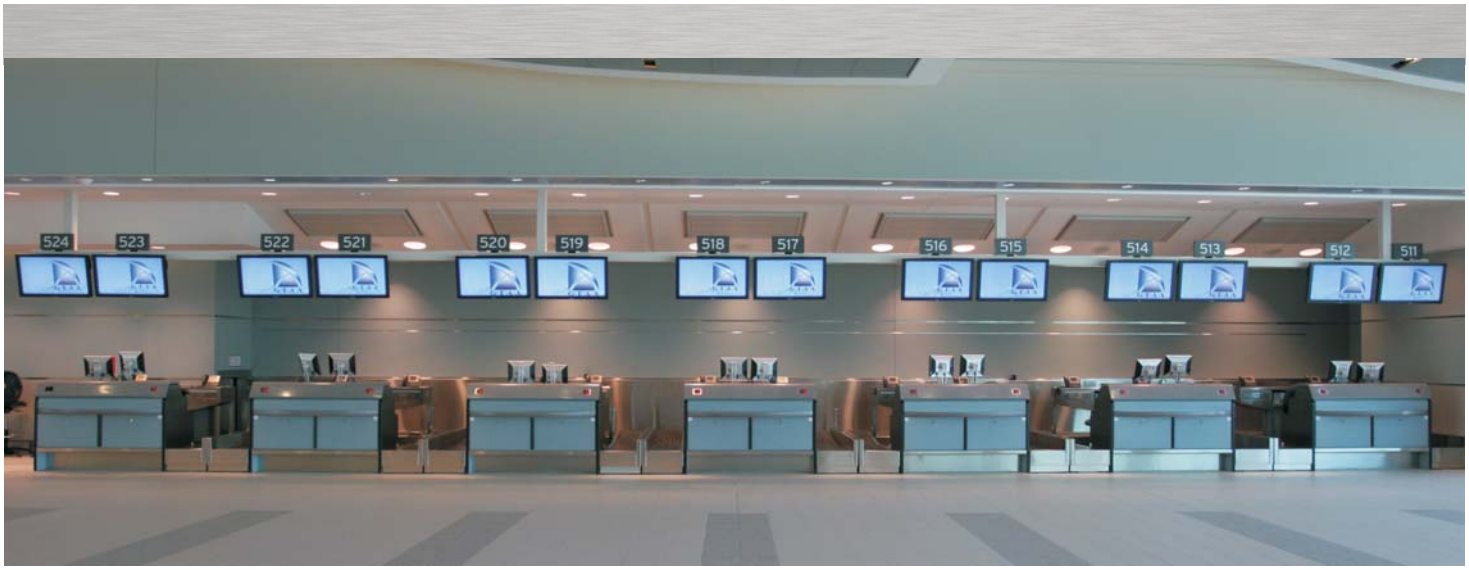

Lester B. Pearson International Airport

Toronto, Canada

Baggage Handling System 2001 – 2007

Pax Capacity	**30 million per annum**
System Throughput	**60 bags / minute**
Transport Conveyors	**6000 meters approx**
Baggage Make Up	**Pallet Loop Flat Carousels fed by Automatic Sortation Loop**
Baggage Reclaim	**Inclined Dispenser Carousels with remote feed conveyors**
Hold Baggage Screening	**3 CT machines for Level 3 screening**
Controls	**GlideControl (PLC), GlideView (SCADA) & GlideSort (SAC)**

Glidepath was awarded the design-build contract for the new baggage handling system at Toronto Airport's Terminal 3 in September 2001.

Glidepath worked closely with the Greater Toronto Airports Authority, Airport Group Canada (Terminal Operators), Scott Associates (Architect), Ellis Don, Aecon and Torbear (General Contractors) to develop the system layout from the reference design. Key issues addressed during this design process were maximizing the operability, throughput and redundancy of the system and ensuring the equipment could be installed within the constraints of an existing building.

Installation started in December 2001 and is split over nine phases with expected completion in April 2007.

In addition to the new equipment, the scope of this project included:

- Redirecting check-in lines from one sort pier to another
- Interfacing to existing Square D PLC control systems
- Replacing the control system including PLC, field devices and motor control equipment for some of the existing conveyors
- Installation of temporary equipment to maintain baggage operations during construction, including temporary ATR (tag reader) and Manual Encode
- Commissioning new equipment in an operating bag hall

All of this work had to be completed without impacting the daily operation of the airport. Much of the work involved careful phasing, planning and numerous overnight cutovers to ensure the installation did not impact the airport operations.

The Toronto system incorporates GlideSort, the baggage sortation and allocation component of Glidepath's suite of system-compatible baggage management software. The system also includes GlideView, Glidepath's Maintenance Diagnostic System and GlideControl - PLC conveyor control and tracking software. GlideView software provides up to the minute equipment status in colour and text format.

To meet the airport's security requirements, level one x-ray and level-three EDS machines are integrated into the conveyor security screening system for 100% hold baggage screening.

GlideSort software provides automated sortation of cleared bags, as well as fully integrated passenger data collection including bag-security clearance data. GlideView software provides detailed equipment status of the X-ray and EDS machines.

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