



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 4d

**ACTION ITEM**

**Date of Meeting** November 8, 2016

**DATE:** November 1, 2016

**TO:** Ted Fick, Chief Executive Officer

**FROM:** Jeffrey Brown, Director AV Facilities and Capital Program  
Wendy Reiter, Director, Aviation Security, Airfield Security  
Wayne Grotheer, Director, Aviation Project Management Group

**SUBJECT:** Airport Automatic Baggage Tag Reader Replacement (CIP #C800802)

**Amount of this request:** \$1,145,000

**Total estimated project cost:** \$1,160,000

**ACTION REQUESTED**

Request Commission authorization for the Chief Executive Officer to (1) execute contracts for the purchase of equipment for the automatic baggage tag reader replacement project at Seattle-Tacoma International Airport in an amount not to exceed \$1,145,000 and (2) utilize Port crews and small works contracts to perform construction, for a total estimated project cost of \$1,160,000.

**EXECUTIVE SUMMARY**

This project will improve reliability and maintainability of the airport's outbound baggage system. The project will replace six obsolete Automatic Tag Readers (ATRs) at the Airport. ATRs perform a critical function in the Airport's baggage handling system. ATRs use a laser array to read the bar codes on the bag tags as baggage is conveyed through the system, enabling bags to be directed to the correct destination. Malfunctioning ATRs severely hamper airline baggage performance along with customer service by causing bags to be misdirected resulting in lost or delayed bags.

**JUSTIFICATION**

This project contributes to the Port's Century Agenda goal to meet the region's air transportation needs at the Airport for the next 25 years. Although not currently malfunctioning, the existing ATRs have exceeded their useful lives and are no longer supported by the manufacturer leaving them unmaintainable. Staff believed that these ATR's would last until the Baggage Optimization project, but due to the schedule development of the project and the decision by Accusort (the equipment manufacturer) to no longer support the existing equipment with parts or technical support, a gap was realized. These new ATRs, which replace the six obsolete devices, will be in place for over three years until the systems they are part of

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are replaced by the Baggage Optimization project at which time they will be utilized for replacement parts or reused elsewhere.

Replacing the ATRs will accomplish the following:

- (1) Increase baggage system reliability
- (2) Make the ATRs maintainable should an equipment fault arise.

**DETAILS**

***Scope of Work***

The following items comprise the scope of the ATR replacement:

- (1) Procure and install new ATRs;
- (2) Modify baggage conveyor sides to accommodate new ATR;
- (3) Install control wiring;
- (4) Revise system programming (through Brock sole source);
- (5) System commissioning; and
- (6) Demo of existing ATRs.

New ATRs will be installed on the C25 system (1), the C96 system (1), and the C88 system (4), for a total of six (6) ATRs.

***Schedule***

This action requests construction authorization to enable ATR replacements to be in place prior to Summer 2017 peak activity. Project will utilize Port Construction Services (PCS) in order to meet the schedule requirements. This type of work has been performed by PCS in the past.

Construction start	2017 Quarter 1
In-use date	2017 Quarter 2

***Cost Breakdown***

	This Request	Total Project
Planning		\$15,000
Construction	\$1,145,000	\$1,145,000
Total	\$1,145,000	\$1,160,000

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1** –Do not proceed with this project and wait for Baggage Optimization to replace.

**Cost Implications:** \$0

Pros:

- (1) No capital expenditure.

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Cons:

- (1) Risk of failure from one or more of the existing ATRs resulting in poor customer service and cost impacts to airlines from lost or delayed bags. Failure would also result in costly corrective maintenance costs.

This is not the recommended alternative.

**Alternative 2** – Fund partial replacement of ATRs with longer service durations

Cost Implications: \$1,000,000 for C88 system (4 total) or \$840,000 C25 and C96 systems (2 total)

Pros:

- (1) Partial ATR replacement would mitigate risk on some conveyance systems but not all.
- (2) This strategy would save the additional cost of equipment procurement and electrical scope for a substantial savings.
- (3) This would enable Maintenance and the new equipment manufacturer to support additional conveyor lines however all sortation would not be supported.

Cons:

- (1) Same con as Alternative 1.

This is not the recommended alternative.

**Alternative 3** – Replace six existing ATRs

Cost Implications: \$1,160,000,

Pros:

- (1) Increases system reliability and reduces the chance that a traveler's bags will be lost or delayed due to failing equipment;
- (2) Enables maintenance and support by the ATR manufacturer and Aviation Maintenance; and
- (3) Protects Air Carriers from the cost of lost or late baggage caused by ATR malfunction.
- (4) The equipment will increase reliability of these baggage systems, resulting in reduced unplanned corrective maintenance costs.

Cons:

- (1) This equipment will be replaced by the proposed Baggage Optimization project. Although it may be possible to relocate this equipment in the future, current plans are to keep it in place for approximately three years.

***This is the recommended alternative.***

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**FINANCIAL IMPLICATIONS**

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
<b>COST ESTIMATE</b>			
Original estimate	\$1,800,000	\$0	\$1,800,000
Cost reduction	(\$640,000)		(\$640,000)
Revised Estimate	\$1,160,000		\$1,160,000
<b>AUTHORIZATION</b>			
Previous authorizations	\$15,000	\$0	\$15,000
Current request for authorization	\$1,145,000	\$0	\$1,145,000
Total authorizations, including this request	\$1,160,000	\$0	\$1,160,000
Remaining amount to be authorized	\$0	\$0	\$0

***Annual Budget Status and Source of Funds***

This project was included in the 2016-2020 Capital Budget and Plan of Finance with a total budget of \$1,800,000. The funding source is the Airport Development Fund. The original budget was decreased from \$1.8M to a new value of \$1.16M based upon a more accurate estimate performed by Port Cost Estimators utilizing historical data.

***Financial Analysis and Summary***

Project cost for analysis	\$1,160,000
Business Unit (BU)	Terminal (Baggage System)
Effect on business performance (NOI after depreciation)	NOI after depreciation will increase
IRR/NPV (if relevant)	N/A
CPE Impact	\$0.02

The costs are being amortized over three years due to likely replacement with the Baggage Optimization project.

***Future Revenues and Expenses (Total cost of ownership)***

After replacement, the equipment will increase reliability of these baggage systems, resulting in reduced unplanned corrective maintenance costs.

**ATTACHMENTS TO THIS REQUEST**

None

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

None