APPENDIX 'A'

GEOTECHNICAL REPORT

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APPENDIX 'A' - GEOTECHNICAL REPORT

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The geotechnical report is provided to aid in the Contractor's evaluation of the existing pavement structure and/or soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in pavement structure and/or soil conditions may exist between test holes and fluctuations in groundwater levels can be expected seasonally and may occur as a result of construction activities. The nature and extent of variations may not become evident until construction commences.

The City of Winnipeg Bid Opportunity No. 332-2014 WWARP 3 – Contract 4 Template Version: C420130321 - RW

Geotechnical Report for Waverley West Arterial Roads Project Part 3 – Contract 4

Test Hole Locations



Summary of Core Samples



KENASTON BLVD SOUTH EXTENSION GEOTECHNICAL INVESTIGATION

| | Sample Depth (m) | Soil Type | Sample Description | Moisture Content (%) | Particle Size Analysis | | | | Atterberg Limits | | |
|------|---------------------|-----------|--|-------------------------|--------------------------------|----------------------------------|-----------------------------------|-----------------------|------------------|------------------|---------------------|
| | | | | | Gravel (%) 75 to 4.75 mm | Sand (%) <4.75 to 0.075 mm | Silt (%) <0.075 to 0.005 mm | Clay (%) ⊲0.005 mm | Liquid Limit | Plastic Limit | Plasticity Index |
| TH13 | 0.6 | Silt | tan, compact, moist, low plasticity, some clay | 22 | 0 | 0.8 | 60.4 | 38.8 | 37 | 16 | 21 |
| TH21 | 0.9 | Clay | grey, stiff, moist, high plasticity | 29 | 0 | 0.4 | 14.1 | 85.5 | 94 | 32 | 62 |
| TH27 | 0.6 | Silt | tan, compact, moist, low plasticity | 17 | 0 | 9.7 | 66.6 | 23.7 | 25 | 16 | 9 |
| TH33 | 0.9 | Clay | grey, stiff, moist, high plasticity | 24 | 0 | 1.5 | 17.5 | 81.0 | 83 | 28 | 55 |
| TH39 | 0.6 | Clay | grey, stiff, moist, high plasticity | 28 | 0 | 1.6 | 20.2 | 78.2 | 87 | 24 | <mark>63</mark> |

Test Hole Log for 30

| Pro Clie Dri Dri | oject Loo ent: Sta lling Co lling Me | TESTHOLE TH30 Date Drilled: C me: Kenaston Blvd South Extension Date Drilled: C cation: Winnipeg, Manitoba Depth of Testh ntec Logged by: Tr ntractor: Active Drilling and Pilling Reviewed by: thod: 125 mm Solid Stem Auger dinates: 14U 630699 m E, 5514855 m N | nole: evor | 3,0 m Schellenberg |
|---------------------------|---|--|---------------|---|
| Depth (m) | Symbol | Description | Sample Type | |
| | 1951163 | Торѕої | + | 25 50 75 100 |
| - | | Clay - grey, stiff, moist, high plasticity - trace organic material to 0,3 m | BS | •22 |
| - | | | BS | |
| - 1,0 - | | Silt - tan, firm, moist, low plasticity | BS | |
| - | | Clay - grey, stiff, moist, high plasticity | BS | •38 |
| - 2.0 - | | | BS | • |
| - | | | BS | •36 |
| | | | BS | •36 |
| 3.0 | | | BS BS | |
| | | No groundwater seepage or soil sloughing was observed during or upon complet Testhole terminated at a depth of 3.0 m. | ion d | of drilling, |
| Dama d | of 1 | | | |

Test Hole Log for 31

| Project Lo Client: Sta Drilling Co Drilling M | TESTHOLE TH31 Date Drilled: ume: Kenaston Blvd South Extension Date Drilled: ucation: Winnipeg, Manitoba Depth of Test untec Logged by: T ontractor: Active Drilling and Piling Reviewed by ethod: 125 mm Solid Stem Auger dinates: 14U 630780 m E, 5514726 m N | thole: revor | 3.0 m Schellenberg |
|--|---|-----------------|-----------------------|
| Depth (m) Symbol | Description | Sample Type | |
| 911/01/ | Topsoi | _ | 25 50 75 100 |
| | Clay - black, stiff, moist, high plasticity - trace organic material to 0,3 m - grey below 0.6 m | BS | •33 |
| | | BS | |
| 1.0 | Silt - tan, firm, moist, low plasticity | BS | |
| | | BS | •10 |
| 2.0 - | | BS | |
| | Clay | BS | |
| | - grey, stiff, moist, high plasticity | BS | •34 |
| 3.0 | | BS | ●‡ 5 |
| | No groundwater seepage or soil sloughing was observed during or upon comple Testhole terminated at a depth of 3.0 m. | ation o | of drilling, |

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Test Hole Log for 32

| | TESTHOLE TH32 | | | | | | |
|--|--|---|-------------|--|--|--|--|
| Pro Pro Clia Dri Dri UT | eer 12, 2012 3.0 m Schellenberg Piamsalee | | | | | | |
| Depth (m) | Symbol | Description | Sample Type | • Water Content (%) 25 50 75 100 | | | |
| | | Topsoil Clay - black, stiff, moist, high plasticity - trace organic material to 0,3 m - grey below 0.3 m - some silt to 2,4 m | BS | •25 | | | |
| - 1.0 - | | | BS BS | •22 | | | |
| | | | BS | •20 | | | |
| - 2.0 - | | | BS | ¢25 | | | |
| | | | BS BS | 927 928 | | | |
| - 3.0 - | | • No groundurator coopers or call alcunking use choosed during or user service | BS BS | •34 •50 | | | |
| Page | 1 of 1 | No groundwater seepage or soil sloughing was observed during or upon completi Testhole terminated at a depth of 3.0 m. | on o | r anning, | | | |