



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8c

ACTION ITEM

Date of Meeting March 23, 2021

DATE: February 17, 2021

TO: Stephen P. Metruck, Executive Director

FROM: Wendy Reiter, Director, Aviation Security
Wayne Grotheer, Director, Aviation Project Management

SUBJECT: Exit Breach Control Replacement Project Authorization (CIP #C801159)

Amount of this request: \$4,081,000

Total estimated project cost: \$4,181,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) develop, advertise, and execute an alternative public works delivery using the Building Engineering Systems process, (2) execute a five-year maintenance service and training agreement for the Exit Breach Control Replacement Project at Seattle-Tacoma International Airport, and (3) utilize Port crews, for an estimated total project cost of \$4,181,000.

EXECUTIVE SUMMARY

Exit lane automation and physical breach control is part of Seattle-Tacoma International Airport's (SEA) multi-layered security approach and is a critical component to securing the passenger concourses and preventing unauthorized access to the secured areas. This Exit Breach Control Replacement Project will replace the existing automated Exit Lane Breach Control System (aka exit lanes) at the Concourse B security exit to the Main Terminal at SEA. The existing exit lanes have reached their end of useful life. The manufacturer no longer fabricates parts for this model. The exit lanes have been kept operational using spare parts remaining from an earlier project; however, most spare parts have been exhausted. Due to replacement component obsolescence, staff has not been able to restore service to one of the three lanes—which remains closed.

This project will be delivered using the alternative public works Building Engineering Systems (BES) process which will combine the procurement of the exit lane technology with the design and construction of the necessary Airport infrastructure connections including communications, electrical, and security systems among others. Additionally, this procurement will also include a separate contract to purchase a five-year manufacturer maintenance service agreement and factory training. As the training and maintenance are required to be completed by the selected manufacturer, it is essential that the service agreement and training component be procured at the same time. The total costs associated with the maintenance service agreement and training

Meeting Date: March 23, 2021

is estimated at \$520,000 over five years. Funding for the maintenance and training contract will be included in the Aviation Division operating budget and approved through the 2022 Aviation Division expense budget approval process.

JUSTIFICATION

A full replacement is necessary to maintain security at the Concourse B exit lane corridor. Exit lane automation and physical breach control is part of SEA’s multi-layered security approach and is a critical component to securing the passenger concourses.

As part of the alternatives analysis, staffing this exit with guards was considered and compared to the preferred alternative of proceeding with this project. Manually staffing this exit is not practicable as it introduces an increased potential for security breaches as a result of human error or fatigue when compared to the security of the one-way automated exit lanes. A cost and critical factors comparison can be found within the “Alternatives and Implications Considered” section below.

Diversity in Contracting

There will be a 7% women-and minority business enterprise (WMBE) aspirational goal for this BES design and construction contract.

DETAILS

The first step for this project will be to procure a BES team composed of a designer, equipment vendor and construction contractor. In order to complete this procurement a Request for Proposals document set will be prepared including a basis of design that will document existing conditions and applicable design standards to be employed.

Scope of Work

The project scope includes:

- (1) A qualifications-based procurement of the exit lane system.
- (2) Demolition and removal of the existing exit lanes.
- (3) Installation of the new exit lanes along with necessary utilities and service connections required to integrate the new exit lanes into Port systems.
- (4) Testing to Port of Seattle Security and Police Department and Federal Transportation Security Administration standards.
- (5) During construction, the existing service animal relief area may be relocated.

Meeting Date: March 23, 2021

Schedule

BES Team Procurement start	Q2 2021
Design start	Q4 2021
Construction start	Q1 2022
In-use date	Q3 2022

Cost Breakdown

This Request and
Total Project

Design	\$720,000
Construction	\$3,461,000
Total	\$4,181,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

During the alternatives analysis it became evident that only two (2) options were practicable solutions to address the failing infrastructure and provide an adequate level of security. The project team evaluated the option of blocking the exit (with the installation of a permanent barricade) upon the next full mechanical failure. Under this alternative, passengers would be rerouted to the next available concourse exit and the existing exit corridor would be walled off. This “do-nothing” approach was eliminated as it was not a sensible alternative for the traffic levels expected to return to the airport. As such, only two alternatives were evaluated further.

Alternative 1 – Upon full mechanical failure, remove the existing automated doors and staff the exit with guards.

Cost Implications: \$4,565,000 (net present value of total cost of ownership comprised of wages, benefits, etc. over a 10-year duration.)

Pros:

- (1) This alternative would not require a capital investment.
- (2) This could be prepared more quickly than a capital project.
- (3) Generates six full-time security guard positions.

Cons:

- (1) This option does not provide a long-term solution to egress at B gates.
- (2) This alternative would incur increased labor costs to manually staff the exit.
- (3) This alternative would increase the potential of security breaches as a result of human error and fatigue when compared to the security of automated exit lanes.
- (4) A rolldown security gate may be required. Costs associated with this are not included in the cost presented above.

This is not the recommended alternative.

Meeting Date: March 23, 2021

Alternative 2 – Replace the automated exit lanes.

Cost Implications: \$4,996,000 net present value of total cost of ownership comprised of \$4,181,000 for capital costs and \$815,000 for operating and maintenance costs.

Pros:

- (1) Physical barrier system for security reduces the risk of physical breaches and that risk reduction offsets the higher NPV costs.
- (2) Provision of a secure passenger egress at Concourse B.
- (3) Installation of a new exit lane system that could be properly maintained.
- (4) No additional long-term staffing needs or costs.

Cons:

- (1) The Concourse B exit would be closed for a longer period of construction.
- (2) The higher NPV cost compared to Alternative 1.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$100,000	0	\$100,000
Current change	\$4,051,000	\$30,000	\$4,081,000
Revised estimate	\$4,151,000	\$30,000	\$4,181,000
AUTHORIZATION			
Previous authorizations	\$100,000	\$0	\$100,000
Current request for authorization	\$4,051,000	\$30,000	\$4,081,000
Total authorizations, including this request	\$4,151,000	\$30,000	\$4,181,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

This project, CIP C801159, was included in the 2021-2025 capital budget and plan of finance with a budget of \$100,000 which was intended to fund project definition and preliminary design. A budget increase of \$4,051,000 was transferred from the Aeronautical Reserve CIP (C800753) resulting in zero net change to the Aviation capital budget. The funding source will be airport development fund (ADF) and future revenue bonds.

Meeting Date: March 23, 2021

Financial Analysis and Summary

Project cost for analysis	\$4,181,000
Business Unit (BU)	Terminal Building
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase due to inclusion of capital (and operating) costs in airline rate base.
IRR/NPV (if relevant)	The preferred alternative has the higher NPV for the total cost of ownership; however, the physical security barrier system reduces the risk of breaches and that risk reduction offsets the higher NPV costs.
CPE Impact	\$.02 in 2023

Future Revenues and Expenses (Total cost of ownership)

The total costs associated with the maintenance service agreement and training will be finalized as a part of the system procurement but has been estimated at \$526,000 over the first five years. Funding for the maintenance and training contract will be included in the Aviation Division operating budget and approved through the 2022 Aviation Division expense budget approval process.

ADDITIONAL BACKGROUND

These doors (and salvaged spare parts) are the legacy of an earlier project that intended to install exit lanes at all SEA concourse security exits but was cancelled in 2013. As such, only the doors at B-gates were installed. This installation was both a pilot program in exit automation for SEA and was an initial prototype from the current manufacturer.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None.