# **Utility Daylighting Projects**



### **Services Used:**

Hydro Vac, wet and dry, soft surface or asphalt/concrete cutting/coring

### **Our Engineers:**

The locations are surveyed using Real Time Kinematic (RTK) Systems (GPS) for the Northing, Easting and Ground Elevation.

Photos of each Test Pit provided in Report, note of each Test Pit where groundwater is encountered, a plot of the location of each Test Pit on a baseline drawing. Completed Projects with the Ministry of Transportation

#### Greater Toronto Area:

- 121 TP:401 Warden to Neilson
- 45 TP: Hwy 401 at Mc Cowan
- 30 TP: Hwy 404 and Sheppard
- 3 TP :Hwy 401 at Brimley
- 4 TP: Hwy 400 and Jane St
- 11 TP: QEW at Evans Court
- 9 TP : Hwy 401 at Leslie Ave
- 5 TP: Hwy 401 at Bennet Rd
- 6 TP: Hwy 427 at Bloor St
- 4 TP: Hwy 400 and Jane St

#### Niagara Region:

- 39 TP: Hwy 140 and Netherby Rd
- 11 TP: QEW Garden City Skyway

### **Durham Region:**

• 4 TP: Hwy 401 at Albert St

### Kawartha Region:

• 8 TP: Hwy 7 at Scugog Line 6

#### Peel Region:

- 2 TP: Hwy 427 and Dixon Road
- 6 TP: Upper Middle Road

### Central Ontario:

- 13 TP: Hwy 9 at Holland Canal Bridge
- 62 TP: Hwy 400 and Anne St

### <u>York Region:</u>

- 4 TP : Hwy 404 and Mj Mackenzie
- 16 TP: Hwy 404 HOV Lanes
- 14 TP: Hwy 404 at 16th Ave
- 40 TP: Hwy 48 and Bloomington
- 8 TP: Hwy 48 at Stouffville Rd

# Subsurface Settlement Monitoring Projects



Tolossi has completed 24 MTO Settlement Monitoring Projects to date. With construction activities under the highway, Tolossi is currently working with the MTO on another 8 subsurface ground movement monitoring projects.

### Completed Projects with the Ministry of Transportation

#### Greater Toronto Area:

- Hwy 401 at Neilson Ave
- Hwy 404 at Sheppard Ave
- Hwy 401 at Midland- Bridge
- Hwy 401 at Markham Rd
- Hwy 401 at Brimley Ave
- Hwy 401 at McCowan Rd
- Hwy 401 at Bennet Rd
- Hwy 401 at Kincort Rd
- Ray at Bartonville Ave
- Kingston Rd
- Hwy 427 at Rathburn Rd
- Hwy 427 at Bloor St
- Hwy 427 at Queensway
- Hwy 27 and Martin Grove
- Humberline Dr at 310 Transfer
- QEW at Evans Court

#### Peel Region:

- Hwy 427 at Burhamthorpe Rd
- Hwy 401 at Renforth Dr

### York Region:

- Hwy 404 at 16<sup>th</sup> Ave
- Hwy 400 and Mj. Mackenzie Dr

# **Geotechnical Investigation Projects**

## Completed Projects with the Ministry of Transportation



The purpose of Geotechnical Investigations is to determine the subsurface soil and groundwater conditions at the proposed pit locations and, based on this information, a geotechnical report addressing all relevant geotechnical aspects for the proposed installation is provided.

- Geotechnical Fieldwork
- Borehole Investigation
- Laboratory Testing Program
- Geotechnical Engineering Report

- Finch Ave West LRT
- Port Union Car Pool Lot
- Hwy 427 at Bloor St
- Hwy 427 and Queensway
- Hwy 404 at Sheppard Ave
- Hwy 401 at Brimley Ave
- Castlefield at Kincort Rd
- Hwy 404 and Overlea Blvd
- Hwy 401 and Albert St
- Given St and Bridge St
- Mill St and Yonge St
- Dundas and Rocesvalle Ave
- Hwy 400 and Major Mackenzie Ave
- Hwy 7 and Winston Churchill
- Islington at Resources Rd
- Kipling Ave
- Metrolinx at 7<sup>th</sup> Line
- Dundas and Bond St

# **Surveying Projects**

## Completed Projects with the Ministry of Transportation



- Hwy 401 at Neilson Rd
- Hwy 401 at Renforth Dr
- Hwy 404 at Sheppard Ave
- Islington at Resources Rd
- QEW and Evans Ave
- Hwy 401 and Leslie St
- Markham Rd North of Dunelm St
- 1365 River St
- QEW Garden City Skyway

- Mobilizing a survey crew complete with RTK-RTN GPS and Total Station to site
- Drafting services to prepare a .dwg file with layers to identify different topographic features on-site
- Review by an Ontario Land Surveyor

## Tree Projects Protection, Removal and Planting



Completed Projects with the Ministry of Transportation

- Hwy 427 at Rathburn
- Hwy 427 at Bloor St
- Hwy 427 at Burnhamthorpe Dr
- Hwy 401 at Neilson Rd
- Hwy 401 and Renforth Rd
- Hwy 404 at Sheppard Ave
- Hwy 401 and Albert St
- Hwy 140 and Netherby Rd

Preparation of Tree Cut, Clearing, Protection, Removal Plan for trees impacted by MTO Properties. General Requirements will include site cleanup (removal of excavated materials/ compound clean up). Heavy machinery, dump truck and truck with chipper, Mobilization, Traffic plan setup and take-down. Documentation, Monitoring and site management

# **Environmental Projects**

# Completed projects with the Ministry of Transportation



- Hwy 427 and Queensway East
- Hwy 427 and Queensway West
- 75 Basin St
- 190 Brimley Rd Water

- Soil and or groundwater sample collection and testing
- Soil truckload monitoring and tracking
- Factual letter reports documenting soil and or groundwater testing
- Factual letter reports documenting soil disposal off-site

# Locates and CCTV Scan Projects

Completed Projects with the Ministry of Transportation



- Hwy 427 at Bloor St: CCTV Scan
- Hwy 401 at Downsview: Locates
- QEW at Evans Court: CCTV Scan

- Private locator service
- On-site supervision
- Emergency Ontario One Call Service Locates Acquisition
- Underground Utility GPS Coordinate Survey
- CAD Deliverables
- Storm Sewer Video and Picture Inspection Reports

The Guard Rail Installation with the Ministry of Transportation





### **QEW and Evans Court**

- Mobilize site for Guard Rail Installation
- Auger Footings for the Guard Rail Post
- Dispose of off-site excavated material
- Installation of Guard Rail Footings
- Install the Guard Rail with all connections
- Duration of work completed: One Day

## **Construction Projects**

### Completed Projects with the Ministry of Transportation



- Hwy 401 at Leslie Ave
- Hwy 140 at Netherby Road

- Mobilize site for temporary access road build
- Pave asphalt ramp along curbside for machine and vehicle access
- Scrape and excavate in depth topsoil throughout the approved location of roadway
- Preparation and compaction of topsoil surface throughout approved location of roadway
- Build access pad for truck and entry and exit off street. Pad to subsequently use as staging area
- Build roadway up to maneuvering pad
- Excavate and cut the existing access slope to accommodate re-grading of slope
- Continue roadway to specified endpoint
- Disburse and blend all removed native soils and material within the limits of work area
- Backfill and compact up to aggregate material in layers for completion of access road
- Demobilization of equipment and set up

# **Engineering Reports**

### Completed Project with the Ministry of Transportation



### **QEW and Evans Court:**

Report on Integrity of Retaining Wall

### Hwy 404 and Sheppard

MTO High Complexity Project Sign off on Bridge Footing Analysis

Review the Geotechnical Setting, existing and proposed construction and based on an assessment of the data, comment on the possibility of the proposed installations adversely impacting the adjacent Highway retaining walls. The report represents overview of the site conditions including soil rock and groundwater conditions, design and construction considerations, with comments on any required mitigation and associated controls an comments on any potential impacts on the MOT structures.