# **APPENDIX 'A'**

## **GEOTECHNICAL REPORT**



The National Testing Laboratories Limited conducted a geotechnical investigation near the intersection of Marion Avenue and Archibald Street in Winnipeg. The purpose of the investigation was to determine the soil conditions for a proposed watermain alignment. Two testholes were drilled to a depth of 7.6 m south of Marion Avenue along the east side of Archibald Street. Testhole 1 was drilled on the north side of the existing box culvert and Testhole 2 was drilled on the south side of the box culvert on Archibald Street. The testhole location plan and testhole logs are attached.

The soil conditions in Testhole 1 consisted of 3 m of clay fill with trace silt, sand, and fine gravel, followed by brown, firm, high plasticity clay to 7.6 m. No groundwater seepage or soil sloughing were observed during or upon completion of drilling the testhole. The testhole was located approximately 2 m from a buried hydro line.

The soil conditions in Testhole 2 consisted of 1.4 m of clay fill with trace silt and fine gravel, 0.6 m of a firm clayey silt, followed by brown, firm, high plasticity clay to 7.6 m. No groundwater seepage or soil sloughing were observed during or upon completion of drilling the testhole. Some sloughing may occur with the silt layer during excavation.

We appreciate the opportunity to assist you in this project. Please call me if you have any questions regarding this report.

Don Flatt, M.Eng., P.Eng. Senior Geotechnical Engineer



### **TESTHOLE TH1**

Project Name: Marion & Archibald St. Watermain Alignment Client: Earth Tech (Canada) Inc. Drilling Contractor: Maple Leaf Drilling Ltd. Drilling Method: 125 mm Flight Auger Date Drilled: June 12, 2008 Depth of Testhole: 7.6 m Logged by: Aron Piamsalee Reviewed by: Don Flatt

#### Subsurface Profile Laboratory Testing **Torvane Readings** Water Content Depth Symbol Description (kPa) (%) (m) 0 20 40 60 80 100 0 20 40 60 80 100 Ground Surface 0-Topsoil Clay Fill - grey/brown, stiff/firm, moist, high 31 plasticity, with trace silt, sand, and fine gravel inclusions 1 2 63 30 3 Clay - brown, firm, moist, high plasticity with black organics, silt, and sand on the 28 surface - stiff/firm below 4.6 m 5 31 6 53 • No water seepage or soil sloughing 8 observed during or upon completion of drilling Testhole was terminated at 7.6 m



#### **TESTHOLE TH2**

Project Name: Marion & Archibald St. Watermain Alignment Client: Earth Tech (Canada) Inc. Drilling Contractor: Maple Leaf Drilling Ltd. Drilling Method: 125 mm Flight Auger Date Drilled: June 12, 2008 Depth of Testhole: 7.6 m Logged by: Aron Piamsalee Reviewed by: Don Flatt



