

# Subway Toronto Subway

Toronto, Canada (2003-2008)

## State Assessment

### Object

Toronto Subway  
Length approx. 100 km

### Project Description

Clearance survey relative to the current track axis.  
Analysis with kinematic clearance profile.  
Period: 2003-2008

### Equipment

Track measurement system: GRP5000 with  
HDS4500 laser scanner

### Measurement

The measurement was conducted overnight during the breaks in operation (2 and 5h breaks). The portable system allowed quick tunnel access through passenger entries, and the measurement could be started immediately after the last train.  
Performance: approx. 1.5-2 km/h

### Processing

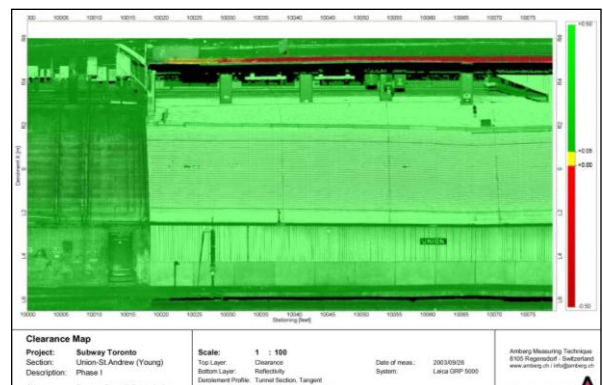
- Layered digital clearance map
- List of encroachments in Excel



Measurement with GRP5000 in TBM section



Greyscale picture from scan data



Clearance analysis

### Client

Toronto Transit Commission (TTC)  
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