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APPENDIX 'A' GEOTECHNICAL REPORT

Template Version: C420130321 - RW

APPENDIX 'A' - GEOTECHNICAL REPORT

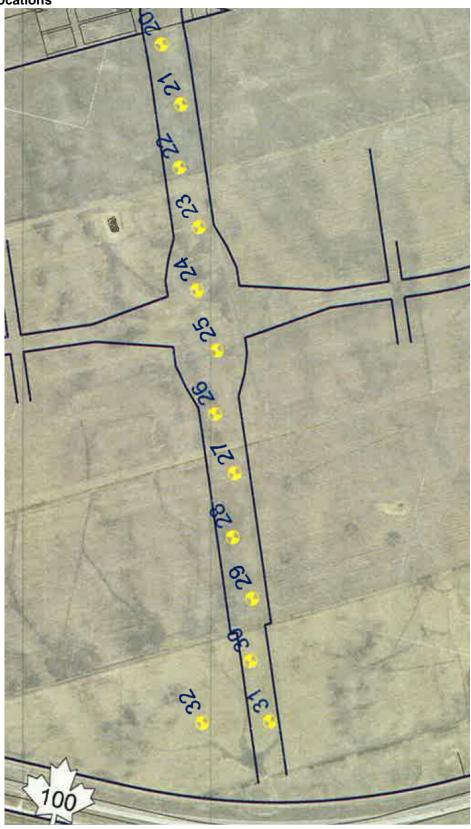
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The geotechnical report is provided to aid in the Contractor's evaluation of soil conditions. The information presented is considered accurate at the locations shown on the Drawings and at the time of drilling. However, variations in soil conditions 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.

Geotechnical Report for Waverley West Arterial Roads Project – Part III

Test Hole Locations



Summary of Core Samples

KENASTON BLVD SOUTH EXTENSION GEOTECHNICAL INVESTIGATION

					P	Particle Size Analysis	Analysis		Att	Atterberg Limits	nits
Testhole no.	Testhole Sample Soil Type no. Depth (m)	Soil Type	Sample Description	Moisture Content (%)	Gravel (%) Sand (%) Silt (%) 75 to <4.75 tw 0.075 twn 0.005 mm	Sand (%) <4.75 to 0.075 mm	Silt (%) <0.075 to 0.005 mm	Clay (%) <0.005 mm	Liquid Limit	Plastic Limit	Plastic Plasticity Limit Index
TH13	9.0	Silt	tan, compact, moist, low plasticity, some clay	22	0	8:0	60.4	38.8	37	16	21
TH21	6.0	Clay	Clay grey, stiff, moist, high plasticity	29	0	6.0	14.1	85.5	94	32	62
TH27	9.0	Silt	tan, compact, moist, low plasticity	17	0	2.6	9.99	23.7	25	16	6
TH33	6.0	Clay	grey, stiff, moist, high plasticity	24	0	1.5	17.5	81.0	83	28	22
TH39	9.0	Clay	grey, stiff, moist, high plasticity	28	0	1.6	20.2	78.2	87	24	63

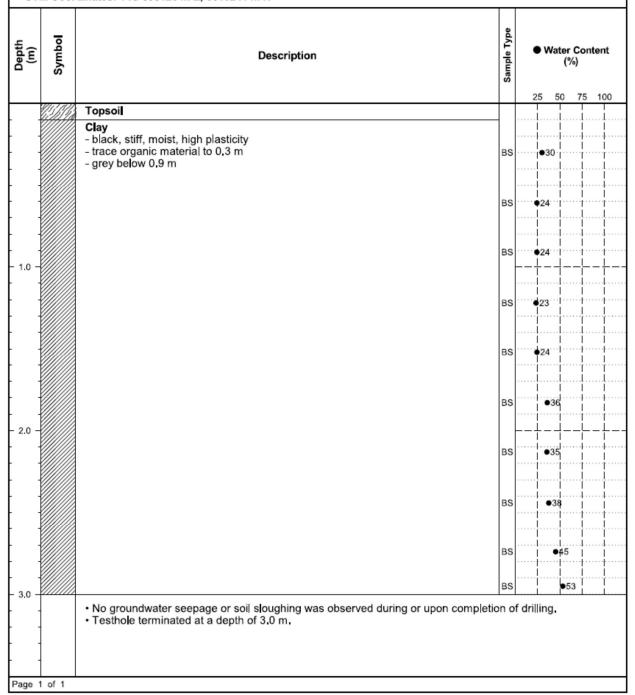
TESTHOLE TH20

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630128 m E, 5516241 m N





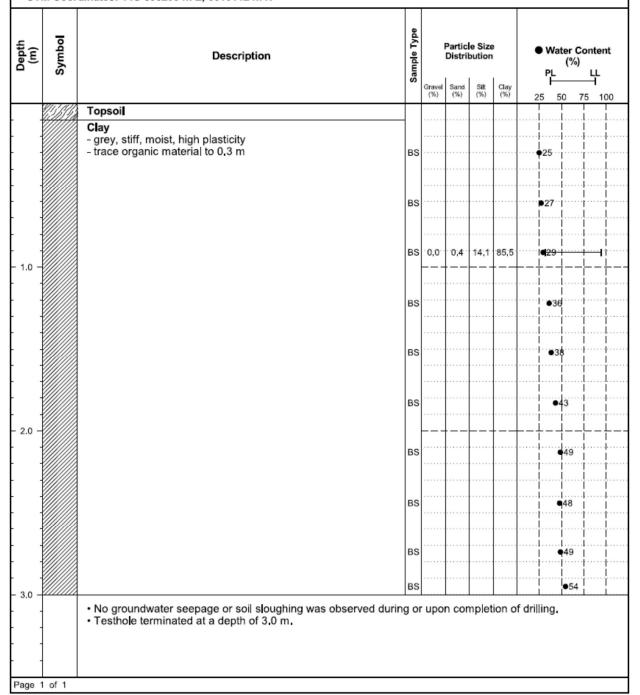
TESTHOLE TH21

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630209 m E, 5516112 m N





TESTHOLE TH22

Project Name: Kenaston Blvd South Extension

Project Location: Winnipeg, Manitoba

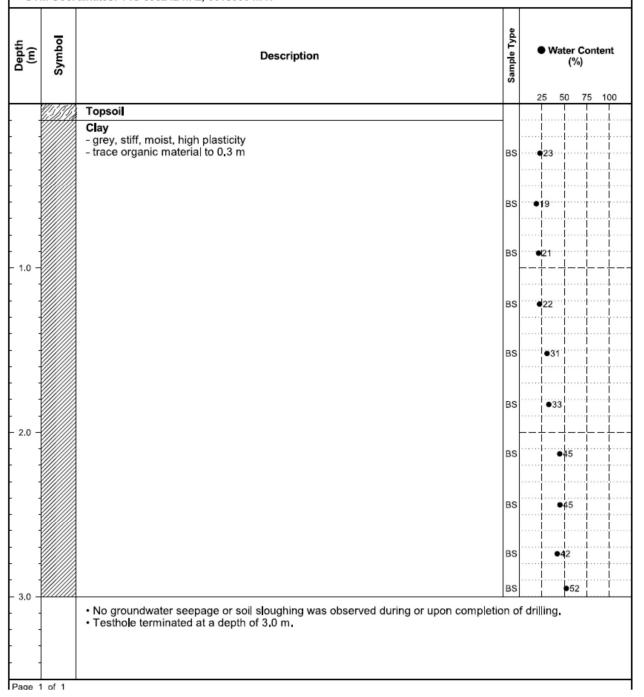
Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630242 m E, 5515963 m N



Date Drilled: October 12, 2012 Depth of Testhole: 3.0 m Logged by: Trevor Schellenberg

Reviewed by: Aron Piamsalee



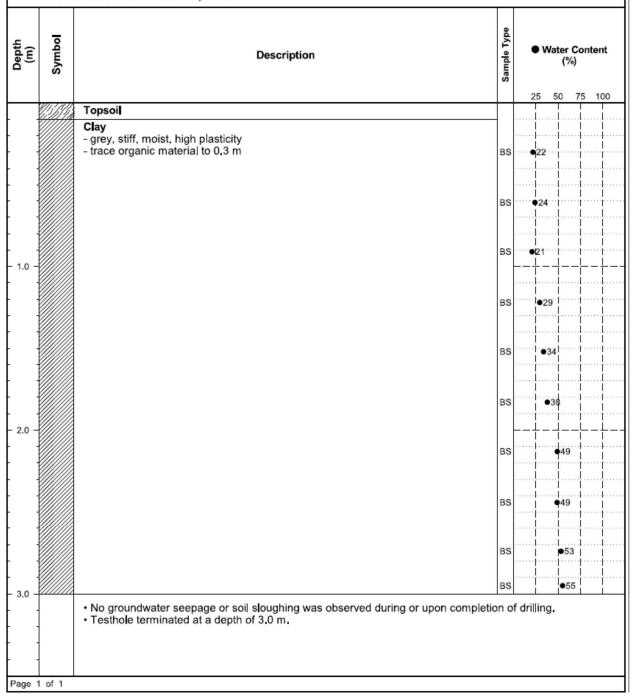
TESTHOLE TH23

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec
Drilling Contractor: Active Drilling and Piling
Drilling Method: 125 mm Solid Stem Auger

Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630323 m E, 5515835 m N





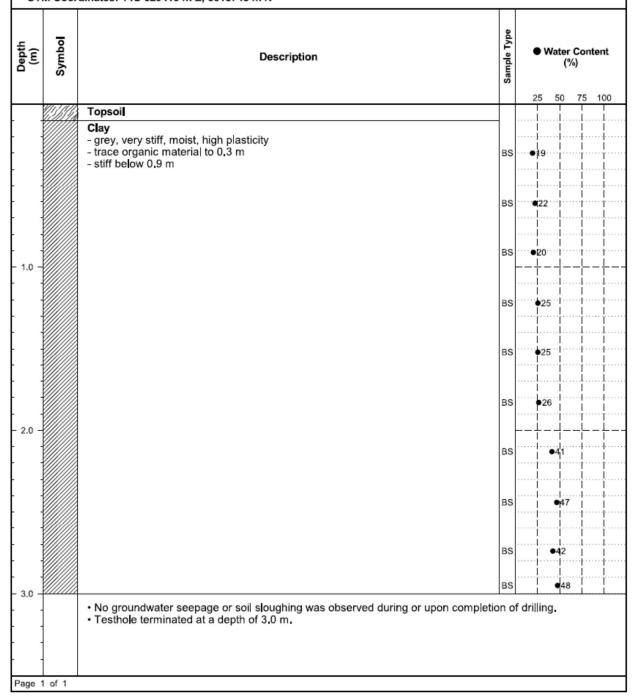
TESTHOLE TH24

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 629413 m E, 5515745 m N





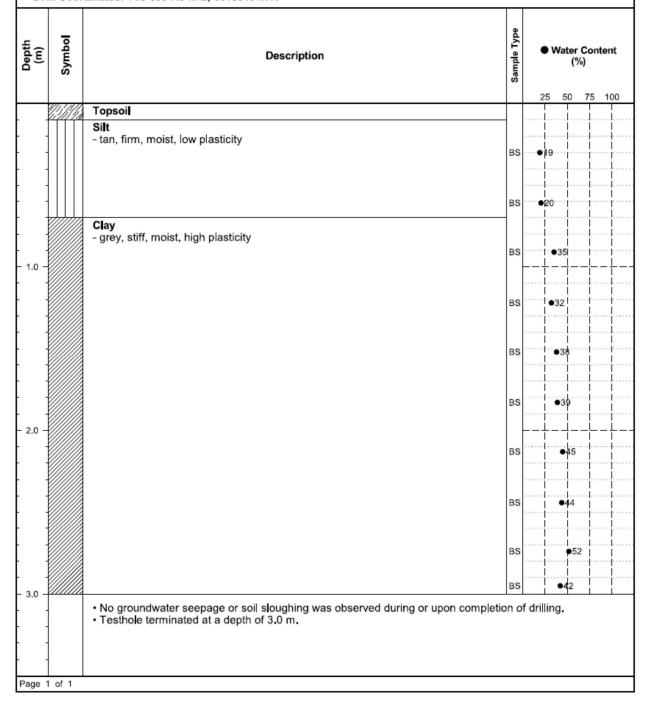
TESTHOLE TH25

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630443 m E, 5515519 m N





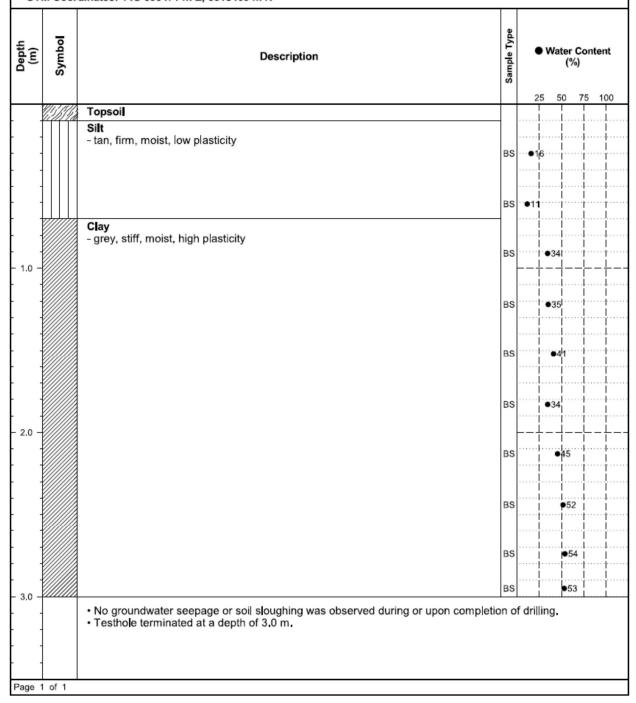
TESTHOLE TH26

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630471 m E, 5515409 m N





TESTHOLE TH27

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630552 m E, 5515281 m N



Depth (m)	Symbol	Description	Sample Type	Particle Size Distribution				• Water Content (%)				
	0,		Sa	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	2	PL 5 50	75	L 1 100	
	13516	Topsoil										
-		Clay - grey, stiff, moist, high plasticity	BS						24	 		
-		Silt - tan, firm, moist, low plasticity										
			BS	0.0	9.7	66.6	23.7	▶1	7			
-		Clay - grey, stiff, moist, high plasticity - some silt from 1.5 m to 1.8 m										
		- some silt from 1.5 m to 1.8 m	BS						-24:1:			
1.0 -			ВЗ				ļ	<u> </u>	●311		- 	
-												
-			BS						•43	ri	·j	
]										[
-			BS						●30			
-										····		
-											 	
-			BS						•45	i	j	
2.0 –								 		<u> </u> -	-+	
			BS						•	53	 	
-												
-			BS						•4 ₁ 1			
-												
-												
-			BS							55		
-			BS							52		
3.0 -		 No groundwater seepage or soil sloughing was observed during. Testhole terminated at a depth of 3.0 m. 	g or	upo	n cor	mplet	tion o	of drill	ing.			

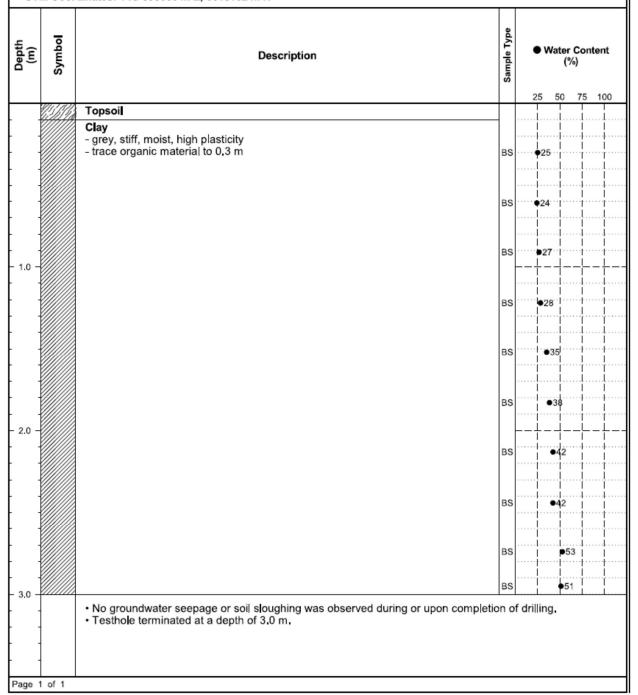
TESTHOLE TH28

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630585 m E, 5515132 m N





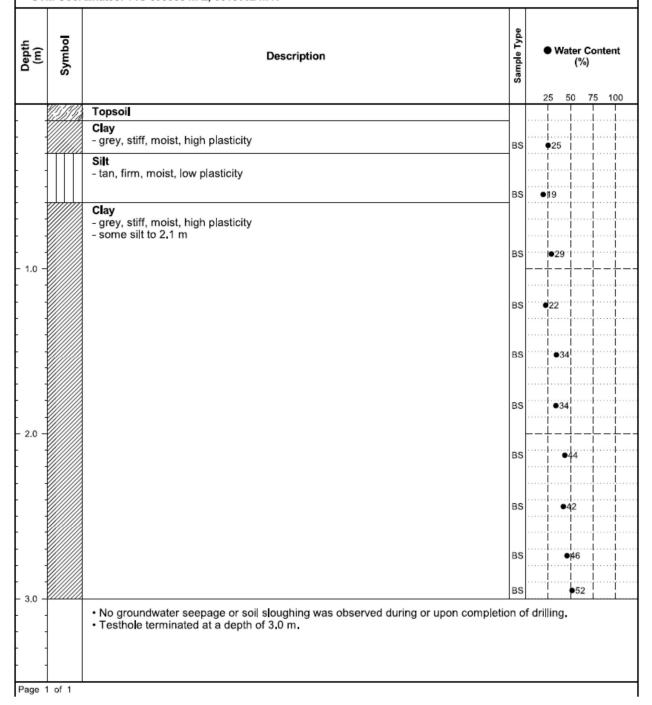
TESTHOLE TH29

THE
NATIONAL
TESTING
LABORATORIES
LIMITED
Entolling in 1923

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630666 m E, 5515002 m N



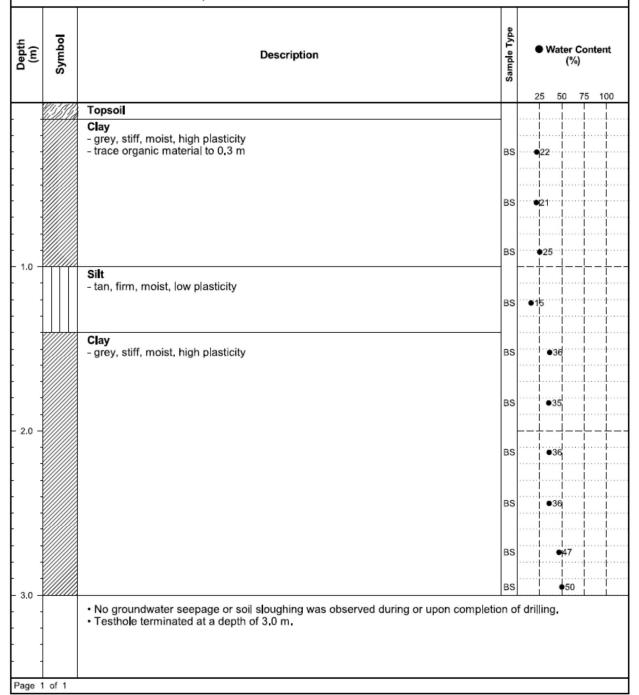
TESTHOLE TH30

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630699 m E, 5514855 m N





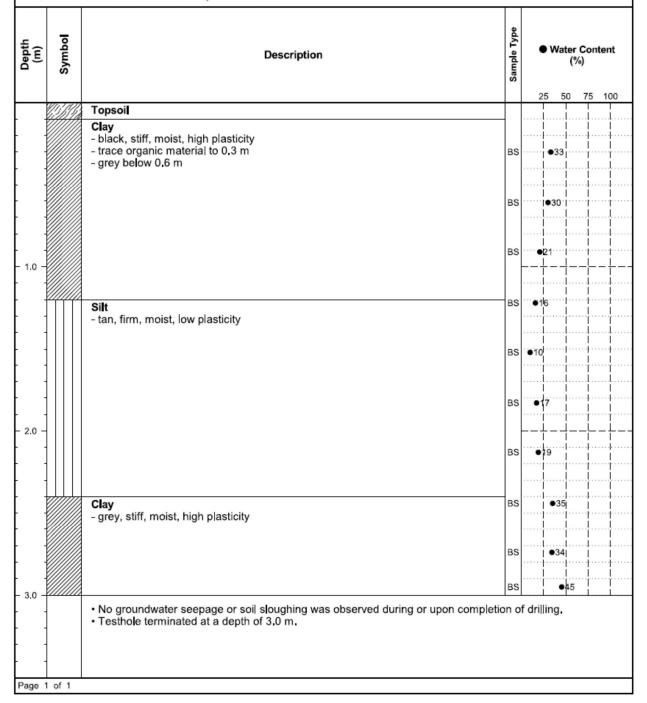
TESTHOLE TH31

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630780 m E, 5514726 m N





TESTHOLE TH32

Project Name: Kenaston Blvd South Extension Project Location: Winnipeg, Manitoba

Client: Stantec

Drilling Contractor: Active Drilling and Piling Drilling Method: 125 mm Solid Stem Auger UTM Coordinates: 14U 630622 m E, 5514682 m N



