Department of Port Control

Ordinance No.: TBD Division of Airport Development

EXECUTIVE SUMMARY

The Department of Port Control is requesting authority to determine the method of making the public improvement of designing and constructing upgrades and improvements to the in-line baggage handling system; authorizing the Director of Port Control to enter into a professional service contract with Cleveland Terminal & Equipment Company (CTEC), for the making of the improvement.

Background/Purpose:

The scope of this work involves upgrades and improvements that will provide additional efficiency and reliability to the Cleveland Hopkins International Airport (CLE) baggage handling system (BHS). The current CLE BHS, designed in 2013, possessed passenger forecast data from 2013 plus 5 years into the future. Since those forecasts were provided, there has been an unprecedented growth in the number of origin and destination (O/D) passengers coming through the Airport. The current BHS, installed in 2017 and early 2018, requires an increase in bag system efficiency and reliability to satisfy the Airport's forecasted passenger growth over the next 5 to 7 years.

Scope of Work:

CTEC will oversee the upgrades and improvements of the in-line baggage handling system. The upgrades and improvements will include:

- **Upper-Level Controls System Replacement** – The existing upper-level controls system will be replaced with a modern redundant server architecture consisting of two (2) redundant physical servers, six (6) operator workstations, one (1) manual encode station, nine (9) baggage status displays (BSDs), one (1) KVM switch, four (4) uninterruptible power supplies (UPS), two (2) printers, and ten (10) large-screen monitors. The project also includes new operating systems, graphics software, communications software, and MIT software upgrades to provide a fully supported and maintainable controls platform.
- **Design, Engineering, Testing, and Commissioning** – The project includes engineering, equipment procurement, database verification, factory configuration, in-house testing, field installation during overnight operational windows, phased system testing, final system cutover, and three (3) days of on-site support following implementation to ensure a seamless transition to the new system.
- **Project Closeout** – Upon successful commissioning and completion of the operational acceptance period, the project will be finalized with punch list completion, warranty documentation, and project closeout activities. Existing legacy server equipment will remain available for removal following the successful operation of the new system.
- **Additional Improvements**-The exiting lower-level controls logic will be optimized through merge logic improvements and tracking window adjustments. Merge logic modification will reduce conveyor collisions, minimize merge gaps, and improve baggage throughput and handling efficiency. Tracking sectors with the PLC's will be reviewed and adjusted to ensure proper system performance, while Daifuku will coordinate with the Operations & Maintenance team to identify and resolve any associated mechanical issues.

Variable Frequency Drives will be installed on all SF1 conveyors to provide enhance conveyor speed control and operational flexibility. The upgrades will improve conveyor performance and enable additional queuing capacity, supporting increased system efficiency and baggage flow.

Justification/Urgency:

The upgrades and improvements to the CLE inline baggage is necessary to meet anticipated demand over the next 5 to 7 years. To accommodate this demand, CLE needs updated equipment, and infrastructure, that will provide the additional efficiency and reliability. CTEC is a consortium of airlines to manage and maintain the current BHS. Managing and maintaining this system, while working closely with the airlines, has given CTEC exclusive knowledge of the system, and what future enhancements would be beneficial to the airlines and the airport. CTEC has developed, and maintained an excellent working relationship with the airlines, together they have identified each airline needs for the future system.

Anticipated cost:

The estimated cost for these services is $6,500,000.

The funding source for this legislation is fund 60 subfund 170.

Schedule or Term of Contract:

Request is for the design-build contract to begin upon date of execution and, unless extended by the City or unless sooner canceled or terminated pursuant to the provisions thereof, shall terminate upon the Department Director's acceptance of completion of all required services

Employee Demographics:

Total number of employees - 5
Number of employees that are minorities - 1
Number that are women - 2
Number that are City of Cleveland residents - 1