world-class international airport by ensuring safe, secure, and sustainable operations.

TRIPLE BOTTOM LINE SUMMARY:

The project supports economic development by investing in an upgraded parking garage to serve the public's safety needs at the Airport. This project helps the environment by reducing energy consumption at the Airport and allows our garage to operate more efficiently.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

Alternative 1 – Do nothing. Do not implement any improvements to the exiting parking garage. This alternative is not recommended because the temporary solution has reached its useful life expectancy and will begin to fail, and the parking garage currently does not meet egress lighting

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code. This alternative will negatively affect the safety of the public. This is not the recommended alternative.

Alternative 2 – Provide new emergency power to bring the emergency electrical system up to code that will meet the life/safety code requirements for egress illumination levels and provide safety for the public. **This is the recommended solution.**

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

- None.

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

- July 6, 2012, the Commission authorized the design for the electrical infrastructure for a new source of emergency power to feed the parking garage emergency lighting circuits to ensure that code-required level of egress illumination is provided for the safety of customers.
- March 18, 2013, the Commission authorized as part of the Interagency Agreement, with the State of Washington Department of Enterprise Services to proceed with design and construction of emergency lighting initiatives. This request authorized energy saving solutions by using current technology to reduce energy consumption while meeting applicable life/safety code requirements for egress area illumination levels.