

# CASE STUDY

## MICROTUNNELING | SLURRY MICROTUNNELING



-  **Project Name:**  
Twinning of the Etobicoke Creek Trunk Sanitary Sewer
-  **Prime/Sub Contractors:**  
CRS Tunnelling Inc.- Dibco Underground, JV
-  **Location:**  
Mississauga, ON
-  **Owner:**  
Region of Peel

-  **Ground Conditions:**  
Varying - granular till, riverbed deposits, shale bedrock
-  **Akkerman Equipment:**  
SL86P MTBM, AZ100 TGS
-  **Pipe:**  
1,800-mm
-  **Total Length/Longest:**  
576 m

### PROJECT OVERVIEW

The Twinning of the Etobicoke Creek Sanitary Sewer involved the microtunneling construction of approximately 576 m of 1,800 mm internal diameter trunk sanitary sewer underneath runways and taxiways at the Lester B. Pearson International Airport (LBPIA).

The new sewer, runs parallel with the existing sewer to increase capacity and allow for redundancy, diversion and inspection.

### THE CHALLENGES

- LBPIA is Busiest Airport in Canada
- Tunnel construction could not interrupt airport operations
- Ground conditions included granular till, riverbed deposits and shale
- Tunnel construction alongside Spring Creek
- Specified contingency measure to include hyperbaric equipment package for tooling changes from MTBM interior
- Crane height limitations, equipment setbacks
- Complex permitting, approval, safety, security and contingency processes for construction on airport property
- High traffic near shaft locations

### THE SOLUTION

Use of Akkerman SL86P microtunneling system with face access  
 AZ100 Total Guidance System provided navigation control for the long-distance alignment accuracy  
 Surface and subsurface monitoring for settlement  
 Continuous 24/7 operations

### OUTCOME

- Successful installation in 37 mining days.
- No settlement along alignment or disruption to GTAA operations.
- Sewer provides added capacity to run twin tunnels in tandem or divert sewer flows for inspection.
- Alignment was on line and grade with low overall jacking tonnage.



source: Trenchless Technology



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