

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No.: 6c

Date of Meeting: August 10, 2010

DATE: July 19, 2010

TO: Tay Yoshitani, Chief Executive Officer

FROM: Michael Ehl, Director, Airport Operations
Wayne Grotheer, Director, Aviation Capital Improvement Program

SUBJECT: Design for slot drains, pavement, and joint seal replacement and installation of temporary common-use equipment at the South Satellite (CIP # C-102573)

Amount of This Request: \$394,000 **Source of Funds:** Airport Development Fund

Total Project Cost: \$10,500,000

ACTION REQUESTED:

Request Port Commission to authorize the Chief Executive Officer to 1) proceed with project management, design, environmental support, and preparation of 100% design level construction documents for the replacement of slot drains, pavement, and joint seal at the South Satellite at Seattle-Tacoma International Airport (Airport), 2) execute and award outside professional service agreements, 3) pre-purchase common-use gate equipment, and 4) allow Port Construction Services (PCS) to self-perform work, advertise for bids, execute and award small works construction contracts for common use equipment installation. Project costs to accomplish this work are estimated at \$394,000. The total cost of this project is estimated to be \$10,500,000 within a total estimated multi-year program of \$30,800,000

SYNOPSIS:

This project will produce the final design for slot drains (a long, narrow drain system to convey runoff from the pavement surface), concrete pavement panels, and joint seal replacement at the South Satellite. The design will include utilities and other scope items related to the project. The final design will be completed in 2010 and implementation of the portable common use units is anticipated to occur in early 2011. Port staff will return to the Commission by early 2011 to request authorization for advertisement and construction funding.

The scope of work includes the design, acquisition and activation of temporary common use boarding door workstations for passenger processing activity for flights displaced by this project. The Port of Seattle (Port) currently provides passenger processing equipment at five common-use gates impacted by this project: S10, 11, 12, 15 and 16. Closure of these gates,

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required by the construction of the project, will cause reassignment of international flights to gates S7, 8 and 9. These three gates do not have common use equipment. The temporary common use equipment will allow flights to be shifted to gates that currently do not have common use equipment and minimize impacts to the airlines and passengers.

BACKGROUND:

In 2009, Airport staff conducted a visual survey of the non-runway pavement on the airfield, to determine which pavement needed replacing, and in what order. It was determined that the South Satellite work should be completed first, due to the deteriorating condition of the pavement, which is at the end of its useful life. To that end, work in 2011 will focus on replacing pavement as well as associated slot drains around the South Satellite. Pavement joint seals will also be replaced, to take advantage of the already closed gates.

The slot drain and adjacent concrete were originally installed in 1971 with an expected service life of 20 years. Typical degradation of the concrete is occurring. In the areas adjacent to the slot drains the concrete is degrading at an accelerated rate. Joint seal in the area has degraded and in some cases is nonexistent.

The concrete, slot drain and joint seal work must occur in a phased, gate by gate, fashion to keep the satellite functional for our airline tenants. Advance acquisition and installation of common use units is required in order to enable a more efficient shift of airlines between gates to allow the work in the vicinity of respective gates to proceed.

This project is part of a multi-year program to replace some of the worst pavement and joint seal on the airfield. The project will generally replace the most critical pavement first, but will include other pavement sections when it makes sense. The criticality and order of the pavement replacement may change over time, based on pavement deterioration, operational impacts, and available funding. The 2011 project is anticipated to be approximately \$10.5 million, which includes the funds currently being requested. The overall program amount is \$30.8 million.

PROJECT JUSTIFICATION:

In areas around the South Satellite, the design used for the existing slot drain system is causing accelerated deterioration of the surrounding pavement. There is also other pavement in the vicinity of the South Satellite that need to be replaced. Concrete debris resulting from the deteriorating pavement is becoming a hazard for aircraft and personnel. As the gates are taken out of service for the pavement and slot drain replacement, it presents an opportunity to also replace the deteriorating pavement joint seal in the immediate area.

This project will displace airline operations at gates S10, 11, 12, 15 and 16 to gates S7, 8 & 9 during construction. Gates S7, 8 and 9, while able to accommodate the displaced aircraft, only have Delta Airlines passenger processing equipment which cannot be used for flight operations by other displaced airlines. The temporary common use equipment will facilitate boarding of all other airline passengers at gates S7, 8 & 9 in a seamless manner.

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PROJECT STATEMENT AND OBJECTIVES:

Project Statement:

Perform the South Satellite slot drain, concrete pavement panel, and joint seal replacement final design including acquisition and activation of temporary common use units in 2010, for a cost of approximately \$394,000.

Project Objectives:

Complete the final design for the slot drain, pavement, and joint seal replacement, and acquire and install temporary common use units in preparation for construction in spring of 2011.

PROJECT SCOPE OF WORK AND SCHEDULE:

Scope of Work:

Produce final design for the South Satellite, slot drain, pavement, and joint seal replacement. The design will include utilities, acquisition and activation of portable common use, and other scope items related to the project. The final design will be completed in 2010. Construction is anticipated in 2011.

Schedule:

90% Design	October 2010
Commission Authorize Advertise	January 2011
Advertise	January 2011

FINANCIAL IMPLICATIONS:

Budget/Authorization Summary:

Original Budget	\$30,800,000
Budget Increase	\$0
Revised Budget	\$0
Previous Authorizations this CIP	\$0
Current request for authorization	\$394,000
Total Authorizations, including this request	\$394,000
Remaining budget to be authorized	\$30,406,000

The \$30,800,000 original budget for pavement replacement was set by the Aviation Investment Committee and is intended to cover replacement over the next several years. Each successive authorization will be requested on a yearly basis.

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Project Cost Breakdown:

Design	\$150,000
Project Management	\$100,000
Survey	\$30,000
Internal POS Support and Review	\$30,000
Outside Professional Services	\$20,000
Common Use Acquisition and Installation	64,000
Total	\$394,000

Budget Status and Source of Funds:

This project is included in the 2010-14 capital budget and plan of finance as a business plan prospective project within CIP #C102573. The funding source will be the Airport Development Fund. Related construction costs will be funded with 2010 revenue bonds.

Financial Analysis and Summary:

CIP Category	Renewal/Enhancement
Project Type	Infrastructure Upgrade
Risk adjusted Discount rate	n/a
Key risk factors	n/a
Project cost for analysis	\$10,500,000
Business Unit (BU)	Airfield - capital costs will be fully recovered in landing fees over the life of the asset
Effect on business performance	No change: NOI after depreciation will increase since capital and operating costs will be recovered through landing fees.
IRR/NPV	N/A
CPE Impact	Less than \$.06 in 2012, but no impact on business plan forecast as this project was included.

ECONOMIC IMPACTS AND BUSINESS PLAN OBJECTIVES:

Generally, there are no new economic impacts related to renewal/enhancement projects since they are primarily related to preservation of existing business activity.

STRATEGIC OBJECTIVES:

This project supports the Port's strategy to "Ensure Airport Vitality" by maintaining a safe operating environment as well as maximizing asset utilization.

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ENVIRONMENT SUSTAINABILITY AND COMMUNITY BENEFITS:

The concrete panel and slot drain repair and maintenance is eligible for a Categorical Exclusion and Categorical Exemption under the National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) due to the nature of the project. The environmental review for the project will be completed before the project is advertised for construction.

During repair and maintenance activities, various sustainable practices will be considered and implemented when practicable. These include, but are not limited to, performing a life cycle analysis of materials used to ensure that resources being used and/or recycled are environmentally and economically practical; utilizing onsite water for dust control and irrigation; the reuse of materials such as concrete and soil; and employing low emission construction equipment.

The Airport's ramp area is comprised of a series of concrete pavement panels, and its slot drain system services the various Airport concourses. The ramp provides parking and access to the gate positions for aircraft. The slot drain system allows for drainage of the ramp area. Maintaining the ramp and slot drain system is critical for preserving access to aircraft parking.

TRIPLE BOTTOM LINE SUMMARY:

Replacement of slot drains, concrete pavement panels, and the joint sealant are a financially responsible way to insure continued access to the gate areas for the airline tenants and continued gate availability for the traveling public.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

- 1) Do nothing: This alternative would result in an increasing risk of aircraft ingesting concrete debris into aircraft engines around the South Satellite and possible need for closure of gates. This is not the recommended alternative.
- 2) Replace the pavement, slot drain system, and joint seal over a two year period: The ultimate result would be the same as the preferred alternative however, the risk of aircraft ingesting concrete debris increases with time as the pavement deteriorates. Escalation in construction costs due to inflation and fixed mobilization/demobilization costs will also occur. Performing the work over consecutive years would cause a prolonged hardship to the South Satellite tenants. This is not the recommended alternative.
- 3) Replace the slot drains, pavement, and joint seal during the 2011 construction season (approximately seven months). This is the preferred alternative

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

None.

PREVIOUS COMMISSION ACTION OR BRIEFING:

September 22, 2009, Senior Aviation Staff briefed Commission on Seattle-Tacoma International Airport Facility Functionality and Readiness.