

Chance® Helical Anchors for Sheet Pile Shoring – London, ON

October 2007

The Problem:

- Sheet pile wall was needed to retain steep slope during excavation for a proposed sanitary sewer manhole installation
- Site proved to have limited access for equipment
- Soil material was a cemented clay with blow counts ranging from 50 to 100
- Use of micropiles or grouted tendons was not practical as there was no time to wait for grout to cure
- Client wanted to limit impact of construction as the area was next to a waterway



Proof loading of anchors to 133% design and locked off at 100% design load



The Solution:

- Tension tests confirmed the **Chance® Helical Anchors** could be installed in the cemented clay and handle the high lateral loads from the sheet pile wall
- **Chance® Helical Anchors** were chosen since they could be loaded immediately after installation
- The anchors terminated with Dywidag thread and nut to support the walers
- **Chance® Helical Anchors** were more cost effective than any other solution

Completing fourth of five rows of anchors



Installation of manhole within retained area

Product Used: (32) Chance® Helical Anchors

Length: 3.0 to 11.6 m (10 to 38 ft) into battered at 19 degrees from the horizontal into the slope

Loads: 330 KN (75 kips) allowable load in tension

Finishing: All anchors were proof loaded to 133% of design load for one hour and locked off at 100% of design load



Completed backfilled area after construction

Structural Engineer: J.H. Vincent Services
Geotechnical Engineer: Trow Associates Inc.
Chance® Helical Anchor Installer: EBS Engineering and Construction Limited