

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA

Item No. 5f

ACTION ITEM

Date of Meeting January 22, 2013

DATE: January 14, 2013

TO: Tay Yoshitani, Chief Executive Officer

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

SUBJECT: Feeder 101 Taps Replacement (CIP # C800234)

Amount of This Request: \$500,000

Source of Funds: Airport Development
Fund and future
revenue bonds

Est. State and Local Taxes: \$158,000

Est. Jobs Created: N/A

Est. Total Project Cost: \$2,706,000

ACTION REQUESTED:

Request Commission authorization for the Chief Executive Officer to proceed with the Feeder 101 Taps Replacement project; direct staff to prepare design documents; use Port crews to support site investigation needed to develop the construction contract documents; and use Port Construction Services to conduct a good faith survey for regulated material. The total amount of this request is \$500,000 and the total projected cost is \$2,706,000.

SYNOPSIS:

This project will replace components of the electrical system that feed power to the north end of the Airport that includes cargo warehouse and aircraft areas and Airport maintenance areas. Feeder 101 is the main feeder cable that supplies electric power to the various facilities along Air Cargo Road. There are approximately 13 taps that have reached or passed their useful life and must be replaced. A tap includes the connection to the main feeder and the service cable that serves each facility.

The project also removes and replaces the existing unit substation at Air Cargo 4 (Port of Seattle [POS] Maintenance Facility) that includes a transformer and switchboard in the building main electrical room. This existing equipment has passed its useable life.

Design services will be performed using the existing mechanical – electrical indefinite delivery, indefinite quantity service agreement that has already been competitively competed.

This project was included in the 2013-2017 capital budget and plan of finance.

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BACKGROUND:

When Feeder 101 was replaced by a previous project a decade ago, approximately 13 of the existing medium voltage feeder taps were left for future replacement. The remaining taps have now reached or passed their useful life. The taps must be replaced to maintain a reliable and safe system. New taps will have a projected life of 30 years.

The POS Maintenance Building unit substation lineup is over 40 years old. The projected life of the original equipment is 40 years. Replacement parts are no longer available for the unit. A failure of any of the components will shut down power to the building. A replacement unit can take up to 18 months to be delivered. Replacing the unit on a predetermined schedule will save downtime and be less costly. The new equipment will have a projected life of 40 years.

The new unit substation lineup (transformer and switchboard) will not fit in the existing Airport Maintenance Building electrical room due to current code requirements. The transformer will be removed from the building's electrical room and replaced with a new, outdoor, pad-mounted 1000/1500 kVA transformer. A new 480V main switchboard will be placed in the existing electric room. This allows us to install the equipment per current code. This also allows us to properly phase construction to minimize the use of temporary measures and down times.

Traffic along Air Cargo Road has increased with the opening of the Rental Car Facility. The increased traffic increases the risk of vehicles damaging transformers and pad-mounted interrupters (PMIs). The Airport has already replaced one transformer due to a traffic accident with a taxi. This project will add protective bollards to transformers and/or PMIs along Air Cargo Road in approximately 10 locations.

PROJECT JUSTIFICATION:

The existing feeder taps and the POS Maintenance unit substation lineup are past their projected lives. The equipment is no longer reliable or safe and must be replaced.

The increased traffic on Air Cargo Road facilitates the need for protective bollards at existing transformers and/or PMIs.

Replacing the electrical equipment and bollards in a scheduled, controlled manner will save the Port potentially long downtimes as well as controlling costs.

Project Objectives:

- Replace the existing taps and feeders along Air Cargo Road.
- Replace the existing transformer and switchgear in the POS Maintenance Building.
- Provide a safe reliable system with a life of at least 30 years.
- Install additional protective bollards at transformers and/or PMIs.
- Minimize downtime and disruption to tenants.
- Complete project on time and within budget.

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PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

The Scope of Work includes the following elements:

- Field Investigation to support design.
- Provide Good Faith Survey.
 - Design for Asbestos Removal.
- Provide design of the Feeder 101 Taps Replacement project.
 - Replace the existing transformer and switchgear.
 - Replace the existing Air Cargo 4 POS Maintenance Building unit substation lineup.
 - Add protective bollards to transformers and/PMIs along Air Cargo Road.

Schedule:

- Commission Design Authorization – January 22, 2013
- Start Design – February 12, 2013
- Complete Design – August 7, 2013
- Commission Authorization to Advertise for Construction – August 21, 2013
- Start Construction – November 7, 2013
- Construction Complete – July 9, 2014

FINANCIAL IMPLICATIONS:

<i>Budget/Authorization Summary:</i>	Capital	Expense	Total Project
Original Budget	\$1,000,000	\$0	\$1,000,000
Budget Increase	\$1,646,000	\$60,000	\$1,646,000
Revised Budget	\$2,646,000	\$60,000	\$2,706,000
Previous Authorizations	\$0	\$0	\$0
Current request for authorization	\$500,000	\$0	\$500,000
Total Authorizations, including this request	\$500,000	\$0	\$500,000
Remaining budget to be authorized	\$2,146,000	\$60,000	\$2,206,000
Total Estimated Project Cost	\$2,646,000	\$60,000	\$2,706,000

<i>Project Cost Breakdown:</i>	This Request	Total Project
Construction	\$0	\$1,723,000
Construction Management	\$0	\$189,000
Design	\$345,000	\$345,000
Project Management	\$113,000	\$249,000
Permitting	\$42,000	\$42,000
State & Local Taxes (estimated)	\$0	\$158,000
Total	\$500,000	\$2,706,000

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Budget Status and Source of Funds:

This project, CIP #C800234, was included in the 2013-2017 capital budget and plan of finance with a budget of \$1,000,000. The budget increase of \$1,646,000 has been transferred from C800404 Aeronautical Allowance, a business plan prospective project, resulting in no net change to the Aviation capital budget. The budget increase is due to increased soft costs, escalation in prices, added Regulated Material Mitigation, and the addition of the switchgear/transformer in Air Cargo #4. The funding sources are Airport Development Fund (ADF) and future bond proceeds. The 2013 – 2017 capital budget and plan of finance assumes the Port will need to issue revenue bonds in 2013 or 2014 to fund a number of capital projects.

Financial Analysis and Summary:

CIP Category	Renewal/Enhancement
Project Type	Airport Infrastructure
Risk adjusted discount rate	N/A
Key risk factors	N/A
Project cost for analysis	\$2,706,000
Business Unit (BU)	Airfield Commercial Area
Effect on business performance	NOI after depreciation will increase
IRR/NPV	N/A
CPE Impact	\$0.01 in 2014; however, no change from business plan forecast as this project was included in the plan

Lifecycle Cost and Savings:

The project replaces existing electrical infrastructure. Operational costs will remain the same and are factored into existing Aviation Maintenance budgets.

STRATEGIC OBJECTIVES:

This project will support our Century Agenda Strategic Objective to triple air cargo volume by ensuring that the infrastructure is reliable and up to date.

ENVIRONMENTAL SUSTAINABILITY:

This project demonstrates environmental sustainability by improving existing Port assets and better utilizing existing resources. This project will replace existing equipment with new, more efficient systems. The majority of the existing materials will be recycled.

BUSINESS PLAN OBJECTIVES:

The anticipated growth in air cargo will require a stable infrastructure that will remain reliable for the next 30 years. 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 supports:

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- The economy by supporting our customers and by continuing to provide service to the community with the facilities located along Air Cargo Road.
- The environment by recycling the majority of the materials to be removed and by installing new more efficient electrical equipment.
- Social responsibility through supporting small business opportunities and job creation.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

Alternative 1 – Replace the feeders, the unit substation, and add protective bollards on separate contracts. This can be accomplished; however, this will increase the costs to the Port and to the contractor. This will also lengthen the schedule, which increases the risk to the Port. *This is not the recommended Alternative.*

Alternative 2 – Leave the equipment in place. The equipment would be replaced as it fails. This alternative represents the biggest risk to the Port due to potential loss of operations and impact to cargo airlines whose international flight schedules could be interrupted. *This is not the recommended Alternative.*

Alternative 3 – Replace all of the feeder 101 taps along Air Cargo Road, replace the existing POS Maintenance unit substation lineup, and add protective bollards to the transformers/PMIs along Air Cargo Road. This alternative is the most cost effective and offers the shortest schedule. The work will be bid as one package and the work will be sequenced to take advantage of one contract. **This is the recommended Alternative.**

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

None

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

None