

**PORT OF SEATTLE**  
**MEMORANDUM**

**COMMISSION AGENDA**

**Item No.** 5g

**ACTION ITEM**

**Date of Meeting** February 26, 2013

**DATE:** February 19, 2013

**TO:** Tay Yoshitani, Chief Executive Officer

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

**SUBJECT:** Sanitary Sewer Pump Stations Upgrade at Seattle-Tacoma International Airport  
(CIP #C102032)

**Amount of This Request:** \$1,133,000      **Source of Funds:** Airport Development Fund

**Est. State and Local Taxes:** \$69,000      **Est. Jobs Created:** 7

**Est. Total Project Cost:** \$1,133,000

**ACTION REQUESTED:**

Request Commission authorization for the Chief Executive Officer to complete the design, advertise for, and proceed with construction of the Sanitary Sewer Pump Station Upgrade project at the Seattle-Tacoma International Airport (Airport). This request seeks a single authorization to perform the design and construct the sewer upgrades to complete the work quickly and take advantage of an existing, competitively bid, indefinite delivery, indefinite quantity contract. The amount of this request is \$1,133,000 and the total projected cost is \$1,133,000.

**SYNOPSIS:**

Commission authorization is requested to design, advertise and execute construction contract for Sanitary Sewer Pump Station Upgrade. This project is included in the 2013-2017 capital budget and plan of finance.

The sanitary sewer pump stations have not been upgraded with current technology to properly control and monitor the whole system. This project will enhance the operation of approximately twenty-two sanitary sewer pump stations at the main terminal and elsewhere at the Airport. Many of these pump stations have operated without backup pumping and control capabilities that are essential to assure risk free operation and maintenance. This project will upgrade all twenty-two pump stations with reliable controls via the facility monitoring system.

This authorization requests both design and construction in one request, rather than separately seeking design first and returning soon thereafter for advertisement and construction as a second request. Design will take less than two months' time by using in-house technical staff and outside consultants that are already available via an existing Indefinite Delivery/Indefinite

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Quantity (IDIQ) contract that was competitively procured earlier. In addition to streamlining the request process for this item, the minor risk of a sewage overflow may be mitigated by expediting this action in a single step.

The design package will be prepared in-house with support from outside consultants (as needed) using the Mechanical-Electrical IDIQ Service Agreement, which has an ordering period end date of April 26, 2014.

The control and monitoring hardware components and software portion of this upgrade project are a Siemens proprietary system. There is an existing Competition Waiver in place that covers the Siemens system hardware, software, and system graphics. The project specifications will include the proprietary system and the equipment will be included in the bid package. The construction contract will include acquisition and installation of control system proprietary hardware, software, and system graphics as well as the non-proprietary system elements such as conduit and wiring.

### **BACKGROUND:**

The sanitary sewer system in the terminal areas around the Airport is equipped with pump stations to pump wastewater into the sanitary sewer. Each of these pump stations has one or more deficiencies. Several pump station failures have occurred in the last five years, resulting in sewage overflows and associated potential health and safety concerns. Eleven of the lift stations do not have modern ultrasonic level transmitters needed to control the pumping operations. Other miscellaneous control upgrades are needed on other pump stations to better control and monitor system performance from the Central Mechanical Plant via the facility control and monitoring system to allow timely response to a malfunction.

A good faith survey for regulated materials is a typical required action and will be completed by an outside consultant and managed by Port Construction Services (PCS). Removal of regulated materials, if required, will be completed by the construction contractor.

### **PROJECT JUSTIFICATION:**

This request will upgrade the existing Sanitary Sewer Pump Stations with an up to date system that will monitor and control the operation of the pumps; monitor the levels in the sumps; and monitor and transmit system alarms to the Central Mechanical Plant.

#### ***Project Objectives:***

- The upgraded system will decrease the response time to problems for Aviation Maintenance personnel
- Lower the risk of undetected sewage overflows

### **PROJECT SCOPE OF WORK AND SCHEDULE:**

#### ***Scope of Work:***

The Scope of Work includes the following elements:

- Perform field investigation to confirm conditions and prepare design.
- Provide good faith regulated materials survey – design for asbestos removal.

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- Package the technical design of the Sanitary Sewer Pump Station Upgrade project for bidding.
- Install electrical power, conduit runs, wire, and associated items as necessary.
- Remove regulated materials as necessary.
- Upgrade the individual pump station control panels.
- Add ultrasonic level transmitters where needed.
- Upgrade or replace individual pump station control and monitoring graphics as needed.
- Connect all twenty-two pump stations to the central control and monitoring system.

### ***Schedule:***

Commission Authorization for Design/Construction	February 2013
Advertise for Bids (construction):	April 2013
Notify Commission of Intent to Award	June 2013
Issue Notice to Proceed:	August 2013
Construction Substantial Completion:	May 2014

### **FINANCIAL IMPLICATIONS:**

<b><i>Budget/Authorization Summary:</i></b>	Capital	Expense	Total Project
Original Budget	\$1,133,000	\$0	\$1,133,000
Previous Authorizations	\$0	\$0	\$0
Current request for authorization	\$1,133,000	\$0	\$1,133,000
Total Authorizations, including this request	\$1,133,000	\$0	\$1,133,000
Remaining budget to be authorized	\$0	\$0	\$0
Total Estimated Project Cost	\$1,133,000	\$0	\$1,133,000

<b><i>Project Cost Breakdown:</i></b>	This Request	Total Project
Construction	\$813,000	\$813,000
Construction Management	\$129,000	\$129,000
Design	\$40,000	\$40,000
Project Management	\$74,000	\$74,000
Permitting	\$8,000	\$8,000
State & Local Taxes (estimated)	\$69,000	\$69,000
Total	\$1,133,000	\$1,133,000

### ***Budget Status and Source of Funds:***

This project (CIP #C102032) was included in the 2013-2017 capital budget and plan of finance with a budget of \$1,133,000. The source of funds is the Airport Development Fund (ADF).

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### ***Financial Analysis and Summary:***

<b>CIP Category</b>	Renewal/Enhancement
<b>Project Type</b>	Airport Infrastructure
<b>Risk adjusted discount rate</b>	N/A
<b>Key risk factors</b>	N/A
<b>Project cost for analysis</b>	\$1,133,000
<b>Business Unit (BU)</b>	Utilities - Sewer
<b>Effect on business performance</b>	N/A Capital costs will be incorporated into Utility rate base.
<b>IRR/NPV</b>	N/A
<b>CPE Impact</b>	Less than \$.01, but no change from business plan forecast as this project was included.

### ***Lifecycle Cost and Savings:***

The impact to ongoing operational costs is negligible. The costs to operate and install the controls and monitoring system will be offset by the savings in periodic manual monitoring of the pump stations. In addition the costs of responding to undetected failures will be minimized.

### **STRATEGIC OBJECTIVES:**

This project will support our Century Agenda Strategic Objective to meet the region's air transportation needs at the Airport for the next 25 years by ensuring that the infrastructure is reliable and well controlled.

### **ENVIRONMENTAL SUSTAINABILITY:**

This project demonstrates environmental sustainability by improving Port assets and better utilizing existing resources. The project will replace existing equipment with new more efficient systems. Existing materials and system components will be recycled where possible.

### **BUSINESS PLAN OBJECTIVES:**

The project will provide a stable, reliable infrastructure that 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:

- The economy by minimizing Aviation Maintenance response time.
- The environment by minimizing the risk of operationally disruptive sewerage overflows and by recycling a portion of the materials to be removed and by installing new more efficient control and monitoring system equipment.
- The community by keeping the Airport operating as efficiently as possible and by minimizing health risks to workers that could be associated with sewerage overflows.

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### **ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:**

**Alternative 1** – Leave the pump station controls as is and live with the lack of alarms when pumps fail or the sewage wet wells overflow. This alternative represents a continuing risk to the Airport. This is not the recommended Alternative.

**Alternative 2** - Systematically upgrade the most pressing deficiencies of each sewage pump station. **This is the recommended alternative.**

### **OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:**

- N/A.

### **PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:**

- N/A