March 19, 2025 File: PG4216-LET.02



#### **Consulting Engineers**

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Geotechnical Engineering Environmental Engineering Hydrogeology Materials Testing Building Science Rural Development Design Temporary Shoring Design Retaining Wall Design Noise and Vibration Studies

patersongroup.ca

#### Tamarack (Richmond) Corporation 3187 Albion Road South Ottawa, Ontario K1V 8Y3

Attention: Mike Green

#### Subject: Sump Pump Feasibility Report Proposed Residential Development 5970 and 6038 Ottawa Street - Ottawa

Further to your request, Paterson Group (Paterson) completed a sump pump feasibility study as per City guidelines to determine the use of sump pumps for the proposed residential development to be located at 5970 and 6038 Ottawa Street in the City of Ottawa.

This report provides a discussion on the criteria to design the underside of footing elevations with respect to the existing groundwater table. The current report should be read in conjunction with Paterson Report PG4216-1 Revision 4 dated March 14, 2025.

## **1.0 Background Information**

The field investigation programs completed at the subject site were carried out by Paterson between December 2018 and March 2025. The investigations consisted of 47 boreholes and 25 test pits extending to a maximum depth of 9.8 m and 3.8 m below ground surface (bgs), respectively. A bedrock delineation program was also carried out in December 2020, consisting of a total of 87 probe holes to the bedrock surface.

The test holes were distributed in a manner to provide general coverage of the subject site and has been presented in Drawing PG4216-2 - Test Hole Location Plan attached to this letter report.



#### **Field Survey**

The test hole locations were selected by Paterson to provide general coverage of the proposed development, taking into consideration the existing site features and underground utilities. The location and ground surface elevation at each borehole and test pit location were provided by Stantec Geomatics Ltd during the initial investigation, and by Paterson for the supplemental investigations.

The test hole locations and ground surface elevations at each test hole location are referenced to a geodetic datum. The location of the test holes and ground surface elevations at each test hole location are presented on Drawing PG4216-2 - Test Hole Location Plan in Appendix 2.

#### **Subsurface Profile**

Generally, the subsurface profile encountered within the subject site consists of topsoil underlain by a compact to dense glacial till deposit, and a firm to very stiff silty clay deposit followed by glacial till throughout the eastern portion of the subject site. The glacial till deposit is typically comprised of silty sand and/or silty clay with varying amounts of gravel, cobbles and boulders. The above noted layers have been underlain by a fair to excellent quality limestone bedrock.

Practical refusal to drill and excavation was encountered at multiple locations throughout the subject site. Bedrock surface elevations are presented in Drawing PG4216-4 - Bedrock Contour Plan attached to the current report.

Based on available geological mapping, the bedrock consists of dolostone of the Oxford formation with an overburden drift thickness ranging between 5 and 10 m.

For the purpose of this study, reference should be made to the area deemed acceptable for sump pumps presented on Drawing PG4216-5 – Designated Silty Clay Areas attached to the current report. Specific details of the soil profiles at the test hole locations relevant to the sump pump study area are presented on the Soil Profile and Test Data sheets also attached to the current report.



#### Monitoring Well Installation

PVC groundwater monitoring wells within the sump pump study area were installed in select borehole locations by Paterson to permit monitoring of the groundwater levels subsequent to the completion of the sampling programs. Monitoring well construction details are described below:

- Slotted PVC 1.5 m screen at the base of each borehole.
- □ 51 mm diameter PVC riser pipe from the top of the screen to the ground surface.
- □ No.3 silica sand backfill within annular space around screen.
- Bentonite hole plug placed directly above PVC slotted screen.
- Clean backfill from top of bentonite plug to the ground surface.

Specific details of the installation of each monitoring well are further included in the Soil Profile and Test Data sheets and attached to the current letter report.

# 2.0 Groundwater Monitoring Program

The monitoring wells within the sump pump study area were equipped with a Van Essen Instrument Mini-Diver Water Level Logger to monitor fluctuations in the groundwater levels during the spring melt as part of a review for the use of sump pumps within the study area of the proposed development. The Mini-Divers were programmed to continuously measure and record groundwater levels throughout the study area during the pre-construction stages of the development at a rate of 1 reading every 12 hours. The results of the groundwater fluctuations and correlated precipitation events for each monitoring well location between April 8, 2021, and April 21, 2023, have been summarized in Figure 1 through Figure 11 attached to the current report.

#### **Groundwater Monitoring Results**

The data presented in Figure 1 through Figure 11 illustrate the collected groundwater elevations. The readings measured within the monitoring wells varied from below the tip of the data logger (>3.6 m and below 90.3 m) to above the original ground surface (Approximately 94.45 m). The low and high groundwater elevation measurements at each well location between April 8, 2021, and April 21, 2023, are summarized in Table 1 below.

Table 1 – Rec	orded Groundwater	Elevations		
Test Hole ID	Ground Surface Elevation (2021) (m)	Low Groundwater Elevation (m)	High Groundwater Elevation (m)	Difference in Groundwater Depth (m)
BH 1D-21	94.24	91.00	94.25	3.25
BH 1S-21	94.24	92.10	94.00	1.90
BH 2-21	93.91	91.00	93.30	2.30
BH 3-21	93.91	91.55	93.65	2.10
BH 4D-21	94.51	91.70	94.45	2.75
BH 4S-21	94.51	92.65	94.40	1.75
BH 5-21	94.21	91.00	94.15	3.15
BH 6-21	94.04	90.60	93.95	3.35
BH 7D-21	93.62	91.80	94.05	2.25
BH 7S-21	93.62	91.75	94.00	2.25
BH 8-21	94.05	90.65	94.00	3.35
BH 9-21	94.21	91.55	94.00	2.45
BH 10D-21	94.08	91.35	93.70	2.35
BH 10S-21	94.08	92.10	93.55	1.45
BH 11-21	93.92	90.30	92.95	2.65

Based on our analysis of the data retrieved from the data loggers between April 8, 2021 and April 21, 2023 groundwater fluctuations can be observed with a difference in elevation between the low and high readings ranging from 90.3 to 94.45 m. The lowest water level readings were found to range between an elevation of 90.3 (or lower) and 92.7 m throughout the monitoring period. During the spring melt season and heavy rain events, the highest water level readings were found to range between found to range between an elevation of 92.95 m and 94.45 m, with an average fluctuation of approximately 2.5 m.

Upon analysing the data collected from the monitoring wells and the subsequent rain events, groundwater reading spikes occurred within short periods of time after each rain event followed by a rapid lowering of the groundwater readings over the following days. It should be noted that the fluctuating groundwater readings are expected to be the result of the accumulation of rainwater within the fissures of the desiccated clay layer (weathered crust), as well as surficial permeation through the sand layers, which provides the collected water access to the shallow monitoring well screens. This is an indication that the groundwater level readings have been influenced by temporarily 'perched' groundwater, which is typical of monitoring well data within low permeability clay deposits, where water from rain events or spring melt tend to be maintained within the upper portion of the subsoil profile until either sheet drainage or evapotranspiration can eliminate the collected water, as well as surficial rainwater infiltration through the sand layers.



# 3.0 Hydraulic Conductivity Testing

Based on discussions with David Schaeffer Engineering Ltd. (DSEL), it is understood the proposed underside of footing depths will be approximately 1.8 m below the proposed center line of the roadways. As such, the underside of footings were estimated to be located slightly below to slightly above existing ground surface. Therefore, monitoring wells could not be positioned to straddle both above and below the expected USF elevation to facilitate hydraulic testing. As such, Atterberg testing and hydrometers in accordance with Unified Soil Classification System (USCS) identified on-site materials as clay soils and is in agreement with the ISTB-2018-04. As such, the hydraulic conductivity values for the silty clay within the sump pump study area were conservatively estimated based on experience at similar sites and published values. Hydraulic conductivity for silty clay generally ranges from 1 x  $10^{-7}$  to 1 x  $10^{-12}$  m/sec and is dependent on the moisture level and consistency of the material.

Hydraulic conductivity (slug) testing was conducted on the glacial till underlying the silty clay deposit. The test data was analyzed as per the method set out by Hvorslev (1951). Assumptions inherent in the Hvorslev method include a homogeneous and isotropic aquifer of infinite extent with zero-storage assumption, and a screen length significantly greater than the monitoring well diameter. The assumption regarding aquifer storage is considered to be appropriate for groundwater flow through the overburden aquifer. The assumption regarding screen length and well diameter is considered to be met based on a screen length of 1.5 m and a diameter of 0.05 m. While the idealized assumptions regarding aquifer extent, homogeneity, and isotropy are not strictly met in this case (or in any real-world situation), it has been our experience that the Hvorslev method produces effective point estimates of hydraulic conductivity in conditions similar to those encountered at the subject site.

Hvorslev analysis is based on the line of best fit through the field data (hydraulic head recovery vs. time), plotted on a semi-logarithmic scale. In cases where the initial hydraulic head displacement is known with relative certainty, such as in this case where a physical slug has been introduced, the line of best fit is considered to pass through the origin.

Based on the above test methods, the monitoring wells screened in the glacial till displayed hydraulic conductivity values ranging between  $1.27 \times 10^{-7}$  to  $1.00 \times 10^{-5}$  m/sec. The values measured within the monitoring wells are generally consistent with similar material Paterson has encountered on other sites and typical published values for glacial till. The results of the hydraulic conductivity testing completed by Paterson and others have been attached to the current letter report.



## 4.0 Summary and Recommendations

It is understood that the proposed residential buildings within the subject site will include a basement level. It is also understood that sump pump systems are proposed for the buildings within the sump pump study area of the subject development to provide an outlet for stormwater and spring melt water collected from the perimeter foundation drainage system. Specific locations are to be determined by the Civil engineer during detailed design.

#### Groundwater Table Versus USF Elevations

Based on the above discussion, the pre-development seasonal high groundwater table within the sump pump study area is anticipated to be at elevations ranging between 92.95 and 94.45 m. Paterson reviewed the following grading plans prepared by DSEL as part of our assessment:

DSEL – Tamarack Richmond, Grading Plan, Project No. 1042, Drawing No. 04D, dated October 2024.

While detailed grading has not been provided for the proposed development, DSEL has noted that the proposed underside of footing (USF) will be placed at an approximate depth of 1.8 m below the center line elevation of the proposed roads identified in the above noted grading plan.

#### Seasonal High Groundwater Level

As indicated above, the pre-development seasonal high water was measured between 92.95 to 94.45 m. Based on our review of the latest conceptual plan provided by DSEL, the proposed USF elevations across the study area are generally below the measured seasonal high groundwater table. It is important to note that the groundwater levels recorded for the site are considered pre-development groundwater levels. From a geotechnical perspective, the pre-development groundwater levels are usually higher than post-development groundwater levels and highly dependent on the inverts of the proposed site servicing pipes.

#### Sump Pumps (Study Area)

It should be noted that based on the Technical Bulletin ISTB-2018-04 and ISTB-2019-02 issued by the City of Ottawa regarding installation of sump pumps, for typical sites, a minimum 300 mm vertical separation is recommended between the design underside of footing elevation and the seasonal high groundwater level.



As previously noted, the proposed USF elevations across the study area are generally below the pre-development seasonal high groundwater table. As such, assessment of the backfill permeability and estimates of the rate of groundwater ingress are required to rationalize the use of sump pumps at the site, as per Appendix 8 of ISTB-2018-04.

#### **Clay Continuity**

The boreholes completed within the sump pump study area of the subject site are in conformance with the City of Ottawa borehole spacing guidelines. The native silty clay soils within the study area are considered to be laterally vertically continuous. The boreholes within the study area of the subject site identify a silty clay deposit at the borehole locations at similar elevations throughout. Therefore, the silty clay deposit is considered to be laterally continuous across the sump pump study area of the proposed residential development.

#### **Backfill Recommendations**

It should also be noted that the backfill used against the foundation walls should consist of workable site excavated or imported silty clay as defined by the USCS. All surfaces adjacent to the proposed buildings should be shaped to shed water away from the building's foundation. All the sump pump installations should be inspected and approved by Paterson at the time of installation.

#### Permeability of Soils and Groundwater Ingress Rate

Based on Atterberg Limits testing completed on the silty clay within the sump pump study area, the material has been classified as CL-CH - Inorganic Clay of Low to High Plasticity per the (USCS). Atterberg Limits testing results have been attached to the current report. For the purpose of this study, a conservative hydraulic conductivity value of  $1 \times 10^{-7}$  m/sec has been used for the silty clay deposit identified on site.

Based on the subsoil profile below the proposed footings, the groundwater ingress rate was calculated to be less than 0.06 L/s (<5,000 L/day) and significantly less than the minimum pump capacity of 0.9 L/s (77,760 L/day) at 3.6 m head as per the above noted sump pump design Bulletin. Also, due to the characteristics of the underlying silty clay, the groundwater levels will not impact the performance of a sump pump due to the low permeability of the soils.

Based on the above, the sump pumps are not expected to be overloaded and/or continuously running. As such, the minimum design requirements for the main sump pump system and the backup pump battery will be achieved for the estimated groundwater rate of ingress under worst case scenarios.



# 5.0 Conclusion

Based on our observations and available design details, the subject area identified in Drawing PG4216-5 – Designated Silty Clay Areas is considered to have met the requirements detailed in the Technical Bulletin ISTB-2018-04 and ISTB-2019-02 issued by the City of Ottawa regarding installation of sump pumps.

We trust that the current submission meets your immediate requirements.

Best Regards,

#### Paterson Group Inc.

Nicholas Zulinski, P.Geo., géo.

#### Attachments:

- Soil Profile and Test Data Sheets
- Symbol and Terms
- Drawing PG4216-2 Test Hole Location Plan
- Drawing PG4216-4 Bedrock Contour Plan
- Drawing PG4216-5 Designated Silty Clay Areas
- □ Figures 1 through 11 Groundwater Monitoring Levels
- Atterberg Testing Results
- Hydraulic Conductivity Testing
- DSEL Grading Plan

Michael Killam, P.Eng.



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#### **List of Services**

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Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

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## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

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Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

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## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

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SAMPLE DESCRIPTION	Ъ	<u>ا</u>	Q	Ϋ́	R	CO %		HEAR STRENGT	H (kPa)	
	RATA	TH	м М	No.	R R(	LER (	20 40 PI (%) WATE	0 60 R CONTENT (%)	<u> </u>	NITC NSTF
GROUND SURFACE	STF	DEF	ž	RE	o z	M	20 40	0 60	80	ELE COM
For soil profile refer to BH 3-25										
		-							·····	
		-								95 -
		1_								0.89m
		-							· · ·	
		-						· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
		- -							1	.88 m 2025-03-12
		2								
End of Borehole		-							· · · · · · · · · · · · · · · · · · ·	2.41m
		-								93-
(GWL at 1.88 m depth - March 12, 2025)		3_								
(		-							· · ·	
		-								
										92-
		4 -								
		-							· · · · · · · · · · · · · · · · · · ·	
		-							· · ·	91-
		5_						•••••		
		-								
		-								
		6								90-
		-								-
		-								
		-								89-
		7-							· · · ·	
		-								
		-						•••••	· · · · · · · · · · · · · · · · · · ·	
		8_							· · · · · · · · · · · · · · · · · · ·	88-
		-								
										87-
		9_								
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		10 -								00
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH		PERTY		RSO					ED. THIS SHE	ET SHOULD BE
	JR I. PA			JF 13						PAGE: 1/1



Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	5611.53	3			NORTHIN	<b>IG</b> : 50	03727.26	ELEVATION	<b>1:</b> 97.14	
PROJECT: Proposed Mixed-Use Development								FILE NO. :	PG4216	
ADVANCED BY: Track Mounted Drill Rig										
REMARKS:					DATE: N	/larch 6	6, 2025	HOLE NO. :	BH 4-25	
				S	AMPLE		PEN. RES	IST. (BLOWS/0.3	im)	
						ħ	20 40	) 60	80	
SAMPLE DESCRIPTION	5		N	(%)		ONTE		HEAR STRENG	TH (kPa)	MOIL MUIC
	A P	٦ ۳	AND	VER)	go	R CC (%)	20 40	HEAR STRENGT	н (кРа) 80	
	TRAI	EPTI	ΥPE	ECO ECO	OR I	ATE	PL (%) WATE	R CONTENT (%)	LL (%)	
GROUND SURFACE	ىن ا		í-	~	z	\$	20 40	60	80	
TOPSOIL0.25m [96.89m]/	~ ~ ~ ~		Ξ							
GLACIAL TILL: Compact, brown silty clay, with	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	× ₹							
		-	Ç	85	RQD 85					
BEDROCK: Good to fair quality limestone		-								96-
		-								
		-	C 2	68	RQD 58					
		2_	~							
		-								
		-								
		3-							: : 	-
		-	C 3	76	RQD 58					94 –
		-	~						· · · ·	3.45m
		-							3.	76 m 2025-03-12 -
		4-								93-
- Mud seams from 4.42 m to 4.57 m depth		-	4	100	ROD 54				· · · · · · · · · · · · · · · · · · ·	
		-	ž		TOD 04					
5.03m [92.11m]		5-							· · · · · · · · · · · · · · · · · · ·	4.98m
		-								
(GWL at 3.76 m depth - March 12, 2025)		-								
		6-								
		-								91-
		-							· · · · · · · · · · · · · · · · · · ·	
		-								
		-								90-
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		8-							· · · · · · · · · · · · · · · · · · ·	89-
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		-								
		9-								
		-								88-
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		10 -								
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY		RSO	N GROUP A	ND THE	E CLIENT FOR WHOM	T WAS PRODUC	ED. THIS SHEE	T SHOULD BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REP	JRT. PA	TERSC	IN GROU	ip Is	NOTRESP	UNSIBL	E FOR THE UNAUTHO	RIZED USE OF T	HIS DATA.	PAGE: 1/1



Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5856.2	0			NORTHIN	<b>IG</b> : 50	0366	5.21		ELEVAT	<b>ION:</b> 95.53		
PROJECT: Proposed Mixed-Use Development										FILE NO.	: PG42'	16	
ADVANCED BY: Track Mounted Drill Rig									-				
REMARKS:					DATE: N	/larch 7	, 202	25		HOLE NO	.: BH 5-2	25	
				5	SAMPLE			■ P	EN. RES	IST. (BLOWS	6/0.3m)		
						F		20	DCPT (5	0mm DIA. CO	ONE) 80	E	
	F		ġ	(%		TEN	Δ	REMO		SHEAR STRE	NGTH (kPa)	NO N	Ê
SAMPLE DESCRIPTION	PLC	Ê	ģ	RV (	9	CON (		UNDR	AINED S	HEAR STRE	NGTH (kPa)		) NO
	ATA	Ŧ	ΕĂ		3 RQ	R €R		20	40	) 60 P CONTENT	80		VATI
	STR	E	ΤΥΡ	REC	ŌN	WAT		PL (%)			(%) LL (%)	CON CON	
TOPSOIL			$\overline{X}$	-				20	+0	, 00			5 -
		-	XI∎	2								0.34 m ¥ 202	25-03-12 _
0.00		-	<u> </u>										95 —
GIACIAL TILL: Compact brown silty sand some		1-	$\mathbb{N}_{2}$	1 07	0 40 47 00								3 -
gravel and cobbles, trace clay		-	$\bigwedge$	3 01	29								8 =
BEDDOCK: Excellent quality limestone		-	U U	8 0	50-/-/-/								94 –
BEDROCK. Excellent quality inflestone		-	-	-	50/0.05								
		2_	L L L	2   100	RQD 100			1 1					
		-										EEE	-
		-						· · · · · · · · · · · · · · · · · · ·					93-
		3_						ļ					-
			50.9	2 100	RQD 100					· · ·			-
		-		-								3.	4 <sub>3m</sub> –
		-											=
		4_						· · · · · · · · · · · · · · · · · · ·	•••••••••••••••••••••••••••••••••••••••				-
		-	e C										-
		-	a d	2 100	RQD 95								91-
4.95m [ 90.58m ]		5_										4	95m -
End of Borehole													
													90-
(GWL at 0.34 m depth - March 12, 2025)										· · ·			
		6											
													=
		-						5 	•••••••••••••••••••••••••••••••••••••••				89-
		7_											
								: 					88-
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		8_						· · · · · · · · · · · · · · · · · · ·					
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		-								·····	······································		87-
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		9_											-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH READ IN CONJUNCTION WITH ITS CORRESPONDING REP	E PROF ORT. PA	TERSO	JF PAT N GRC	ERS( )UP IS	S NOT RESP	AND THE ONSIBL	E FO	ENTFOR R THE UI	VVHOM I NAUTHO	IT WAS PROE RIZED USE (	DUCED. THIS S OF THIS DATA.	SHEET SHOU	LD RE
										、		PAGE:	1/1



Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 43	5817.8	5			NORTHI	<b>IG</b> : 50	04471.80	ELEVATION	<b>1:</b> 94.12	
PROJECT: Proposed Mixed-Use Development								FILE NO. :	PG4216	
ADVANCED BY: Track Mounted Drill Rig										
REMARKS:					DATE: N	March 7	7, 2025		<b>DП 0-2</b> Э	
					SAMPLE		PEN. RES DCPT (5	IST. (BLOWS/0.3 0mm DIA. CONE	m) :)	
						ENT	20 40	60	, 80	
SAMPLE DESCRIPTION	LOT	-	N N	701 <b>X</b>		ILNO	△ REMOULDED S ▲ UNDRAINED S	HEAR STRENG	TH (kPa) TH (kPa)	
	TA F	E (m			RQD	R C(%)	20 40	60	80	STRU
	STR/	DEP1	TYPE		N OR	WATI			LL (%)	
							20 40	00	00	94-
GLACIAL TILL: Compact, brown silty clay, some		-	×.	AU 1						
sand, trace gravel		-	Ê.						0.6	1 m 💆 2025-03-12
GLACIAL TILL: Dense to very dense, brown sandy		1-		ດຊ ເຊິ່ງ	6-17-13-17	,				
silt, with gravel, cobbles and boulders		-	Д'	0	30					
		-	$\square$	m						
		2-	1	S 4	5 10-21-34-2 55	7				
2.21m [91.92m]		-								
gravel and cobbles		-		75 N	5 7-9-11-11					
g		-	Д`		20					
		-	Π.	2						<u>3.05</u> m y1_
		-	۲ ا	S 8	3 9-12-13-12 25	2				
- Grey by 3.73 m depth		-	Ħ.	o						
		4-	X	s 4	3 3-8-50-/ 58/0 25			•••••		90-
4.57m [ 89.56m ]		-			00,0.20			· · · · · · · · · · · · · · · · · · ·		
End of Borehole		-								4.57m _ 
		5-								89-
Practical refusal to augering at 4.57 m depth		-								-
(CWI at 0.61 m dapth March 12, 2025)		-								-
(GWL at 0.01 III deptit - March 12, 2025)		6-								
										88
		-								-
		7-							· · · · · · · · · · · · · · · · · · ·	
		-								87-
		-								-
		-								-
		8-							· · · · · · · · · · · · · · · · · · ·	86
		-								-
										-
		9-								85-
		-								
		-								
READ IN CONJUNCTION WITH ITS CORRESPONDING REF	PORT. PA	TERSO	OF PA	OUP	S NOT RESP	ONSIBL	E FOR THE UNAUTHO	RIZED USE OF 1	HIS DATA.	



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 433	5747.9	4				NORTHIN	<b>G</b> : 500	)4424	.67		E	LEVATIO	<b>DN:</b> 94.61			
PROJECT: Proposed Mixed-Use Development											FIL	E NO. :	PG421	16		
ADVANCED BY: Track Mounted Drill Rig														<b>7</b> /		
REMARKS:						DATE: D	ecemb	er 16,	2024			LE NO.		24		
					S	AMPLE			∎ F	EN. RE	SIST. ( 50mm	BLOWS/0 DIA. COI	).3m) NE)			
							ENT		20	4	0	60	, 80		z	_
SAMPLE DESCRIPTION	LOT	-			X (%	-	ILNO	∆ ▲	REMO	ULDED	SHEAI Sheaf	R STREN	GTH (kPa) GTH (kPa)		IER ICTIC	m N
	AT I	LH (J	AN		0 VEF	r RQI	ER 0 (%)		20	4	0	60	80		OME:	/ATIO
	STR	EP.	L A		REC	N OF	WAT	F	²L (%)	WATE		NTENT (%	6) LL (%)		PIEZ	ELE
TOPSOIL 0.23m [94.38m]					_			:	20	4	iU	00	00			-
GLACIAL TILL: Compact, brown silty sand, with		-	臤	4U 1			24		c		· · · · · ·					-
gravel, trace clay, cobbles and boulders		-	Ħ							-						94 —
		1-	XI	SS 2	58	Р	22		0		;; ;					-
		-	Щ							-	· · ·					-
		-	$\square$	3												93-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	2-	M	SS	/5	5-7-9-8 16	12	•	<u>, ר</u>		: 					-
		-							-	-	· · ·	-				-
		-														92-
Dance by 2.0 m depth	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	3-											· · · · · · · · · · · · · · · · · · ·			-
- Dense by 5.0 m depth		-	М	4	67	7 13 21 21	13		<b>`</b>	-	· · ·					-
		-	$\square$	ŝ	07	34	13			••••••	· · · ·	•••••				91-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-								-						-
	~ ~ ~ ~ ~	4-														-
- Grev by 4.6 m depth		-														
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	M	S 5	8	6-5-8-20	8	о								90 -
		5-	Д	S	-	13				•••						-
		-						· · · · · · ·					· · · · · · · · · · · · · · · · · · ·			-
	V V V V V V V V V V V V	-								-	· · ·					89-
		6-						· · · · · · · · · · · · · · · · · · ·		•••	· · · · · · · · · · · · · · · · · · ·					-
		-	XI	SS 6	58	8-12-13-6	10	o			· · ·					-
6.71m [ 87.90m ]	<u> </u>	-	А			25				-	· · ·					88-
End of Borenole		7-							· · · · · · · · · · · · · · · · · · ·		: :					-
		-						:		-	· · ·					-
		-								•••						87-
		8-														-
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		-														86-
		_ 														-
		-								-	· · ·					-
		-						· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·							85-
		10 -								-	· · ·					-
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY	OF P/	ATER	RSO	N GROUP A	ND THE	CLIE	NT FOR	WHOM	IT WA	S PRODI	JCED. THIS S	SHEET	SHOULI	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REP	urt. Pa	TERSC	)n gf	ROUE	- IS	NOT RESPO	ONSIBLI	EFOR	THE U	NAUTHO	URIZEI	USE OF	THIS DATA.	F	PAGE: 1	1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5865.23	3				NORTHIN	<b>G</b> : 500	)444	8.81			EL	EVAT	ION:	94.0	7		
<b>PROJECT:</b> Proposed Mixed-Use Development												FILE	NO.	: 1	PG4	216		
ADVANCED BY: Track Mounted Drill Rig							h	1	c	14	ł	ноі	F NO	•	RH (	2-24		
REMARNS:						DATE: D	ecemb	ern	0, 202	24 DEN 1		ст /Б			\ \	<b>-------------</b>		
					SA	AMPLE	ţ		2	DCP	T (50 40	) mm l	DIA. CO 60	ONE)	) 80			
SAMPLE DESCRIPTION	РLOT	(E	ND NO.		ERY (%)	Q	CONTE %)	∆ ▲	REM UNI	IOULDE DRAINE	D SI	HEAR IEAR	STRE	NGTH NGTH	l (kPa (kPa)	)	ETER	(m) NO
	RATA	PTH (	E A			DR RC	ТЕR С		20 PL (%	) ) WA	40 TER	CON	60 TENT	(%)	<u>80</u> LL (9	%)	ZOM	EVAT
GROUND SURFACE	STI	DE	Ě		х П	z	<b>A</b>		2	)	40	0	60	(,,,	80		8	
TOPSOIL, trace sand and gravel	~ ~ ~ ~			-			16		0			-			-			94
GLACIAL TILL: Compact to dense, brown silty sand,	~ ~ ~ ~ ~	-	섰	A							•••••							-
with gravel, cobbles and boulders		-		5														
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	X	SS 5	8	11-11-11-24 22	11		0									93-
	~ ~ ~ ~ ~	-	$\square$							· · · · · · · · · · · · · · · · · · ·			· · · · · · · ·			<u>.</u>		-
	~ ~ ~ ~ ~	-	XI	SS 5	8	9-18-23-20	11		0						-			-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	2-	$\square$			41												92-
	0 0 0 0 0 0 0 0 0 0 0 0	-																
0.05	~ ~ ~ ~ ~	-							· · · ·	-		-			-			
Compact to dense, brown SILTY SAND, trace gravel		3-	$\square$	4														91-
3.66m [90.41m]		-	Х	sg 2	25	16-14-13-13 27	23			0								
GLACIAL TILL: Dense, grey silty sand, with gravel,	▼	-							· · ·			-			-			-
cobbles and boulders	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	4-										••••						90-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-														· · · · · · · · · · · · · · · · · · ·		-
	~ ~ ~ ~ ~	-	$\square$	0.5		6 14 25 21		~				-			-			-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	5_	$\square$	S s	00	39	9		, 	•••••	· · ·	••••	· · · · · · · · · · · · · · · · · · ·					89-
	~ ~ ~ ~ ~	-																-
	~ ~ ~ ~ ~	-							· · ·	-		-			-			-
	~ ~ ~ ~ ~	6																88-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	X	880	3	9-19-25-24	10	C	5						-			
6.71m [87.36m ]	~ ~ ~ ~ ~	-	Д			44						-			-			
End of Borehole		7_									· · · :							87-
		-								-								
		-												-	-			
		8-								· · · · · · · · · · · · · · · · · · ·								86-
		-							· · ·	-		-			-			
		-																
		9-											· · · · · · ·					85
														-				-
		-							· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·					-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	E PROF	PERTY	of P/ N GF	ATERS	102 15	N GROUP A	ND THE		ENT FOR	DR WHO	DM IT		S PROL	DUCE	D. THI IS DA	IS SHEE TA.	T SHOUL	.D BE
					.01							0			.5 01	.,	PAGE:	1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5899.3	1				NORTHIN	<b>G</b> : 50	0426	64.51			ELEVATIO	N: 94.06			
PROJECT: Proposed Mixed-Use Development												FILE NO. :	PG42	16		
ADVANCED BY: Track Mounted Drill Rig											F			•		
REMARKS:						DATE: D	ecemb	er 1	6, 202	24		HOLE NO. :	BH 3	-24		
					S	AMPLE			•	PEN.	RESI	ST. (BLOWS/0.	3m) -`			
							F		2	0 DCP	40	60	=) 80			
SAMPLE DESCRIPTION	ы		Ö		(%)		NTE	Δ	REM	IOULDI	ED SI	HEAR STRENG	TH (kPa)		TION NOI	Ē
	⊿ F	) (E	QNA		ΈRΥ	ð	с (%)	•		DRAINE	ED SH 40	HEAR STRENG	<b>TH (kPa)</b>		AETE RUC	lon
	RAT	PTH	E		ŝ	OR R	ATER		PL (%	5) WA	ATER	CONTENT (%)	00 LL (%)	)		EVA
GROUND SURFACE	ST	ä	≥	-	R	z	8		2	0	40	60	80		≣ 8	ᆸ
TOPSOIL, trace clay		· -	$\overline{\mathbf{x}}$	-			39				0					94 _
Hard, brown SILTY CLAY			X	A						•••••						=
														>250		=
		1 1-	Х	SS	100	Р	37				0		Δ80		<b>▲</b>	93-
1.45m[92.61m]			$\square$													-
GLACIAL TILL: Compact, brown silty clay, with	~ ~ ~ ~ ~		M	23	50	P	31									=
gravel, trace sand, cobbles and boulders	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	2_	$\wedge$	ő	50	Г	51			Ŭ						92-
2.29m [91.77m]	<u> </u>															-
gravel trace clay occasional cobbles	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		Х	SS 4	58	4-9-7-4	12		0							-
graver, race day, occasional connect	~ ~ ~ ~ ~	3_				16								: 		
			$\bigvee$	5	50	0 4 45 40	10		~	-						91-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~		$\wedge$	SS	50	8-4-15-19 19	12		0					: 		=
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~									-			-			=
	~ ~ ~ ~ ~	4-							· · · · · ·	•••••						90-
																-
- Grey by 4.6 m depth	~ ~ ~ ~ ~ ~ ~ ~ ~ ~		$\square$	9						-			-			=
		5_	Ň	SS	42	3-17-4-6 21	11		0	• • • • • •						89-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~									-						-
	~ ~ ~ ~ ~															-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	6-														
	~ ~ ~ ~ ~			2												88
6 71m [ 87 35m ]			Å	SS	42	15-28-13-12 41	14		0							
End of Borehole													-			-
		7-														87-
																-
										-						
		8_										· · · · · · · · · · · · · · · · · · ·	:			86-
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		10											-			=
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY	OF P/	ATEF	RSO	N GROUP A	ND THE	CLI	ENT F	OR WH	OM IT	T WAS PRODU	CED. THIS	SHEE	T SHOUL	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ort. Pa	TERSO	N GF	ROUR	P IS	NOT RESPO	ONSIBL	E FO	R THE	UNAU	THOF	RIZED USE OF	THIS DATA	۹.		
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## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTIN	<b>G</b> : 435891	.01			NORTHIN	<b>G</b> : 50	04133.10	ELEVATION	: 93.78	
PROJECT: Proposed Mixed-Use Develop	oment							FILE NO. :	PG4216	
ADVANCED BY: Track Mounted Drill Rig										
REMARKS:					DATE: D	ecemb	per 19, 2024	HOLE NO. :	BH 3A-21	
				S	AMPLE		PEN. RE	SIST. (BLOWS/0.3r	n)	
						5	20 <b>DCPT (</b>	50mm DIA. CONE) 0 60	80	
	6		ġ	(%)		LE V		SHEAR STRENGT	H (kPa)	m IION
		Ē	g	ERY	8	<u>%</u> دا			H (kPa)	RUC.
	RAT/	PTH	L A H	S S	R R	TER )	PL (%) WATE	R CONTENT (%)	50 LL (%)	
GROUND SU	RFACE	В	Σ	RE	z	M	20 4	0 60	80	
For soil profile refer to BH 3-21										
		-								93-
		1-								
		-								
								• • • • • • • • • • • • • • • • • • • •		
		2-						· · · · · · · · · · · · · · · · · · ·		92-
2.29m [ 9	1.49m]	-								
Very stiff, brown SILTY CLAY		8	Μ.,	-	Б	52		A <sup>43</sup>	>121	
			Mű	8 100		52				91-
		3-	$\square$				/	· · · · · · · · · · · · · · · · · · ·	>121	
				g   100	Р	44	<sup>22</sup> 🔬 34	- <del>0</del>	- 121	
3.73m[9	0.05m]		Д					· · · · · · · · · · · · · · · · · · ·		
Firm, grey SILTY CLAY										90-
		-	X	g 75	Р	42	Δ10	0 48		
4.88m [ 8	8.90m]	8	M		2411	36	0		>121	89-
GLACIAL TILL: Dense, grey silty clay, trace sar	id, <u>v v</u>	5	Mű	6 100	5	12	0			
gravel, cobbles and boulders		· ⊽ -	$\square$							
		· ⊽ ·	Xv	294	2-5-27-50	12	0	· · · · · · · · · · · · · · · · · · ·		
5.87m [8	7.91m] <u>* * *</u>	 	H		32					88 -
		-						· · · · · · · · · · · · · · · · · · ·		
		-								87 -
		7-								
								· · · · · · · · · · · · · · · · · · ·	·····	
		8-								- 08
		-								
		-								85-
		9-								
										04
		10								84-
DISCLAIMER: THE DATA PRESENTED IN THIS SHEE				TERSC					ED. THIS SHEE	T SHOULD BE
				JUF 13						PAGE: 1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5891.01	1			NORTHI	NG: 500	04133.10	ELEVATION	<b>1:</b> 93.78	
PROJECT: Proposed Mixed-Use Development								FILE NO. :	PG4216	
ADVANCED BY: Track Mounted Drill Rig										4
REMARKS:					DATE: I	Decemb	per 19, 2024	HOLE NO. :	BH 3B-2	1
				S	SAMPLE		PEN. RES	SIST. (BLOWS/0.3	<b>m)</b>	
						Ł	20 40	) 60	80	
SAMPLE DESCRIPTION	5		NO.	(%)		ONTE		SHEAR STRENG	ГН (kPa)	L (m)
	₹	(۳ ۳	AND	VER)	gg	ر % در	■ UNDRAINED S 20 40	D 60	H (KPa) 80	METI TRUC
	TRAI	E E E	ŕPE	С Ш С	ORI	ATEI	PL (%) WATE	R CONTENT (%)	LL (%)	
GROUND SURFACE	<u>ى</u>		F	₽	z	3	20 40	0 60	80	
For soil profile refer to BH 3-21										
		-							· · · · · · · · · · · · · · · · · · ·	
										93 -
		-							· · · · · · · · · · · · · · · · · · ·	
		-								
		-								92-
		2_								
		-								
		-							· · · · · · · · · · · · · · · · · · ·	
3.05m [ 90.73m ]		3-								91-
Brown SILTY CLAY		-	1	100						
		-	∑ ►	100					· · · · · · · · · · · · · · · · · · ·	
3.81m [89.97m]	H H									90-
Grey SILTY CLAY		4-	W 2	100					·····	
4.42m [ 89.36m ]		-								
End of Borehole		-								89-
		5								
		-								
		-								
		6								88-
		0_								
		-								
		-								87 -
		7_							· · · · · · · · · · · · · · · · · · ·	
		-								
		-							· · · · · · · · · · · · · · · · · · ·	06
		8-							· · · · · · · · · · · · · · · · · · ·	
		-								
		-							· · · · · · · · · · · · · · · · · · ·	
		_								85-
		9_								
		-								
		-								84-
		10 -								
READ IN CONJUNCTION WITH ITS CORRESPONDING REP	E PROP ORT. PA	TERSO	UF PATE	irsc JP IS	S NOT RESP	and the Ponsibli	E FOR THE UNAUTHC	IT WAS PRODUC	ED. THIS SHEE HIS DATA.	ET SHOULD BE
										PAGE: 1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 43	5936.4	1				NORTHIN	<b>G</b> : 50	0409	9.07		EL	EVATIO	<b>N:</b> 93.87		
PROJECT: Proposed Mixed-Use Development											FILE	E NO. :	PG4216		
ADVANCED BY: Track Mounted Drill Rig									0004		ноі	FNO ·	BH /-2/		
REMARKS:						DAIE: L	ecemb	er 16	, 2024				2m		
					S	AMPLE			- r	DCPT (	50mm	DIA. CON	E)		
	⊢		d	5	(9		TENT	^	20 REMO		0 Shear	60 STRENG	80 TH (kPa)	N	Ê
SAMPLE DESCRIPTION	PLO	Ê			ERV (°	R	CON.	<b></b>	UNDR	AINED S	SHEAR	STRENG	TH (kPa)	ETER	I) NO
	RATA	PTH (	Р Р	1	Sol	DR RC	, CER		20 PL (%)	4 WATE	0 IR CON	60 ITENT (%)	80 LL (%)	NSTF	EVAT
GROUND SURFACE	STI	DE	Σ		Ä	z	W		20	4	0	60	80	불양	Ξ
0.25m [93.62m] /			×.	L L			43	-	-		0				-
Hard, brown SILTY CLAY		-	X	◄					•••••						-
		-		2				-	-				>249		93-
		1	X	SS	50	Р	36			0			280	Î	-
	IX.														-
		-	XI	SS 3	100	Р	50		-		8	50	>249	+	92-
		2-	$\square$										· · · · · · · · · · · · · · · · · · ·		-
- Very stiff by 2.3 m depth		-	$\square$	4		_				29		A665	179		-
		-	Ŵ	SS	100	Р	57	-	-		/				01_
		3-	$\square$				07		· · · · · · · · · · · · · · · · · · ·		/		>121		91 -
3.50m [ 90.37m ]		-	XI	SS 5		Ρ	31		-	∆ <sup>29</sup> <sup>0</sup>	<u> </u>			•	-
GLACIAL TILL: Compact, grey silty sand, with clay,		-	$\square$				44		-		0				-
gravel, cobbles and boulders		4-	М	90	100	D	31		· · · · · · · · · · · · · · · · · · ·	0	: 	•••••			90-
		-	$\square$	ő	100	Г	8	0	-						-
		-	$\square$												-
		5-	XI	SS 7	50	2-6-9-5	10	Ċ	)						89-
		-	$\square$			15			-		-				
		6-										· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		88-
		-	$\square$	8											-
6.71m [ 87.16m ]		-	M	SS	67	3-3-3-2 6	14		0				· · · · · · · · · · · · · · · · · · ·		-
End of Borehole		-							-						87-
									-		-				-
		-							· · · · · · · · · · · ·						-
		-							-						86-
		8-													-
		-													-
		-							-						85
		9-							· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·		-
		-											· · · · · · · · · · · · · · · · · · ·		
		-													
		10 -			200						IT \\/\^	יי וחחפס	רבה דעופ פערי	 ד פווחויי	
READ IN CONJUNCTION WITH ITS CORRESPONDING REP	ORT. PA	TERSC	OF PA	ROUF	PIS	NOT RESP	ONSIBL	E FOF	R THE U	NAUTHC	RIZED	USE OF	THIS DATA.		ם חב
														PAGE	1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5936.4	1			NORTHI	NG: 500	04099.07	ELEVATION	: 93.87	
PROJECT: Proposed Mixed-Use Development								FILE NO. :	PG4216	
ADVANCED BY: Track Mounted Drill Rig										
REMARKS:					DATE:	Decemb	oer 19, 2024	HOLE NO. :	BH 4A-24	1
				•			PEN. RES	SIST. (BLOWS/0.3	m)	
				3			DCPT (	0mm DIA. CONE	)	
			Ċ			ENT	20 40	0 60	80	Z o
SAMPLE DESCRIPTION	LOT		N	۲ (%		INC		SHEAR STRENGT	TH (kPa)	
	∠	E T	AND	ER,	gg	й ~ %	20 4	60	80	
	RAI	Ē	Å	0 0 0	OR I	ATEI	PL (%) WATE	R CONTENT (%)	LL (%)	
GROUND SURFACE	ST	ä		R	z	Ž	20 40	) 60	80	
For soil profile refer to BH 4-24									· · ·	
		-								
		1-								93-
		-								
		2								92-
		-								
									· · · · · · · · · · · · · · · · · · ·	
2.90m [ 90.97m ]		-								Q1_
Brown SILTY CLAY	XX	3-	-							
2.54	XX		₹ A	100						
5.5 m [ 90.30m ]	~ * * /	-								
										90-
		4-						······	•••••	
		-								
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		_								89-
		5_								
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		6								88-
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		-								
		7_								8/-
		-								
										86-
		8_							· · · · · · · · · · · · · · · · · · ·	
										85-
		9_							· · · · · · · · · · · · · · · · · · ·	
		]								
		10 -								84-
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY (	OF PATE	RSO	N GROUP	AND THE	E CLIENT FOR WHOM	IT WAS PRODUC	ED. THIS SHEE	ET SHOULD BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ort. Pa	TERSO	N GROL	IP IS	NOT RESP	PONSIBLE	E FOR THE UNAUTHO	RIZED USE OF T	HIS DATA.	
										PAGE: 1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5994.6	1				NORTHIN	<b>IG</b> : 50	0395	6.27		E	LEVATION	<b>N:</b> 93.90		
PROJECT: Proposed Mixed-Use Development											FIL	E NO. :	PG4216		
ADVANCED BY: Track Mounted Drill Rig															
REMARKS:						DATE: D	)ecemb	per 1	6, 2024		HC	DLE NO. :	BH 5-24		
					S	AMPLE			■ F	EN. RE	SIST.	(BLOWS/0.3	im)		
							Þ		20	DCP1 (	<b>50mm</b> 10	60	:) 80		
SAMPLE DESCRIPTION	Б		Ş		(%)		NTE	Δ	REMO	ULDED	SHEA	AR STRENG	TH (kPa)	TION TION	<u>٤</u>
	⊿ F	Ē			ſΕRΥ	ð	о %				SHEA	R STRENG	FH (kPa) 80	AETE RUC	NOI
	RAT	PTH	L L	2	SOV	DR R	ATER (		PL (%)	WATE	ER CO	ONTENT (%)	LL (%)		EVA
GROUND SURFACE	ST	ä	2	-	RE	z	≥ ≥		20	4	0	60	80	≣8	
TOPSOIL 0.25m [ 93.65m ] /			$\overline{\mathcal{A}}$	-			39			с	)				-
Hard, brown SILTY CLAY		-	X	A					· · · · · · · · · · · · · · · · · · ·		• • • •				-
		-							· · ·				>249		93-
		1											▲89		
		-											· · · · · · · · · · · · · · · · · · ·		-
			M	32	100	Б	52		<b>4</b> 20			<u>_</u>	149		
		2_	$\wedge$	ő	100	Г	52		····· · · · · · · · · · · · · · · · ·			<b>v</b>			92-
													>121		-
		-								<b>∆</b> 29	• • • • • • • • •				-
2.90m [91.00m]	\$ <del>,</del>	3_									: ;				91-
gravel cobbles and boulders	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	$\bigvee$	33	40	4540	9	c	>	-	•				=
- Grev by 3.4 m depth	~ ~ ~ ~ ·	-	$\wedge$	SS	42	4-5-4-6 9	11		0						-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~										•				90-
	~ ~ ~ ~ ~ ~ ~ ~	4-								••••••••	<u>.</u>				
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-							· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·		-
- Dense by 4.6 m depth	~ ~ ~ ~ ·	-	$\square$	4											-
	~ ~ ~ ~ ~	5-	Å	SS		5-10-29-24 39	9	C	)						89-
5.36m [ 88.54m ]	<u> </u>	-							· · ·		•				-
End of Borehole		-									· · · · · · ·				
Practical rational to augoring at 5.26 m donth		6							· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·		88-
Fractical relusar to augering at 5.50 m depth															
		=													
		-													87-
		7													
		-										· · · · · · · · · · · · · · · · · · ·			
		-								-	•				-
		8-									:		· · · · · · · · · · · · · · · · · · ·		86-
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		=								•••••••••••••••••••••••••••••••••••••••	· · · · · · ·				
		9_													85-
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		10 -							· · ·		•				84 -
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY	OF P	ATE	RSO	N GROUP A		E CLI	ENT FOF	WHOM	IT W	AS PRODUC	ED. THIS SHEE	ET SHOUL	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ort. Pa	TERSC	N G	ROU	P IS	NOT RESP	ONSIBL	E FO	R THE U	NAUTHO	ORIZE	D USE OF 1	THIS DATA.		
														PAGE:	1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

PROJECT:         Proposed Musek-Use Development ADVANCED BY: Track Mounted Drill Rig RRMARKS:         FUE NO::         PG2416           SAMPLE DESCRIPTION         SAMPLE DESCRIPTION <t< th=""><th>COORD. SYS.: UTM ZONE 18 EASTING: 435</th><th>5422.6</th><th>8</th><th></th><th></th><th></th><th>NORTHIN</th><th><b>G:</b> 50</th><th>0387</th><th>9.79</th><th></th><th></th><th></th><th>ELE\</th><th>ATION</th><th><b>1:</b> 94</th><th>.24</th><th></th><th></th></t<>	COORD. SYS.: UTM ZONE 18 EASTING: 435	5422.6	8				NORTHIN	<b>G:</b> 50	0387	9.79				ELE\	ATION	<b>1:</b> 94	.24		
ADVANCED BY: Track Mounted Drill Rig REMARKS:         DATE: December 17, 2024         DUE NO: EH6-24           SAMPLE DESCRIPTION (COUND SUFFACE (COUND SUFFACE (COU	PROJECT: Proposed Mixed-Use Development												F	ILE N	0. :	PG	4216		
REMARKS:         DATE: December 17, 2024         POLE MOLESC (BUNRD 30) DEFT (500m DL CONE) 30 40 60 80 DEFT (500m DL CONE) 30 40 60 80 DEFT (500m DL CONE) 30 40 60 80 DEFT (500m DL CONE) 30 40 60 80 PL (6) MORA 500 80	ADVANCED BY: Track Mounted Drill Rig												-				0.04		
SAMPLE DESCRIPTION         SAMPLE         PP. RESIST (NOV803.0h) COUND SURFACE           GLACAL TILL: Compact grey subs and, with gravel, COUND SURFACE         C.S. TARKS (NOV803.0h) COUND	REMARKS:						DATE: D	ecemb	er 1	7, 20	24		H	OLE	NO. :	BH	6-24		
SAMPLE DESCRIPTION         USE						S	AMPLE				P	EN. RE DCPT	SIST (50m	. (BLC	WS/0.3	m)			
SAMPLE DESCRIPTION         Description <thdescription< th=""></thdescription<>					.			LN I			20		40		60	80		z	_
Image: control subscription         Image: control subscription <t< td=""><td>SAMPLE DESCRIPTION</td><td>LOT</td><td></td><td></td><td></td><td><u>۲ (%)</u></td><td>_</td><td>ONTE</td><td></td><td>RE</td><td></td><td></td><td>SHE</td><td>AR ST</td><td></td><td>TH (kP TH (kP</td><td>a)</td><td>CTIO</td><td>N (m</td></t<>	SAMPLE DESCRIPTION	LOT				<u>۲ (%)</u>	_	ONTE		RE			SHE	AR ST		TH (kP TH (kP	a)	CTIO	N (m
CROUND SURFACE         PA		ATA F	<u>ш</u> Н	AND		Ř	RQD	ER C (%)			20		40		60	80	u)	OME	ATIO
Obsolute stands       Image: Second stands       Imag		STRA	DEPT			ы С	N OR	NATE		PL (	%)	WAT	ER C	ONTE	NT (%)	LL	<b>(%)</b>		ELEV
4.300 (Action 11LL: Compact, brown sandy day, with sitt, see and boulders       38       0       39       0       94         GLACIAL TILL: Compact, grey salty sand, with gravel, cobbles and boulders       4       1       1       1       1       0       93         GLACIAL TILL: Compact, grey salty sand, with gravel, cobbles and boulders       4.51m (845m)       5       100       P       30       0       90         GLACIAL TILL: Compact, grey salty sand, with gravel, cobbles       5       5       6       111       9       0       90         GLACIAL TILL: Compact, grey salty sand, with cobbles       6       7       6       7       8       81-19-19       9       0       88         GLACIAL TILL: Compact, grey salty sand, with cobbles       6       7       6       7       8       81-19-19       9       0       88         GLACIAL TILL: Compact, grey salt, with cobbles       6       7       7       8       88	GROUND SURFACE			Ħ	-	-	-	-		:	20		40	:	60	80			
GLACIAL TILL: Compact grey silly sand, with gravel, obbies and boulders       4.57m [8:67m]       5       5       3-3-3-2       14       0       91         GLACIAL TILL: Compact grey silly sand, with gravel, obbies and boulders       6       7       7       7       7       7       8       81-13-16-19       9       0       0       880         GLACIAL TILL: Compact grey silly sand, with gravel, obbies and boulders       6       7       7       7       7       8       81-13-16-13       19       0       880         GLACIAL TILL: Compact grey silly sand, with gravel, obbies and boulders       6       7       7       8       81-13-16-13       19       0       0       880         GLACIAL TILL: Compact grey silly sand, with gravel, obbies and boulders       7       7       8       8       19       0       0       880	GIACIAL TILL: Compact brown sandy clay with silt	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	X.	AU 1			39			-		0						94 —
4.50       1       1       1       1       1       1       1       0       30       0       0       93         4.50       1       1       1       1       1       1       1       0       92         4.50       1       1       1       1       0       1       0       92         4.50       1       1       1       0       0       1       1       0       92         6.00       1       1       1       0       0       0       1       91         6.00       1       1       1       0       0       0       0       91         90       1       1       1       0       0       0       91         90       1       1       1       0       0       0       0       0       0       91         90       1       1       1       1       1       0       0       0       0       0       90       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0	gravel, cobbles and boulders		-							· · · · · ·									-
4.57m (86.57m)       2       2       2       2       2       2       3       3       0       0       0       93         4.57m (86.57m)       2       2       2       2       2       2       3       0       0       93         4.57m (86.57m)       3       3       3       3       3       5       14       0       0       93         GLACIAL TILL: Compact grey sithy sand, with gravel, cobbles and boulders       4       4       5       5       5       5       5       10       2.3-16.43       19       9       0       88       88         GLACIAL TILL: Compact grey sand, with gravel, cobbles       5       5       5       5       5       5       10       2.3-16.43       19       9       0       88	g.a.o., control and non-		1-	М	201	100	P	30				0							-
4         5         50         3-3-3-2         14         0         92-           4         5         50         3-3-3-2         14         0         92-           4         5         92         6-8-3-2         13         0         91-           6         5         92         6-8-3-2         13         0         90-           GLACIAL TILL: Compact grey sity sand, with gravel, and boulders         91-         92-         92-         92-           6         5         92         6-8-3-2         13         0         90-           GLACIAL TILL: Compact grey sity sand, with gravel, and boulders         91-         92-         92-         92-           6         92-         92-         92-         92-         92-         92-         92-           GLACIAL TILL: Compact grey sand, with cobbles         92-			-		' \	100		50			-	ļ	-	÷	· · ·	-	-		93-
4.5/m [84.6m]         4.5/m [87.5m]         92         6-         1         0         91           GLACIAL TILL: Compact grey sitly sand, with gravel, and boulders         91			-	$\mathbb{H}$	_						 		· · · · · · · · · · · · · · · · · · ·	• • • • • • •			· · · · · · · · · · · · · · · · · · ·		-
4-57m [8957m]       3       5       92       6-8-3-2       13       0       91-         GLACIAL TILL: Compact grey silty sand, with gravel, cobbles and boulders       5       5       83       8-13-18-19       9       0       90-         GLACIAL TILL: Compact grey silty sand, with gravel, cobbles and boulders       5       5       83       8-13-18-19       9       0       88-         GLACIAL TILL: Compact grey silty sand, with gravel, cobbles       5       5       83       8-13-18-19       9       0       88-         GLACIAL TILL: Compact grey sand, with cobbles       6       5       5       10       2-3-16-43       19       0       88-         Bad boulders       6       5       5       10       2-3-16-43       19       0       88-         Ind of Borehole       7       8       8       19       0       88-       88-         9       9       10       10       10       10       10       10       10       10       10			_	XI	SS	50	3-3-3-2	14		0	-	-	-	÷			-		-
4.57m   89.67m         3       5       92       6-8-3-2       13       0       91         GLACIAL TILL: Compact grey sitly sand, with gravel, cobbles and boulders       4.57m   89.67m         92       6-1       13       9       0       90         GLACIAL TILL: Compact grey sitly sand, with gravel, cobbles and boulders       6       5       83       8-13-16-19       9       0       88         GLACIAL TILL: Compact grey sitly sand, with cobbles and boulders       6       5       10       2-3-16-43       19       0       88         Band boulders       6.7/m   87.5m         7       6       5       10       2-3-16-43       19       9       0       88         Band boulders       6.7/m   87.5m         7       6       7       8       8       88       86       88         9       0       10       10       10       10       19       0       88			2	H			0												92 -
4.57m [38.37m]       3       5       92       6-8-3-2       13       0       91         GLACIAL TILL: Compact grey silty sand, with gravel, cobbles and boulders       5 <td< td=""><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>· · · · · ·</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td></td<>			-								· · · · · ·								-
4.57m [85/7m]       3       7       13       0       91         GLACIAL TILL: Compact grey silty sand, with gravel, cobbles and boulders       4       5       83       8-13-18-19       9       0       90         GLACIAL TILL: Compact, grey sand, with cobbles       5       5       5       5       5       5       5       6       9       0       90         GLACIAL TILL: Compact, grey sand, with cobbles       6       7       5       5       5       5       5       5       6       8       80			-								-		-	-	· · ·				-
4.57m [867m]       4       1       0       91         GLACIAL TILL: Compact grey silty sand, with gravel, cobbles and boulders       5       5       5       5       5       5       1       9       0       88       88-       88       88-       88       88-       88 <td< td=""><td></td><td></td><td>3-</td><td><math>\square</math></td><td></td><td></td><td></td><td></td><td></td><td></td><td> </td><td></td><td> </td><td></td><td></td><td></td><td></td><td></td><td>-</td></td<>			3-	$\square$							 		 						-
4.57m [80.57m]       4         GLACIAL TILL: Compact grey silty sand, with gravel, cobbles and boulders			-	XI	SS 4	92	6-8-3-2	13		0									91-
457m [88,67m] GLACIAL TILL: Compact grey silty sand, with gravel, cobbles and boulders 6.10m [88,14m] 4.57m [80,67m] 6.10m [88,14m] 5.10m [88,14m] 5.10		~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	$\square$			11												-
4.57m [89.67m]       Image: Constraint of the second			4-										: 						-
4.57m [89.67m]       v v v         GLACIAL TILL: Compact grey silty sand, with gravel, v v v       v v v         0 obbles and boulders       v v v         6.10m [88.14m]       v v v         0 obbles       e 10m [88.14m]         v v v v       e 10m			=								-	-	-						90 -
GLACIAL TILL: Compact grey sind, with grave, or very compact grey sind, with cobbles       5	4.57m [ 89.67m ]	<u> </u>	-	$\square$							 		 						-
GLACIAL TILL: Compact, grey sand, with cobbles and boulders       6.10m [88.14m] v v v v v v v v v v v v       0       31       31       89         End of Borehole       7       6       7       6       88 <td>GLACIAL TILL: Compact grey silty sand, with gravel,</td> <td>~ ~ ~ ~ ~ ~ ~ ~ ~ ~</td> <td>5</td> <td>XI</td> <td>SS 5</td> <td>83</td> <td>8-13-18-19</td> <td>9</td> <td>С</td> <td>&gt;</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td>	GLACIAL TILL: Compact grey silty sand, with gravel,	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	5	XI	SS 5	83	8-13-18-19	9	С	>									-
6.10m [88.14m]       VVVV       6         GLACIAL TILL: Compact, grey sand, with cobbles and boulders       6.71m [87.53m]       VVVV         End of Borehole       7         8       8         9       9         9       9         9       10         10       10		~ ~ ~ ~ ~		$\square$			31				-	-	-	÷			-		89-
6.10m [88.14m] <ul> <li>6.10m [88.14m]</li> <li>9</li> <li>6</li> <li>9</li> <li>10</li> <li>2.3-16.43</li> <li>19</li> <li>0</li> </ul> 88           and boulders         6.71m [87.53m] <ul> <li>9</li> <li>0</li> </ul> 0 <ul> <li>88</li> <li>9</li> <li>10</li> <li>2.3-16.43</li> <li>19</li> <li>0</li> </ul> 88 <ul> <li>88</li> <li>9</li> <li>10</li> <li>10</li> <li>10</li> </ul> 19         0 <ul> <li>88</li> <li>88</li> <li>88</li> <li>88</li> <li>88</li> <li>88</li> <li>88</li> <li>88</li> <li>88</li> <li>9</li> <li>10</li> <li>10</li> <li>10</li> </ul> <ul> <li>10</li> <li>10</li></ul>			=																-
GLACIAL TILL: Compact, grey sand, with cobbles       0 <t< td=""><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td>-</td><td>-</td><td>· · ·</td><td></td><td></td><td></td><td>-</td></t<>			-								-		-	-	· · ·				-
and boulders       6.71m [87.53m]       Image: Constraint of the second	<u>6.10m [88.14m]</u>		6-	$\square$						• • • • •			•••••				· · · · · · · · · · · · · · · · · · ·		-
End of Borehole	and houlders	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	XI	9 SS 1	100	2-3-16-43	19		(	S								00
Image: Second control of Borenoie       7 - 1       87 - 1 <td>6.71m [87.53m]</td> <td>~ ~ ~ ~</td> <td>-</td> <td><math>\square</math></td> <td></td> <td></td> <td>19</td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>÷</td> <td>· · ·</td> <td>-</td> <td>-</td> <td></td> <td>-</td>	6.71m [87.53m]	~ ~ ~ ~	-	$\square$			19				-	-	-	÷	· · ·	-	-		-
			7_								: : :		: 				····		-
			=								-	-	-	-					87 —
			-							 - - -			· · · · · ·			•••••	· · · · [· · · · · ·		-
			8-										:						-
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			=										· · · · · ·	·		•••••	· · · · · · · · · · · · · · · · · · ·		-
											-	-	-	÷			-		-
			9_																85-
			=																-
-			40								-	-	-				-		-
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS THE PROPERTY OF PATERSON GROUP AND THE CLIENT FOR WHOM IT WAS PRODUCED. THIS SHEFT SHOULD BE	DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	L E PROF		ULL OF PA	ATER	soi	N GROUP A		CLIF	ENT I	OR	WHON	/ IT V	VAS P	RODUC	ED. T	HIS SHF	ET SHOUI	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA.	READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ort. Pa	TERSC	ON GR	ROUP	PIS	NOT RESPO	ONSIBL	E FOI	R TH	EUN	IAUTH	ORIZ	ZED US	SE OF T	HIS D	ATA.	PAGE	1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5600.2	1				NORTHIN	<b>G</b> : 50	0403	31.	42			E	ELEV	/ATIOI	<b>N</b> : 9	3.94			
PROJECT: Proposed Mixed-Use Development													FII	E N	0. :	P	G42	16		
ADVANCED BY: Track Mounted Drill Rig																_	-	•		
REMARKS:						DATE: D	ecemt	per 1	7,	2024			НС	DLE	NO. :	В	H 7-	24		
					S	AMPLE				■ F	PEN.	RES	IST.	(BLO	WS/0.3	3m)				
							E			20	DCF	<b>יד (5</b> 40	0mn )	n DIA (	. CONE 30	E) 8	0			
	5		ġ		(%)		NEL N	Δ	I	REMO	ULDI	ED S	, SHE/	AR ST	RENG	TH (I	«Pa)		LION NOI	Ē
SAMPLE DESCRIPTION	Ъ	Ē	g		Ϋ́	B	0 2 (§	•		UNDR	AINE	ED S	HEA	RST	RENG	TH (k	Pa)			NO
	RATA	H			<u>S</u>	R R(	۳ ۳		P	20	w	40 ATEI	) R CC		50 NT (%)	<u>ع</u> ا	0 L (%)		ZOM	EVAT
GROUND SURFACE	STI	B	È		Ä	N	M			20		40	)	э <u></u>	50	8	0		뽑응	
<b>TOPSOIL</b> 0.20m [ 93.74m ]		. =	$\overline{\mathcal{A}}$	5			0.4		:					-						-
GLACIAL TILL: Brown silty sand, with gravel,	~ ~ ~ ~ ~	-		₹			34				C	)								=
cobbles and boulders	~ ~ ~ ~ ~	-							-		-			-	· · ·					-
		1-	XI	SS 2	75	13-20-12-8	10		0						:					93-
		=	$\square$	0		32				-	-			-	· · ·					-
<ul> <li>Increasing clay content by 1.5 m depth</li> </ul>		=													· · · · · · · · · · · · · · · · · · ·					-
	~ ~ ~ ~ ~ ~ ~ ~	2	XI	SS	75	4-8-4-4	11		0					-	:					92-
						12					-			-	: :					-
	~ ~ ~ ~ ~	-																		-
		=									-			-						
- Increasing sand content by 3.0 m depth	~ ~ ~ ~ ~ ~ ~ ~	3-							÷.											91-
		-	XI	SS 4	83	1-20-23-16	9		0					-						=
- Grey by 3.5 m deptn 3.71m [90.23m]	<u> </u>	-	$\square$			43														
End of Borehole		4-												] 						90-
		-									-			-			· · ·			-
Practical refusal to augering at 3.71 m depth		=							÷						: : :		· · · · · · · · ·			-
											-			-						80-
		5-													· · · · · · · · · · · · · · · · · · ·					09 -
		=																		-
										-	-			-	· · ·					-
		6-																		88-
		=									-			-						-
		-																		-
										÷				-	:					87-
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		8-																		86-
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		9_																		85-
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		10 -												-						-
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY		ATEF	RSOI	N GROUP A	ND THE	E CLI	IEN	T FOF	R WH	OM I	IT W	AS PI	RODUC	CED.	THIS	SHEE	T SHOUL	04 _D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ort. Pa	TERSC	N GF	ROUF	P IS	NOT RESPO	ONSIBL	E FC	DR -	THE U	NAU	тно	rize	ED US	SE OF	THIS	DATA		D4.65	
																			PAGE:	1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	5672.2 <sup>-</sup>	1			NORTHIN	I <b>G</b> : 500	03946	.75		EL	EVATIO.	N: 94.52		
<b>PROJECT:</b> Proposed Mixed-Use Development										FILE	NO. :	PG4216		
ADVANCED BY: Track Mounted Drill Rig							4-			ноі				
REMARKS:					DATE: L	ecemb	ber 17,	2024						
				S	AMPLE			■ P	EN. RES DCPT (!	SIST. (E 50mm l	BLOWS/0. DIA. CON	3m) E)		
			ä			ENT		20	4	0	60	80	z	_
SAMPLE DESCRIPTION	LOT	÷	2 D	<u>۲</u> (%		LNO			JLDED S	SHEAF SHEAR	STRENG	iTH (kPa) TH (kPa)	IER ICTIC	m) N
	ATA	л) Н	AN	OVEF	RQE	ER C (%)		20	4	0	60	80	OME.	/ATIO
	STR/	DEP.	ΤΥΡΕ	REC	NOF	WAT	P	<sup>2</sup> L (%)	WATE		60	) LL (%)	PIEZ	ELE
									4	0	00	00		-
GLACIAL TILL: Compact, brown silty sand, with clay,	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	A K			22		0						- 10
gravel, cobbles and boulders	0 0 0 0 0 0 0 0 0 0 0 0 0	-												
	~ ~ ~ ~ ~	1—		33	4-9-5-3	25		с				· · · · · · · · · · · · · · · · · · ·		-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	Д,		14			-						-
	~ ~ ~ ~ ~ ~	-	~ ~											93-
	$\nabla \nabla \nabla \nabla$	2-	Ns	67	6-5-4-6 9	14	•••••	0						-
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-						-						-
	~ ~ ~ ~ ~	-										· · · · · · · · · · · · · · · · · · ·		92-
Increasing condicentant by 2.0 m denth	$\nabla \nabla \nabla \nabla$	3-	-											-
- increasing sand content by 5.0 in deptin	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-	Ss Z		12-50-/-/	11	0	)						-
3.53m [90.99m ]	~ ~ ~ ~	-			50/0.00									91-
End of Borenole								-		-				-
Practical refusal to augering at 3.53 m depth		4										· · · · · · · · · · · · · · · · · · ·		-
		-									· · · ·	· · · · · · · · · · · · · · · · · · ·		90 -
		-						-						-
		5-												-
		-										· · · · · · · · · · · · · · · · · · ·		89-
		-						-						-
		6												-
		-						-		-				-
		-												88-
		7-												-
		-						-						-
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		8-												-
		-												-
		-						· · · ·						86-
														-
		9 												-
		-										· · · · · · · · · · · · · · · · · · ·		85-
		- - 10 -						-		-				-
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY		RSC				NT FOR	WHOM	IT WAS		CED. THIS SHEE		D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT	ort. Pa	TERSC	N GROU	JP IS	NOT RESP	ONSIBLI	E FOR	THE UN	IAUTHC	ORIZED	USE OF	THIS DATA.	PAGE: '	1/1



Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	5719.68	3			N	NORTHIN	<b>IG</b> : 50	0401	5.59		ELE	EVATIO	<b>N:</b> 94.18			
<b>PROJECT:</b> Proposed Mixed-Use Development											FILE	NO. :	PG42	16		
ADVANCED BY: Track Mounted Drill Rig														24		
REMARKS:						DATE: L	Decemb	er 1	7, 2024			= NO	рп э-	•24		
					SA	MPLE			■ P	EN. RES DCPT (!	SIST. (BI 50mm D	LOWS/0.3 IA. CONI	3m) E)			
			Ġ				ENT		20	4	0	60	80		NELL	_
SAMPLE DESCRIPTION	LOT	÷	N N	101 24	%) X	~	ONT			JLDED S	SHEAR SHEAR S	STRENG STRENG	iTH (kPa) TH (kPa)			M (m
	ATA I	ы Н	AN		Ц С	RQL	ER C (%)		20	4	0	60	80		STRL	ATIO
	STR	DEP.	ΤYPE		2	N OF	WAT		PL (%)	WATE		ENT (%)	LL (%)		MON	ELE
TOPSOIL 0.25m [93.93m]					+					4	0	00	00		XX	94 -
Hard, brown SILTY CLAY		-	۲				31		· · · · · · · · · · · · · · · · · · ·	0				· · · · · · · ·		-
		-													<b>]</b> _E	=
		1-		2 S	8	Р	25		0				Δ	21 <b>9</b> .9	12 m ¥ 202	5-01-09 -
		-	Д`						· · ·		-					93-
Compact, brown SILTY SAND, with clay, gravel,		-	$\square$	m			23		0				· · · · · · · · · · · · · · · · · · ·		3 E	
cobbles and boulders		2-	1	တ္တ   10	00	2-5-5-3 10	17		0							-
GLACIAL TILL: Dense, brown silty sand, with gravel,		-							· · ·							92-
cobbles and boulders	~ ~ ~ ~ ~	-							· · · · · · · · · · · · · · · · · · ·				• • • • • •			-
2.97m [ 91.21m ]		3_							· · · · · · · · · · · · · · · · · · ·						3 8	
BEDROCK: Excellent to good quality limestone		- -		_					· · ·		-				1 E	91-
		-		ິບ 10	00	RQD 90										
		-							· · ·		-					-
		4-												(		90-
		-													4	52m
		-			00				· · ·		-					-
		5-		œ   '`					· · · · · · · · · · · · · · · · · · ·							80_
		-							· · ·		-					09
		-		~												-
6 17m [ 88 01m ]		6-		සි  <sub>8</sub>	3	RQD 74									6.0	05m –
End of Borehole		-							· · ·		-					88-
		-														-
(GWL at 0.92 m depth - January 9, 2025)		7-														=
		-							· · ·							87-
		-							· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·			-
		-							· · ·							=
		-0														86-
		-												: : : :		-
		-							· · ·		-					-
		9-														85-
		-												: 		-
		-							· · ·		-					-
		10 - FRTV								WHOM		PRODU		SHEE	T SHOU	
READ IN CONJUNCTION WITH ITS CORRESPONDING REP	ORT. PA	TERSO	ON GR	OUP	ISN	NOT RESP	ONSIBL	E FOI	R THE UN	AUTHC	DRIZED	USE OF	THIS DATA	۵. ۱۳۲۲		
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Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	5719.6	8			NORTHIN	<b>NG:</b> 500	04015	5.59		ELE	VATION	<b>1:</b> 94.18		
<b>PROJECT:</b> Proposed Mixed-Use Development										FILE	NO. :	PG421	16	
ADVANCED BY: Track Mounted Drill Rig					D.475 -	<b>.</b> .	10	0004			: NO ·		24	
REMARKS:					DATE: L	Jecemb	er 18	, 2024			. NO		' <b>24</b>	
				S.	AMPLE			• P	EN. RES DCPT (5	0mm DI	A. CONE	im) E)		
	L		Ġ			ENT	•	20	40		60	80		
SAMPLE DESCRIPTION	PLOI	Ê	ž	RY (%			▲		JLDED S AINED S	HEAR S	TRENG	TH (KPa) TH (kPa)		U NC
	ATA	TH (r	E AN	OVE	R RQ	IER (%		20	40		60	80		VATIO
GROUND SURFACE	STR	DEP	Τ	REC	0 Z	NAI	r	20	40		60	80	NON NO	
For soil profile refer to BH 9-24														94 -
		-								· · · · · .				-
		=						-		-			0.94 m <b>V</b> 2	- - 025-01-09
		1												93-
		-												1.45m -
		-						-						-
		2-					•••••					· · · · · · · · · · · · · · · · · · ·		92-
		-												-
2.07m [ 01.21m ]		=						-	· · ·	-				-
End of Borehole		3-								····				2.97m -
		-								:				
Practical refusal to augering at 2.97 m depth		=						-		-				-
(GWL at 0.94 m donth January 9, 2025)		4-					•••••	•••••	•••••••••••••••••••••••••••••••••••••••	· · · · · . :		· · · · · · · · · · · · · · · · · · ·		90-
(GWE at 0.94 In depth - January 9, 2023)		-												
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		-						-		-				85-
		=						· · · · · · · · · · · · · · · · · · ·		•••••				
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	e prof Drt. pa	PERTY	OF PATE	rso JP IS	N GROUP / NOT RESP	AND THE PONSIBLE	E CLIEI E FOR	NT FOR	WHOM I NAUTHO	IT WAS RIZED L	PRODUC	ED. THIS S THIS DATA.	SHEET SHO	ULD BE



#### SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 **ELEVATION: 93.82** EASTING: 435692.30 NORTHING: 5004138.10 **PROJECT:** Proposed Mixed-Use Development FILE NO. : PG4216 ADVANCED BY: Track Mounted Drill Rig HOLE NO.: BH11-24 **REMARKS:** DATE: December 18, 2024 PEN. RESIST. (BLOWS/0.3m) SAMPLE DCPT (50mm DIA. CONE) MONITORING WELL 20 40 80 60 CONTENT CONSTRUCTION ġ %) ELEVATION (m) **REMOULDED SHEAR STRENGTH (kPa)** STRATA PLOT Δ SAMPLE DESCRIPTION RECOVERY UNDRAINED SHEAR STRENGTH (kPa) ▲ **LYPE AND DEPTH** (m) N OR ROD % WATER ( 80 20 40 60 PL (%) WATER CONTENT (%) LL (%) 20 80 GROUND SURFACE 40 60 TOPSOIL 0.25m [ 93.57m ] 30 Ò Very stiff, brown SILTY CLAY A 93 180 3 100 Р 0 47 92 SS V 2 Δ14 9' 3 >12 26 C ∕∆72 ന - Grey by 3.4 m depth ŝ 75 Ρ 22 0 3.66m [ 90.16m ] GLACIAL TILL: Loose to dense, grey silty sand, with 90 4 SS 4 clay, gravel, cobbles and boulders 67 0 0-1-1-/ 15 2 ۱O 89 67 2-3-3-5 12 0 SS 5 6 88 6 10m SS 6 **v v** 42 13-21-50-/ v v 11 Ö ~ ~ 6.53m [ 87.29m ] 71/0.23 End of Borehole 87 7 Practical refusal to augering at 6.53 m depth (GWL at 1.98 m depth - January 9, 2025) 86 8 85 9 84 10 DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS THE PROPERTY OF PATERSON GROUP AND THE CLIENT FOR WHOM IT WAS PRODUCED. THIS SHEET SHOULD BE READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA. PAGE: 1/1



Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

<b>PROJECT:</b> Drepsed Mixed Lies Development	
FILE NO.: PG4216	
ADVANCED BY: Track Mounted Drill Rig	
REMARKS: DATE: December 18, 2024 HOLL NO BH 12-24	
SAMPLE PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE)	
	Ē
SAMPLE DESCRIPTION $\begin{bmatrix} 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 \\ 2 $	UN (
$\left  \begin{array}{c} \mathbf{E} \\ \mathbf{E} \\$	VATIC
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
TOPSOIL 036m [93 57m]	-
Hard, brown SILTY CLAY	
	03_
	5-01-09 - 
$\overrightarrow{P}$ $\overrightarrow{S}$ 100 P 54 25 54 199	
	92-
- Silt content increasing by 3.0 m depth	91-
<u>3.73m[90.20m]</u>	
GLACIAL TILL: Compact, grey silty clay, with sand,	90
gravel, cobbles and boulders $v v v$ v v v	-
	-
cobbles and boulders, trace clay $\overline{v \cdot v \cdot} = 5$	89-
$\begin{bmatrix} v & v & v \\ v & v & v \\ v & v & v \\ v & v &$	-
	88-
	-
	-
	<sup>-</sup> <sup>.86m</sup> o7—
End of Borehole	
(GWL at 1.08 m depth - January 9, 2025)	
	86
	85-
	84 — I D R⊏
READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA.	



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5783.2	0			NORTHIN	<b>IG:</b> 500	)422	0.10		E		<b>FION</b> :	93.50			
<b>PROJECT:</b> Proposed Mixed-Use Development										FIL	E NO.	:	PG42	16		
ADVANCED BY: Track Mounted Drill Rig																
REMARKS:		,			DATE: D	Decemb	er 1	9, 2024		HC	DLE NO	). :	BH12	A-24	ł	
				\$	SAMPLE			■ F	EN. RES	SIST.	(BLOW	S/0.3n	n)			
						F		20	DCPT (: 4	<b>50mm</b> 0	1 DIA. C 60	ONE)	80		_	
SAMPLE DESCRIPTION	5		NO.	(%)		NTEN	Δ	REMO	ULDED	SHEA	R STR	ENGT	H (kPa)		TION	Ē
	ЪГ И	Ē	QN	ER	8	о %				SHEA		NGTH	l (kPa)		RUC	NOL
	RAT/	H	E A	≥	R R	TER )		PL (%)	WATE	R CO	NTENT	(%)	LL (%)			EVAL
GROUND SURFACE	STI	В	Σ	R	z	<b>A</b> N		20	4	0	60		80		≣S	
For soil profile refer to BH 12-24																:
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																91-
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Brown SILTX CLAX, with high silt contant		3-										••••	••••			-
Brown SILT F CLAT, with high sin content			TW 1	96	3											
3.80m [ 89.70m ]			_													90-
GLACIAL TILL		4-	12													-
4 42m [ 89 08m ]	~ ~ ~ ~ ~ ~ ~ ~ ~ ~		MT N	62	2						· · ·		· · ·			
End of Borehole																89-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	L E PROF	PERTY (		RS			CLIF		R WHOM	IT W	AS PRO	DUCF	D. THIS	SHEF	T SHOUI	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ORT. PA	TERSO	N GROL	JP IS	S NOT RESP	ONSIBLI	E FO	R THE U	NAUTHC	ORIZE	DUSE	OF TH	IIS DATA		PAGE:	1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5783.2	C			NORTHI	NG: 50	0422	0.10		EL	EVATION	<b>N:</b> 93.50		
<b>PROJECT:</b> Proposed Mixed-Use Development										FILE	NO. :	PG42	16	
ADVANCED BY: Track Mounted Drill Rig													D 01	
REMARKS:					DATE:	Jecemb	per 19	9, 2024				DUIT	D-24	
				S	AMPLE			■ F	PEN. RES DCPT (5	5IST. (B 50mm D	LOWS/0.3 DIA. CONE	im) E)		
						L.		20	40	)	60	80		
SAMPLE DESCRIPTION	LO T		ON 0	۲ (%)		ONTE		REMO			STRENG	TH (kPa)		
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	TRA	EPTI	ΥPE	ECO ECO	R	ATE		PL (%)	WATE	R CON	TENT (%)	LL (%)		
GROUND SURFACE	S		-	œ	z	5		20	40	)	60	80	C	УШ
For soil profile refer to BH 12-24										-				-
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2.74m[90.76m]		-	_							-				-
Brown SILTY CLAY		3_	V 1	92							••••			-
3.35m [ 90.15m ]	XX/	-								-				-
End of Borehole		-						· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·		90-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH		PERTY (		RSO				ENT FOR				ED. THIS S	SHEET SHO	ULD BE
	JINI. F <i>P</i>					UNUDL							PAGE	: 1/1



Supplemental Geotechnical Investigation 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	35792.21 NORTHING: 5004358.09 ELEVATION: 93.96															
<b>PROJECT:</b> Proposed Mixed-Use Development											FIL	E NO. :	PG42	216		
ADVANCED BY: Track Mounted Drill Rig									0 000		но		BH11	2-21		
REMARKS:						DATE: D	ecemb	er	9, 2024				2m	13-24		
					S	AMPLE				DCPT (	50mm	DIA. CON	.sm) IE)			
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SAMPLE DESCRIPTION		Ê	Ž				▲		RAINED	SHEA	R STRENG	GTH (kPa) GTH (kPa)			u) NC	
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GROUND SURFACE	STR	Б	∣₽		REC	0 N	MA		20	4	0	60	80	,	PIEZ	
Hard to very stiff, brown SILTY CLAY	XX		М	-	50	4442	26			•						-
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1.45m [92.51m]		-									· · · · · ·					-
GLACIAL TILL: Compact, brown slity clay, with sand,	0 0 0 0 0 0 0 0 0 0 0 0	-	M	S 2	92	1-2-8-9	14		0	-	· · ·		· · ·			
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- Silty sand, with clay, gravel, cobbles and boulders	~ ~ ~ ~ ~	-	XI	SS 4	67	5-8-18-16	12		0	-	· · ·		· · · · · · · · · · · · · · · · · · ·			
Sy 0.0 m depth 3.66m [90.30m]	<u>~~~</u>	-	А			26										-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS THI	l E PROF	10 - PERTY	OF P4		l ISOI	N GROUP A			ENT FO	RWHOM	IT WA		ICED, THIS	SHFF	TSHOU	∣ 84 _ _D BF
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ort. Pa	TERSC	N GF	ROUF	PIS	NOT RESPO	ONSIBL	E FO	R THE L	JNAUTHO	ORIZE	D USE OF	THIS DAT	A.		1/1



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

								FILE	NO. :	PG4216	
			DATE:	Decemb	er 19	, 2024		HOL	E NO. :	BH13A-2	24
		s	AMPLE			<i>,</i> ■ P	EN. RES	IST. (BI	LOWS/0.	3m)	
				F		20	40 DCPT	0 <b>mm D</b> )	60	<b>E)</b> 80	
	ġ	(%)		NTEN	Δ	REMO	JLDED S	HEAR	STRENG	GTH (kPa)	m) TION
(E)	AND	/ERY	gg	د co (%)	•	UNDR. 20	AINED S 40	HEAR :	STRENG 60	6 <b>TH (kPa)</b> 80	METE
EPT	Ę		ORF	ATE	l	PL (%)	WATE		FENT (%	) LL (%)	
	F-	~	z	3	;	20	40	)	60	80	
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## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 43	6034.9	3			NORTHIN	<b>G</b> : 50	0403	7.45		EL	EVATION	: 93.95		
PROJECT: Proposed Mixed-Use Development										FILE	NO. :	PG4216		
ADVANCED BY: Track Mounted Drill Rig														
REMARKS:					DATE: D	ecemb	er 1	9, 2024		HOL	E NO. :	BH14-24		
				5	SAMPLE			■ F	EN. RES	SIST. (B	LOWS/0.3r	n)		
						F		20	DCPT (	<b>50mm L</b> 0	DIA. CONE) 60	80		
SAMPLE DESCRIPTION	5		ŇO.	ERY (%)	e e	NTEN	Δ	REMO	ULDED	SHEAR	STRENGT	H (kPa)	m 10N	
	A PL	Ē	QN			со %)	<b></b>			SHEAR STRENGTH (kPa)				;
	RAT	PTH	FE /	00	OR R	VTER )		PL (%)	WATE		TENT (%)	LL (%)		
GROUND SURFACE	ST	В	≥	R	z	۸۷ ۲		20	4	0	60	80		1
For soil profile refer to TP 6								· · ·						-
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		-						· · ·						-
		2											92	2-
2.29m [91.66m]		-						· · ·				>121		
very sun, brown SILT F CLAY, with high sin content		-	X Iss	83	Р	36		22  -	1°	<b>Δ</b> 43				-
2.97m [ 90.98m ]		3_											91	1-
GLACIAL TILL: Dense to compact, brown silty clay,			$\bigtriangledown$									>121		-
with sand, gravel, cobbles and boulders	~ ~ ~ ~ ~	-	$\mathbb{N}^{\mathbb{N}}$	50	5-12-6-3	11		0					Ī	-
														-
		4-	SS SS	33	4-3-2-2	10		C					90	1-
		-	$\square$		5			· · ·						
- Silty sand by 4.2 m depth	~ ~ ~ ~ ~	-	√ 4											-
5 19m [ 99 77m ]		5-	$\mathbb{X} \mathbb{X}$	42	23-26-20-16 46	12		0					89	) —
End of Borehole	<u> </u>	7	<u> </u>											-
		-												-
		6						· · ·					88	
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READ IN CONJUNCTION WITH ITS CORRESPONDING REP	ORT. PA	TERSO	N GRO	JP IS	NOT RESP	ONSIBL	E FO	R THE U	NAUTHO	DRIZED	USE OF TI	HIS DATA.		-
													PAGE: 1/1	



## SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 436	6034.9	3			NORTHI	<b>NG:</b> 500	04037.45	ELEVATION	<b>1:</b> 93.95					
PROJECT: Proposed Mixed-Use Development								FILE NO. :	PG4216					
ADVANCED BY: Track Mounted Drill Rig														
REMARKS:					DATE: I	Decemb	er 19, 2024	HOLE NO. :	BH14A-2	4				
				5	SAMPLE		PEN. RES	SIST. (BLOWS/0.3	m)					
						5	20 4	50mm DIA. CONE 0 60	:) 80					
	Б		Ň	(%)		TEN		SHEAR STRENG	TH (kPa)	m (m)				
SAWIFLE DESCRIPTION	Ъ	<u>ا</u>	R	l Y	B	<u>%</u> د		SHEAR STRENG	H (kPa)	RUC <sup>-</sup>				
	₹AT¢	PTH	E A	S S	R R	TER	20 4 PL (%) WATE	R CONTENT (%)	80 LL (%)					
GROUND SURFACE	STI	B	Σ	۳.	z	M	20 4	0 60	80					
For soil profile refer to TP 6									· · ·					
								· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·					
		1_								93 -				
							· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·					
		2								92-				
2.29m [ 91.66m ]														
Brown SILTY CLAY			5	06					· · · · · · · · · · · · · · · · · · ·					
2.90m [ 91.05m ]	IX.		Þ	90										
End of Borehole		3-							····	91-				
									· · · · · · · · · · · · · · · · · · ·					
		4						· · · · · · · · · · · · · · · · · · ·		90 -				
									· · · · · · · · · · · · · · · · · · ·					
		-												
		5_								89-				
									· · · · · · · · · · · · · · · · · · ·					
		6								88-				
									····					
		7-							· · · · · · · · · · · · · · · · · · ·	87-				
		-												
		8-								86-				
									· · · · · · · · · · · · · · · · · · ·					
										OF				
		9_								00-				
								· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·					
		10 -								84_				
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH READ IN CONJUNCTION WITH ITS CORRESPONDING REP	e prof ort. Pa	VERTY (	of Pate N groi	:RSC JP IS	ON GROUP S NOT RESE	AND THE PONSIBLE	E CLIENT FOR WHOM	TT WAS PRODUC	ED. THIS SHEE	I SHOULD BE				
						5				PAGE: 1/1				
natorsonar		ın	Con	sulting	g	SOIL	_ PRO	FILE	ΞA	ND	TE	ST C	ΑΤΑ	
--	-------	-------------------------	--------	-----------	-------	--	------------------------------------	------------------	---------------------	---------------------------------------	---------------------	--------------------------	---------------	-----------------
9 Auriga Drive, Ottawa, Ontario K2E 7T9		μ	Eng	ineers	( 	Geotechnic Proposed F Ottawa, Or	cal Invest Residenti Intario	tigati ial De	on velo	pme	ent - E	Eagles	son Roa	ad
EASTING: NORTHING:				ELEV	ATIC	DN: 94.237	7			FI	LE NO	F	PG421	6
REMARKS:						E. 2021	March 10	<b>,</b>		н	OLE NO	).		_21
	Ц		SAN	IPLE	DAT	<u>E: 20211</u>		, Pe	en. R	lesis	st. Bl	ows /	0.3m	
SAMPLE DESCRIPTION	A PLO		~	<u>کر</u>	ш	DEPTH (m)	ELEV. (m)		• 5	60 m	m Dia	a. Coi	ne	
	RAT/	ГҮРЕ	JMBEF	SOVEF		יר אמו			0 V	Vate	er Coi	ntent	%	NSTR
GROUND SURFACE	ST	~	۲ ۲	REC	z	<b>0</b> -	-94.24		20	4	0	60	80	ο
TOPSOIL														<u>      </u>
		& AU	1											
		$\overline{\mathbf{N}}$												
Very stiff, brown SILTY CLAY		ss	2	100	7	1-	-93.24							
		Δ												
		$\overline{\mathbf{N}}$												
CLACIAL THE Compact site		ss	3	100	16	6								<u>11111</u>
some sand and clay, trace gravel		$\Lambda$				2-	-92.24							
GLACIAL TILL: Dense, brown silty sand with gravel, cobbles														
and boulders		55	4	8	+5	0								
						3-	-91.24							
		$\overline{\mathbf{N}}$												
- some running sand present by		ss	5	100	34	1								
3.5m depth3.66		$\square$												
(GWL @ 0.15m - March 31, 2021)														
										· · · · · · · · · · · · · · · · · · ·				
									20	4	0	<b>60</b>	80 1	   <b>00</b>
									<b>She</b> Undis	<b>ar S</b> turbe	<b>treng</b> d ∠	<b>jth (kl</b> ∆ Remo	Pa) oulded	

natorsonar		ır	Cons	ulting		SOII	_ PRO	FILE AI	ND TEST	T DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7T	9 9		Engi	neers	Ge Pro	otechnic oposed F	cal Invest Residenti	igation al Develo	pment - Eaç	gleson Roa	ad
EASTING: NORTHING	<b>3</b> :			ELEVA		94.237	7		FILE NO.	PG4210	6
REMARKS:									HOLE NO.		
BORINGS BY: CME 55 Power Auger				D	ATE:	2021 I	March 19			BH 1S-	21 
SAMPLE DESCRIPTION	PLOT		SAM	PLE ≻		DEPTH (m)	ELEV. (m)	Pen. R ● 5	esist. Blow 0 mm Dia. (	rs / 0.3m Cone	ICTION
	RATA	LYPE	MBER	% SOVER		. ,		• <b>v</b>	later Conte	ent %	UITORI N NSTRU
GROUND SURFACE	ST		N	REC	z °	0	04.24	20	40 60	80	NON NO
TOPSOIL 0.3	0					0-	-94.24				
Very stiff, brown <b>SILTY CLAY</b>						1-	-93.24				
<b>GLACIAL TILL:</b> Compact silt, some sand and clay, trace gravel End of Borehole	3					2-	-92.24				
(GWL @ 0.16m - March 31, 2021)								20	40 60	80 11	00

natorsona		ır	Con	sulting	1	SOII	_ PRO			<b>F DATA</b>	
9 Auriga Drive, Ottawa, Ontario K2E 7	т9		Eng	ineers	G P	Seotechnic Proposed F	cal Invest Residenti otario	tigation ial Develop	oment - Eag	gleson Road	d
EASTING: NORTHIN	G:			ELEV	ATIO	N: 93.908	8		FILE NO.	PG4216	;
REMARKS:									HOLE NO.		
BORINGS BY: CME 75 Power Auger		1			DATE	<u>: 2021 I</u>	March 19	)		BH 2-21	 
SAMPLE DESCRIPTION	PLOT		SAN	/IPLE		DEPTH	ELEV.	Pen. Re ● 50	esist. Blow ) mm Dia.	rs / 0.3m Cone	G WEL
	RATA	ΥΡΕ	MBER	% OVER\	/ALUE			• w	ater Conte	ent %	ITORIN NSTRU
GROUND SURFACE	STI		Ŋ	REC	źð	5	00.04	20	40 60	80	MON
TOPSOIL						- 0-	-93.91				
0.:	<u>25 (^^^^</u>	AU	1								
Very etiff to etiff, brown SILTY		糉 1 1									
CLAY, trace sand		ss	2	92	4	1-	-92.91				<u>երրիրերի</u>
											<u>լիկկկկկ</u>
		ss	3	100	2						
2.1	21					2-	-91.91				
<b>GLACIAL TILL:</b> Brown silty clay some sand, gravel, cobbles and		ss	4	75	4						
boulders						3-	-90.91				
		ss	5	17	3						
End of Borehole	<u>56 \^^^^</u>										
(GWL @ 0.32m - March 31, 2021)											
								20 Shea ▲ Undistu	40 60 r Strength µrbed △ R	80 10 ( <b>kPa)</b> emoulded	0

natersonar		In	Con	sulting	3	SOIL	PRO	FILE AND 1		
9 Auriga Drive, Ottawa, Ontario K2E 7TS	,		Eng	ineers	F	Geotechnic Proposed F Ottawa Or	al Invest Residenti Intario	igation al Developmen	t - Eagleson Ro	ad
EASTING: NORTHING	:			ELEV	ATIO	<b>DN:</b> 92.787	7	FILE	NO. PG421	16
REMARKS:					_	- 0004 1	Acres 40	HOL	E NO.	24
BORINGS BY: CME 75 Power Auger	F		<b>6 A A</b>		DATI	E: 2021 M	March 19	Den Desist	BH 3-2	21
SAMPLE DESCRIPTION	A PLO		SAN M		ш	DEPTH (m)	ELEV. (m)	● 50 mm	Dia. Cone	
	TRAT	ТҮРЕ	UMBE	% cove	I VALU	0 אמר		○ Water	Content %	NITOR ONSTE
GROUND SURFACE	S XX	×	z	R	2	- 0-	-92.79	20 40	60 80	E E
			1							
		ss	2	100	6	1-	-91.79			
Very stiff to stiff, brown <b>SILTY</b>										
		SS	3	50	4	2-	-90.79			
		ss	4	75	3					
3.12					U	3-	-89.79			
Stiff, grey SILTY CLAY		SS	5	100	2					
End of Borehole										
								20 40 Shear Str	60 80 ength (kPa)	100
								Shear Stro	ength (kPa) △ Remoulded	

natorsonar		ın	Con	sulting	,	SOIL	L PRO			<b>F DATA</b>	
9 Auriga Drive, Ottawa, Ontario K2E 7T9			Eng	ineers	F	Geotechnic Proposed F Ottawa. Or	cal Invest Residenti ntario	igation al Develo	oment - Eag	gleson Roa	ad
EASTING: NORTHING: DATUM: Geodetic				ELEV	ATIO	on: 94.514	4		FILE NO.	PG421	6
REMARKS:					~ • • •	- 2024	Marah 22		HOLE NO.		21
BORINGS BY: CIVIE 55 Power Auger	F		SVW		JAI	<u>=: 20211</u>		Don D	Legist Play	<u>БП 4</u> D-	
SAMPLE DESCRIPTION	A PLC				ш	DEPTH (m)	ELEV. (m)	• 5	0 mm Dia.	Cone	ING WE
	RAT/	LγPE	MBE	% SOVEF				• <b>N</b>	later Conte	ent %	VITOR
GROUND SURFACE	ST		Ŋ	REC	z (	<b>&gt;</b> 0-	-94 51	20	40 60	80	NON MO MO NO
TOPSOIL						0	04.01				
		₩ AU	1								The second secon
Vary stiff to stiff, brown SILTY											
CLAY, trace sand			2	50	Б	1-	-93.51				
			2	50	5						
		17									
		ss	3	50	11						
		$\langle \rangle$				2-	-92.51				
2.36											
2. <u>30</u>											
		ss	4	58	20						
GLACIAL TILL: Brown silty clay with sand, gravel, cobbles and		Д									
boulders		17				3-	-91.51				
3.38		ss	5	8	+50	C					
End of Borehole											
Practical refusal to augering at 3.38m depth											
(GWL @ 0.29m - March 31, 2021)											
								20	40 60	80 1	 00
								Shea	ur Strength urbed △ R	<b>(kPa)</b> emoulded	

natersonar		ır	Con	sulting		SOII	_ PRO	FILE AN	ID TEST	DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7T9		<b>~</b>	Eng	ineers	G Pi O	eotechnic roposed F ttawa	cal Invest Residenti ntario	tigation ial Develop	ment - Eag	leson Roa	d
EASTING: NORTHING:				ELEVA		N: 94.514	4		FILE NO.	PG4216	3
REMARKS:									HOLE NO.		
BORINGS BY: CME 55 Power Auger	L_			D	ATE	: 2021 I	March 22	2		BH 4S-2	21
SAMPLE DESCRIPTION	PLO1		SAN	MPLE ►		DEPTH (m)	ELEV. (m)	Pen. Re • 50	sist. Blows mm Dia. C	s / 0.3m Cone	NG WEL
	RATA	ΓYPE	IMBER	% SOVER	VALUE r RQD			• W	ater Conte	nt %	VITORI
GROUND SURFACE	ST		NN	REC	z °		01 51	20	40 60	80	
TOPSOIL						0-	94.51				
Very stiff to stiff, brown <b>SILTY</b> <b>CLAY,</b> trace sand							02.54				
						1-	-93.51				
<u>2.13</u>						2-	-92.51				
End of Borehole											
(GWL @ 0.30m - March 31, 2021)											
								20 Shea ▲ Undistu	40 60 r Strength rbed △ Re	80 10 (kPa) emoulded	)0

natorsonar		ır	Con	sulting	3	SOIL	_ PRO		ND TEST	DATA
9 Auriga Drive, Ottawa, Ontario K2E 7T9			Eng	ineers	F	Geotechnic Proposed F Ottawa, Or	cal Invest Residenti ntario	tigation ial Develor	oment - Eag	leson Road
EASTING: NORTHING	:			ELEV	ATIO	N: 94.212	2		FILE NO.	PG4216
REMARKS:						- 0004			HOLE NO.	
BORINGS BY: CME 55 Power Auger	F		CAN		DATE	E: 2021 I	March 22			BH 5-21
SAMPLE DESCRIPTION	A PLO				ш,	DEPTH (m)	ELEV. (m)	● 50	) mm Dia. (	
	TRAT	ТҮРЕ	UMBE	ECOVE	N VALU			• <b>w</b>	ater Conte	nt %
	<b>0</b>	×	~	<b>T</b>	_	- 0-	-94.21	20	40 60	
0.23		AU	1							
Very stiff to stiff, brown <b>SILTY</b> <b>CLAY,</b> trace sand		ss	2	58	5	1-	-93.21			
									· · · · · · · · · · · · · · · · · · ·	
		SS	3	50	5	2-	-92.21			
2. <u>4</u> 9		ss	4	100	6					
<b>GLACIAL TILL:</b> Brown silty clay with sand, gravel, cobbles and boulders						3-	-91.21			
3.66		SS	5	42	7					
(GWL @ 0.30m - March 31. 2021)										
								20 Shea	40 60 r Strength	80 100 (kPa)

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9 Auriga Drive, Ottawa, Ontario K2E 7T		~ P	Eng	jineers	( F (	Geotechnic Proposed F Ottawa. Or	al Invest Residenti ntario	tigation tial Development - Eagleson Road
EASTING: NORTHING	:			ELEVA	ATIC	<b>DN:</b> 94.044	4	FILE NO. PG4216
REMARKS:				_		- 0004	Manah 00	HOLE NO.
BORINGS BY: CME 55 Power Auger	F		<b>6</b> 4 4		DATI	E: 2021 r	viarch 22	
SAMPLE DESCRIPTION	A PLO		SAN 22		ш,	DEPTH (m)	ELEV. (m)	● 50 mm Dia. Cone
	TRAT	ТҮРЕ	NUMBE	ECOVE		יא עד דעד דיר		• Water Content %
		8	~	2	_	- 0-	94.04	
0.25		AU	1					
Very stiff to stiff, brown <b>SILTY</b> CLAY		ss	2	100	5	1-	-93.04	
		ss	3	33	1	2-	-92.04	
<b>GLACIAL TILL:</b> Compact to dense, brown silty clay with sand, gravel, cobbles and boulders		ss	4	75	9			
3.66		ss	5	50	33	3-	-91.04	
End of Borehole (GWL @ 0.26m - March 31, 2021)	<u> </u>							
								20 40 60 80 100 Shear Strength (kPa) ▲ Undisturbed △ Remoulded

natersonar		In	Con	sulting	3	SOIL	- PRO	FILE AI	ND TES	T DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7T	·9		Eng	ineers	P C	Seotechnic Proposed F Ottawa Or	cal Invest Residenti Intario	tigation ial Develo	pment - Ea	gleson Roa	d
EASTING: NORTHING	6:			ELEV	ATIO	N: 93.623	3		FILE NO.	PG421	6
REMARKS:						2021 M	March 22	2	HOLE NO.	BH 7D	21
	ot		SAN	IPLE	DATE	. 20211		Pen. R	esist. Blov	vs / 0.3m	
SAMPLE DESCRIPTION	A PL(		۴	۲	ш,	DEPTH (m)	ELEV. (m)	• 5	0 mm Dia.	Cone	
	<b>IRAT</b>	ТҮРЕ	JMBE	covel	VALU			• <b>v</b>	later Conto	ent %	NITOR
GROUND SURFACE	S S	- &	ž	RE	z	- 0-	-93.62	20	40 60	80	<u>ş</u> ŭ El E
			1								ներերերերեր Ուրեւներեր
		ss	2	33	9	1-	-92.62				<u>երերերերերի։</u> Արերերերեր
Very stiff to stiff, brown <b>SILTY</b> CLAY		ss	3	17	4						
						2-	-91.62				
		SS	4	50	6	3-	-90.62				
<b>GLACIAL TILL:</b> Brown silty clay with sand, gravel, cobbles and	5	ss	5	67	6						
boulders 3.6 End of Borehole	6 <u>`^^^^</u>							20	40 60	80 1	00
								▲ Undist	surbed $\triangle R$	Remoulded	

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9 Auriga Drive, Ottawa, Ontario K2E 7T9			Eng	ineers	G	eotechnic roposed F	cal Invest Residenti	tigation ial Develo	pment - E	agleson Roa	ıd
EASTING: NORTHING:				ELEVA		I: 93.623	3		FILE NO.	PG4210	6
REMARKS:									HOLE NO		
BORINGS BY: CME 55 Power Auger				0	ATE:	2021	March 23	8		BH 7S-	21
SAMPLE DESCRIPTION	PLOT		SAN			DEPTH	ELEV.	Pen. R ● 5	esist. Blo 0 mm Dia	ws / 0.3m . Cone	G WEL CTION
	RATA	ΥPE	MBER	% OVER1		(,	(,	0 <b>V</b>	later Con	tent %	ITORIN
GROUND SURFACE	STI	-	NN	REC	źö	0	02.62	20	40 6	0 80	MON
							-93.02				
Very stiff to stiff, brown <b>SILTY</b> CLAY						1-	-92.62				
2.13						2-	-91.62				
End of Borenole								20 Shea	40 6 ar Strenot	0 80 10 h (kPa)	00

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9 Auriga Drive, Ottawa, Ontario K2E 7T	9	μ	Eng	ineers	( 	Geotechnic Proposed F Ottawa, Or	al Invest Residenti Intario	tigation tial Development - Eagleson Road
EASTING: NORTHING	:			ELEV	ATIC	<b>DN:</b> 94.047	7	FILE NO. PG4216
REMARKS:								HOLE NO.
BORINGS BY: CME 75 Power Auger	<b>F</b>				DAT	E: 2021 [	March 23	3 BH 8-21
SAMPLE DESCRIPTION	A PLO		SAN	APLE	ш	DEPTH (m)	ELEV. (m)	● 50 mm Dia. Cone
	TRAT	түре	UMBER	% COVE		סר אנגר		○ Water Content %
GROUND SURFACE	0 \	—	z	R	2	- 0-	-94.05	
TOPSOIL 0.2	5	AU	1					
Very stiff to stiff, brown <b>SILTY</b> CLAY		ss	2	100	2	1-	-93.05	
		$\overline{\mathbb{N}}$						
2.13	3	SS	3	100	12	2 2-	-92.05	
<b>GLACIAL TILL:</b> Compact, brown silty clay with sand, gravel, cobbles and boulders		SS	4	58	23	3		
<u>3.2</u> (	D					3-	-91.05	
GLACIAL TILL: Compact, brown silty sand with gravel, clay, cobbles and boulders3.66	5 \^^^^^	ss	5	58	24	ł		
End of Borehole								
(GWL @ 0.49m - March 31, 2021)								20 40 60 80 100 Shear Strength (kPa) ▲ Undisturbed △ Remoulded

natersonar		ır	Con	sulting	3	SOIL	_ PRO	FILE AND TEST DATA
9 Auriga Drive, Ottawa, Ontario K2E 7	-79 -79		Eng	ineers	P	Geotechnic Proposed F	cal Invest Residenti otario	tigation ial Development - Eagleson Road
EASTING: NORTHING	G:			ELEV	ATIO	N: 94.20	9	FILE NO. PG4216
REMARKS:						0004		HOLE NO.
BORINGS BY: CIME 55 Power Auger	T		SAN		DATE	: 20211	viarch 23	DD 9-21
SAMPLE DESCRIPTION	A PLC				ш	DEPTH (m)	ELEV. (m)	● 50 mm Dia. Cone
	TRAT	ТҮРЕ	UMBEF	cover	I VALU			• Water Content %
GROUND SURFACE	0 ^^^^^	8	z	RE	Z	- 0-	-94.21	
0.2	0 ^^^^		1					
Very stiff to stiff, brown <b>SILTY</b>		ss	2	100	2	1-	-93.21	
CLÁY								
		ss	3	75	2	2-	-92.21	
GLACIAL TILL: Compact, brown silty sand with gravel, clay,		ss	4	50	23			
cobbles and boulders	0	× ss	5	8	+50	3-	-91.21	
(GWL @ 0.68m - March 31, 2021)								
								20 40 60 80 100   Shear Strength (kPa) △ Remoulded

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9 Auriga Drive, Ottawa, Ontario K2E 7T9			Eng	ineers	G P	eotechnic roposed F	al Invest Residenti Intario	stigation tial Development - Eagleson Road
EASTING: NORTHING: DATUM: Geodetic				ELEV	ATIO	N: 94.076	6	FILE NO. PG4216
REMARKS:								HOLE NO.
BORINGS BY: CME 55 Power Auger					DATE	:: 2021 N	March 23	3 BH10D-21
SAMPLE DESCRIPTION	PLOT		SAN	MPLE ≻		DEPTH (m)	ELEV. (m)	Pen. Resist. Blows / 0.3m ● 50 mm Dia. Cone
	RATA	YPE	MBER	% OVER	VALUE r ROD			○ Water Content %
GROUND SURFACE	ST		D Z	REC	z °		04.00	20 40 60 80
TOPSOIL 0.23		AU	1			_ 0-	-94.08	
Very stiff to stiff, brown <b>SILTY</b> CLAY		ss	2	75	8	1-	-93.08	
		ss	3	100	4	2-	-92.08	
sand, gravel, cobbles and boulders		ss	4	100	6			
3.66		ss	5	75	7	3-	-91.08	
3.66 End of Borehole (GWL @ 0.72m - March 31, 2021)								
								20 40 60 80 100 Shear Strength (kPa) ▲ Undisturbed △ Remoulded

natorsonar	,	SOII	L PRO		ND TES	T DATA					
9 Auriga Drive, Ottawa, Ontario K2E 7T9			Engi	ineers	F	Geotechnic Proposed F	cal Invest Residenti	tigation ial Develor	oment - Ea	agleson Roa	ad
EASTING: NORTHING:				ELEV		<b>DR:</b> 94.076	6		FILE NO.	PG421	6
REMARKS:									HOLE NO.		
BORINGS BY: CME 55 Power Auger	<b>_</b>			[	DATI	E: 2021 I	March 23	3		BH10S	-21
SAMPLE DESCRIPTION	PLO1		SAN	IPLE ►		DEPTH (m)	ELEV. (m)	Pen. Re ● 50	esist. Blov ) mm Dia.	ws / 0.3m . Cone	NG WEL
	RATA	ΥPE	MBER	% OVER				• w	ater Cont	tent %	UITORII NSTRI
GROUND SURFACE	ST	L	N N	REC	z (	• 0-	-01 08	20	40 60	) 80	MON MON
TOPSOIL 0.23						0	94.00				
Very stiff to stiff, brown <b>SILTY</b> CLAY						1-	-93.08			·····	
2.13						2-	-92.08			· · · · · · · · · · · · · · · · · · ·	
End of Borehole											
(GWL @ 0.49m - March 31, 2021)											
								20 Shea ▲ Undist	40 60 r Strengt	) 80 1 h (kPa) Remoulded	00

natorsonar		ın	Con	sulting	1	SOIL	_ PRO	FILE AN		T DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7T	9		Eng	ineers	F	Geotechnic Proposed F Ottawa, Or	cal Invest Residenti Intario	tigation ial Develo	oment - Ea	gleson Roa	ad
EASTING: NORTHING DATUM: Geodetic	:			ELEV	ATIO	DN: 92.938	3		FILE NO.	PG421	6
REMARKS:									HOLE NO.		
BORINGS BY: CME 55 Power Auger				[	DATE	E: 2021 N	March 23	} 		BH11-2	21 
SAMPLE DESCRIPTION	PLOT		SAN	/IPLE ►		DEPTH (m)	ELEV. (m)	Pen. R ● 5	esist. Blov 0 mm Dia.	vs / 0.3m Cone	NCTION
	RATA	ГУРЕ	JMBER	% SOVER				• <b>N</b>	ater Cont	ent %	NSTRU
GROUND SURFACE	ST		N N	REC	z '	<b>-</b> 0-	02.04	20	40 60	80	ο Φ Ο Ψ Ο
Very stiff to stiff brown <b>SILTY</b>		AU	1			0-	-92.94				
CLAY		ss	2	100	4	1-	-91.94				լուներին երերերին։ Անդերերին երերերին։
2.2	1	ss	3	67	6	2-	-90.94				<u>(111111)</u> 1111111 1111111111111111111111
Stiff, grey SILTY CLAY		ss	4	83	3	3-	-89.94				
GLACIAL TILL: Grey silty clay with sand, gravel, cobbles and boulders 3.6 End of Borehole (GWL @ 0.13m - March 31, 2021)	5	ss	5	75	15	;					
								20 Shea ▲ Undist	40 60 ar Strength urbed △ F	80 1 n <b>(kPa)</b> Remoulded	00

							SOII	- PRO	FILE AI	ND TES	ST DATA		
9 Auriga Drive, Ottawa, Ontario K2	2 TT9			Eng	ineers	G Pi	eotechnic roposed [	al Invest Developn	igation nent - Eag	leson Roa	ad at Ottawa	a St.	
EASTING: NORT	THING:				ELEV		I: 93.96			FILE NO.	PG421	6	
REMARKS:	valion	s we	re reie	erence	ed to a	geod	Jelic dalu	m.		HOLE NO	).		
BORINGS BY: CME 55 Power Aug	jer		1			DATE	2018 [	Decembe	er 13		BH 1		
SAMPLE DESCRIPTION		гот		SAN	IPLE		DEPTH	ELEV.	Pen. R	lesist. Blo 0 mm Dia	ows/0.3m Cone	ER	
		TA F	щ	<b>E</b> R	ΈRΥ	۳g	(m)	(m)					
Ground Surface		STRA	ТҮР	NUME	RECOV	N VAI or R(			0 V 20	Ater Con	1tent %		
	0.20	.11.1.1.	×	1			- 0-	-93.96					
Loose, brown SANDY SILT,				1								₽	
some clay	<u>1.22</u>		ss	2	54	5	1-	-92.96					
			ss	3	67	39					· · · · · · · · · · · · · · · · · · ·		
							2-	-91.96					
			ss	4	71	23		00.00					
			ss	5	58	14	3-	-90.96					
Dense to compact, brown <b>SILTY</b> <b>SAND,</b> trace gravel								1	80.06				
			ss	6	71	32	4-	-09.90					
			ss	7		24	5-	-88.96					
			D V			_		00.90			· · · · · · · · · · · · · · · · · · ·		
	<u>5.94</u>		ss	8	100	3	6-	-87.96					
			ss	9	67	42							
							7-	-86.96					
dense, grey silty sand with gravel			ss	10	91	82	8-	-85.96					
							9-	-84.96					
	0.75		ss	11		7							
End of Borehole	<u>9.75</u>	<u>``^`^``</u>	¥										
(GWL @ 0.61m - Dec. 28, 2018)													
									20 Shea	40 6 ar Strengt	o 80 th (kPa)	100	
									Undis	turbed $\triangle$	Remoulded		

natersongroup						SOIL PROFILE AND TEST DATA						
9 Auriga Drive, Ottawa, Ontario K2E 7T9		μ	Eng	ineers	G Pi	eotechnic roposed E ttawa	al Invest Developm	igation nent - Eagl	eson Roa	ad at Ottawa	St.	
EASTING: NORTHING: DATUM: Ground surface elevation	IS We	re refe	rence	ELEVA		N: 94.23	m		FILE NO.	PG421	6	
REMARKS:			. on oc		900				HOLE NO	).		
BORINGS BY: CME 55 Power Auger				D	DATE	: 2018[	Decembe	er 13		BH 2		
SAMPLE DESCRIPTION	РГОТ		SAN			DEPTH	ELEV.	Pen. R ● 50	esist. Ble ) mm Dia	ows/0.3m . Cone	TER	
	RATA	гүре	JMBER	% :OVERY	VALUE r RQD		(11)	• <b>N</b>	later Con	itent %	EZOME	
Ground Surface	ST	•	٦٢	REC	zō		04.00	20	40 6	0 80	CO ⊡	
TOPSOIL0.25		AU	1			- 0-	-94.23		• • • • • • • • • • • • •			
Stiff to very stiff, brown <b>SILTY</b> <b>CLAY</b> some sand		ss	2	92	4	1-	-93.23					
2.13						2-	-92.23					
GLACIAL TILL: Brown silty clay		ss	3	8	12	3-	-91.23					
with sand, gravel, cobbles and boulders		ss	4	42	35							
End of Borehole						4-	-90.23					
Practical refusal to augering at 4.32m depth												
(GWL @ 0.77m - Dec. 28, 2018)												
								20 Shea ▲ Undist	40 6 ar Strengt urbed △	<b>0 80 1</b> t <b>h (kPa)</b> Remoulded	<b>o</b> o	

natersonar	sulting	,	SOIL	_ PRO	FILE AI		ST DATA				
9 Auriga Drive, Ottawa, Ontario K2E 7T9			Eng	ineers	G P O	eotechnic roposed [ ttawa, Or	cal Invest Developn Intario	igation nent - Eag	leson Roa	ad at Ottawa	St.
EASTING: NORTHING: DATUM: Ground surface elevation	: IS WA	re refe	erence	ELEVA ed to a		N: 94.76	m		FILE NO.	PG421	6
REMARKS:					geo				HOLE NO		
BORINGS BY: CME 55 Power Auger					DATE	: 2018 [	Decembe	er 13		BH 3	1
SAMPLE DESCRIPTION	PLOT		SAN			DEPTH	ELEV.	Pen. F ● 5	tesist. Blo 0 mm Dia	ows/0.3m . Cone	TER
	TRATA	ТҮРЕ	UMBER	% COVERY	VALUE or RQD	(11)	(11)	• <b>v</b>	later Con	itent %	IEZOME
Ground Surface	ν.		Ž	RE	z	0-	-94 76	20	40 6	0 80	чо
TOPSOIL0.15		au 8	1				34.70				
Stiff to firm, brown SILTY CLAY		₩ 17					00.70				
		ss	2	92	6	1-	-93.76				
2.12		ss	3	92	6	2-	-02 76				
<u>Z</u> .13		= SS	4	0	50+		92.70				
						3-	-91 76				
GLACIAL TILL: Brown sandy silt with clay, gravel, cobbles and		ss	5	67	23						
boulders						4-	-90.76				
4.42	<u> [^^^^/</u>										
Practical refusal to augering at											
4.42m depth											
(GWL @ 0.62m - Dec. 28, 2018)											
								20 Shea ▲ Undis	40 6 ar Strengt turbed △	0 80 1 t <b>h (kPa)</b> Remoulded	<sup>1</sup> 00

natorsonar		SOIL	- PRO			ST DATA					
9 Auriga Drive, Ottawa, Ontario K2E 7T9		μ	Eng	ineers	G P O	eotechnic roposed [ ttawa_Or	al Invest Developn Intario	tigation nent - Eagl	leson Roa	ad at Ottawa	St.
EASTING: NORTHING:		ro rofo	aronce	ELEVA		<b>1</b> : 97.71	m		FILE NO.	PG421	6
REMARKS:	0 100				geo				HOLE NO	).	
BORINGS BY: CME 55 Power Auger		1		[	DATE	: 2018 [	Decembe	er 13		BH 4	1
SAMPLE DESCRIPTION	РГОТ		SAN				ELEV.	Pen. R ● 50	esist. Bl ) mm Dia	ows/0.3m . Cone	TER
	RATA	ΓΥΡΕ	MBER	% OVERY	/ALUE		(11)	• <b>N</b>	later Cor	itent %	EZOME
Ground Surface	ST		Ŋ	REO	źō		07.74	20	40 6	0 80	Ğ⊒
TOSPOIL0.30		au 8	1			_ 0-	-97.71				
				74	40	1-	-96 71				
			2		40		50.71				
		ss	3	71	68	2-	-95.71		· · · · · · · · · · · · · · · · · · ·		
GLACIAL TILL: Very dense, brown silty sand with gravel,		ss	4	71	50+						
coddles and boulders		ss	5	88	73	3-	-94.71				
		2				4-	-93.71				
4 85		ss	6	100	50+						
End of Borehole											
Practical refusal to augering at 4.85m depth											
(GWL @ 1.10m - Dec. 28, 2018)											
								20 Shea ▲ Undist	40 6 ar Strengt turbed △	0 80 10 t <b>h (kPa)</b> Remoulded	00

natersongroup						SOIL			ND TEST	DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7T9		μ	Engi	ineers	G Pi O	eotechnic roposed [ ttawa, Or	al Invest Developm Intario	igation 1ent - Eagl	eson Road	at Ottawa	St.
EASTING: NORTHING:		ro rofe	arence	ELEVA		N: 97.45	m		FILE NO.	PG4216	6
REMARKS:	3 WC		i ence		geoi				HOLE NO.		
BORINGS BY: CME 55 Power Auger		1		D	ATE	: 2018 [	Decembe	er 13		BH 5	
SAMPLE DESCRIPTION	гот		SAM	IPLE		DEPTH	ELEV.	Pen. R ● 50	esist. Blow ) mm Dia. (	/s/0.3m Cone	TION
	ATA F	ЪЕ	IBER	% VERY		(m)	(m)		lator Conto	nt %	ZOMET
Ground Surface	STF	F	NUN	с С ЩС	≥ r ≥ r			20	40 60	80	
TOPSOIL 0.30		×				- 0-	-97.45				
Very stiff, brown <b>CLAYEY SILT</b>		× AU × SS	1		50+						
End of Borehole	MZX.					1-	-96.45				
Practical refusal to augering at 1.01m depth											
(BH dry upon completion)											
								20 Shea ▲ Undist	40 60 ar Strength urbed △ Re	80 10 (kPa) emoulded	00

natersonar	ing SOIL PROFILE AND TEST DATA								
9 Auriga Drive, Ottawa, Ontario K2E 7T9		a p	Eng	ineers	G Pi	eotechnic roposed [	cal Invest Developn	igation nent - Eag	leson Road at Ottawa St.
EASTING: NORTHING:				ELEV		1: 94.70	Itario		FILE NO. PG4216
<b>DATUM:</b> Ground surface elevation <b>REMARKS</b> :	is wei	re refe	erence	ed to a	geo	detic datu	m.		HOLE NO.
BORINGS BY: CME 55 Power Auger	1	1		[	DATE	2018 [	Decembe	er 13	BH 6
SAMPLE DESCRIPTION	гот		SAN	IPLE		DEPTH	ELEV.	Pen. R	esist. Blows/0.3m
	ATA F	ЪЕ	IBER	% VERY		(m)	(m)		
Ground Surface	STR	F	NUN	RECO	N V			20	40 60 80
TOPSOIL0.30	.1 1.1 1	× AU	1			- 0-	-94.70		
Compact to loose, brown		8	2	67	12	1-	-93.70		
SANDY SILT, trace clay		N SS	2	07	12				
		ss A	3	92	5	2-	-92.70		
		ss	4	88	59	3-	-91 70		
GLACIAL TILL: Verv dense.		ss	5	71	68		00		
<b>GLACIAL TILL:</b> Very dense, brown silty sand with gravel, cobbles and boulders						4-	-90.70		
		ss	6	100	50	5-	-89 70		
5. <u>69</u>		≌ SS	7	100	50+				
End of Borehole									
Practical refusal to augering at 5.69m depth									
(GWL @ 0.73m - Dec. 28, 2018)									
								Shea	ar Strength (kPa) $\triangle$ Remoulded

natorsonar		In	Con	sulting		SOIL	_ PRO		ND TES	T DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7T	9	up	Eng	ineers	G Pi	eotechnic roposed [	cal Invest Developn	tigation nent - Eagl	leson Roa	nd at Ottawa	ı St.
EASTING: NORTHING	:			ELEVA		1: 94.88			FILE NO.	PG421	6
REMARKS:	ns we	ie iele	erence	eu lo a (	geo	delic dalu	111.		HOLE NO		
BORINGS BY: CME 55 Power Auger		1		D	DATE	: 2018 [	Decembe	er 13		BH 7	1
SAMPLE DESCRIPTION	PLOT		SAN	IPLE		DEPTH	ELEV.	Pen. R ● 50	esist. Blo ) mm Dia	ows/0.3m . Cone	TER
	RATA	ΥPE	MBER	% OVERY	/ALUE		(11)	• <b>N</b>	later Con	tent %	EZOME
Ground Surface	ST		R	REC	ź			20	40 6	0 80	COP
	5	× AU	1			- 0-	-94.88				
<b>GLACIAL TILL:</b> Brown silty sand with clay and gravel		ss	2	67	9	1-	-93.88				
1.73	3	k k ss	3	50	50+					••••••	
End of Borehole		]									
Practical refusal to augering at 1.73m depth											
(GWL @ 0.83m - Dec. 28, 2018)											
								20 Shea	40 6 ar Strengt	0 80 1 h (kPa)	00
								▲ Undist	turbed $\Delta$	Remoulded	

natersonaroun						ng SOIL PROFILE AND TEST DATA						
9 Auriga Drive, Ottawa, Ontario K2E 7TS			Eng	ineers	Ge Pr	eotechnic oposed E	al Invest Developm	igation nent - Eagl	eson Road	l at Ottawa	St.	
EASTING: NORTHING		ro rofe	pronce	ELEVA		: 94.03	m		FILE NO.	PG421	6	
REMARKS:				su lo a	geot				HOLE NO.			
BORINGS BY: CME 55 Power Auger		1		D	OATE:	2018 [	Decembe	er 13		BH 8		
SAMPLE DESCRIPTION	гот		SAN	IPLE		DEPTH	ELEV.	Pen. R ● 50	esist. Blo <sup>.</sup> ) mm Dia.	ws/0.3m Cone	TION	
	ATA F	ΒE	<b>IBER</b>	% VERY	ALUE 30D	(m)	(m)	0 M	lator Cont	ont %	ZOME	
Ground Surface	STR	F	NUN	SECO	N <			20	40 60	80		
TOPSOIL 0.25	5	×				- 0-	-94.03					
Very stiff, brown <b>SILTY CLAY</b>		ss	1	79	13	1-	-93.03					
1.73		ss	3	96	6	2-	-92.03					
<b>GLACIAL TILL:</b> Brown silty sand with gravel, cobbles, boulders		∦ss Vas	4	71	7	3-	-91.03					
4.17	· · · · · · · · · · · · · · · · · · ·	N SS	5	50	36	4-	-90.03					
End of Borehole												
Practical refusal to augering at 4.17m depth												
(GWL @ 1.28m - Dec. 28, 2018)												
								20 Shea ▲ Undist	40 60 ar Strength urbed △ F	80 1 ( <b>kPa)</b> Remoulded	00	

natersonar	ng SOIL PROFILE AND TEST DATA										
9 Auriga Drive, Ottawa, Ontario K2E 7T	9	μŅ	Eng	ineers	G	eotechnic roposed [	al Invest Developn	igation nent - Eag	leson Ro	ad at Ottawa	St.
EASTING: NORTHING	<b>3</b> :			ELEV		1: 93.78	itario		FILE NO.	PG421	6
<b>DATUM:</b> Ground surface elevation	ns we	re refe	erence	ed to a	geod	detic datu	m.			).	-
BORINGS BY: CME 55 Power Auger		1		I	DATE:	2018 [	Decembe	er 13		BH 9	
	LOT		SAN	IPLE		DEPTH	ELEV.	Pen. R	esist. Bl	ows/0.3m	ION
SAMPLE DESCRIPTION	Δ Δ		ĸ	RΥ	۳0	(m)	(m)	• 5		. Cone	METI
	[RA]	ТҮРЕ	JMBE	%C	VALL r RQI			• •	later Cor	ntent %	IEZO
Ground Surface	S		й	REC	z °	0-	-03 78	20	40 6	<b>60 80</b>	с С С
<b>TOPSOIL</b> <u>0.2</u>	5	∦ AU	1				-93.70				
		₿ T7								· · · · · · · · · · · · · · · · · · ·	
Very stiff, brown SILTY CLAY		ss	2	96	4	1-	-92.78				
			_		_					1	49
2.2	o	ss	3	83	Р	2-	-91.78	4			
		ss		88	Р						
	5				•	3-	-90.78				
		ss	5	46	7						
		ss	6	79	9	4-	-89.78				
Loose, brown <b>SILTY SAND</b> with gravel, trace clay			_		-						
		ss	7	71	9	5-	-88.78				
6.1	0					6-	-87.78				-88
		ss	8	100	26						
						7	06 70				
		ss	9	62	14		-00.70				
Compact to dense, grey <b>SILTY</b>											
SAND		ss	10	62	36	8-	-85.78				
						9-	-84.78				
	_	ss	11	42	31						
Dynamic Cone Penetration Test	<u>5        </u> 					10-	-83 78	<b>9</b>			
commenced at 9.75m depth. 10.1		-					03.70				•
Practical DCPT refusal at 10 17m											
depth											
(GWL @ 0.70m - Dec. 28, 2018)											
								20 Cha	40 6	60 80 1	<b>00</b>
								Snea ▲ Undist	turbed $\triangle$	Remoulded	

natersonar		ın	Con	sulting		SOIL	- PRO	FILE AN	ID TEST	DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7TS			Eng	ineers	G Pi O	eotechnic roposed [ ttawa, Or	al Invest Developn ntario	tigation nent - Eagl	eson Road	at Ottawa	St.
EASTING: NORTHING		re refe	Prence	ELEV/		I: 93.37	m		FILE NO.	PG421	6
REMARKS:					geo				HOLE NO.		
BORINGS BY: CME 55 Power Auger				[	DATE	2018 [	Decembe	er 13		BH10	
SAMPLE DESCRIPTION	PLOT		SAN	MPLE		DEPTH	ELEV.	Pen. R ● 50	esist. Blow mm Dia. C	/s/0.3m Cone	CTION
	TRATA	ТҮРЕ	UMBER	% COVER1	NALUE or RQD	(,	(,	• w	ater Conte	nt %	PIEZOME DNSTRU
Ground Surface	S	~	z	R	z	- 0-	-93.37	20	40 60	80	<b>-</b> S
		AU	1			-					₩₩
		ss	2	96	6	1-	-92.37				
Very stiff, brown <b>SILTY CLAY</b>		ss	3	54	Ρ	2-	-91.37			11	
- grey by 2.9m depth		ss	4	100	Ρ	3-	-90.37				
		ss	5	58	10	4-	-89.37				
5,41		ss	6	83	37	5-	-88.37				
		X SS	7	96	50+	6-	-87.37				
		ss	8	83	75	7-	-86.37				
silty sand with gravel, cobbles and boulders		∑ss	9	92		8-	-85.37				
						9-	-84.37				
9.75			10	100	50+						
(GWL @ 0.48m - Dec. 28, 2018)								20 Shea	40 60 r Strength (	80 10 (kPa)	00



Supplemental Geotechnical Investigation

5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 436	6079.4	1				NORTHI	NG: 50	0373	4.86	6		E	LEV	ATION	<b>I:</b> 94	.53		
PROJECT: Proposed Mixed-Use Development												FIL	E N	<b>D</b> . :	PG	4216		
ADVANCED BY: Excavator															TD	4 0 4		
REMARKS:						DATE:	Decemb	er 16	6, 20	)24		HC		NO. :	IP	1-24		
					S	AMPLE				PE	N. RE	SIST.	(BLO	WS/0.3	m)			
							τ			20	4	501111 10	6 הוס וו	0	) 80			
SAMPLE DESCRIPTION	5		S		(%)		NTE	Δ	RE	MOU	LDED	SHE/	AR ST	RENGT	TH (kF	Pa)	TION	Ē
	A PL	Ē			ſΕRΥ	B	CO (%)	•	U	<b>NDRA</b> 20	INED	SHEA ເດ	R STI	RENGT	H (kP 80	a)	RUC	10N
	RAT	HT	Ц		ŝ	ORR	ATER		PL (	<u>%</u> )	WATE	ER CO	NTEN	• •T (%)	LL	(%)		EV.
GROUND SURFACE	ST	ä	⊨≥	:	R	z	2		ŀ	20	. 4	10	5 6	0	80	+	≣S	
TOPSOIL 0.20m [94.33m]										-	-	- - - -	-					-
Stiff, brown SILTY CLAY		-										: : : :						-
		- 1		-			34			-	0	· · ·	-	· · ·				-
		-		0			54				. 0			:		· · · ·		94 –
	X									Δ22	:	:	-	· · ·		▲ 88		-
		-										· · · · · · · · · · · · · · · · · · ·	-	· · · · · · · · · · · · · · · · · · ·				-
	X	 - 1-											] (* * * * * *					-
		-								-	-	-	-	· · ·				-
	IX.	-											-			· · · · · · · · · · · · · · · · · · ·		-
1.40m[93.12m]		-								-	-	•	-					-
GLACIAL TILL: Compact, brown silty clay, some	~ ~ ~ ~ ~	-										)		().		· · · · (· · · · · 		93-
gravel, occasional cobbles and boulder		-								:	:	:	-	· · ·				-
	~ ~ ~ ~ ~	-																-
		2-		5								: 	l çerere					-
2.15m [ 92.38m ]	~ ~ ~ ~ ~ ~ ~ ~	-		G			27			C	)	- - - -	-	· · ·				-
End of Test Pit		-												· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		-
		-								-	-	· · ·	-	· · ·				-
lest pit terminated on bedrock surface		-										N	(***** 	· · · · · · · · · · · · · · · · · · ·				92-
No groundwater infiltration was observed upon		-																-
completion of the test nit		-								-		- - - -	-					-
		3-										: : : · · · · ·	: :			÷		-
		-								-			-	· ·				-
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		-								-	-	-	-	· · ·				-
		-											-					91-
		-										: : : : : : : : :						-
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		4-											-	· · · · · · · · · · · · · · · · · · ·				-
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					200							I IT \A/			: =			
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	E PROF ORT. PA		OF P/ DN GF	ROU	rsu PIS	NOT RESP	PONSIBL	E FOF	R TH	IE UN	AUTH	ORIZE	AS PH ED US	E OF T	ED. I HIS D	HIS SHE ATA.		

PAGE:



Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5766.7	7				NORTHIN	<b>IG</b> : 500	)386	5.03		E	LEVATI	ON: 9	95.89		
PROJECT: Proposed Mixed-Use Development											FIL	E NO. :	Ρ	G421	6	
ADVANCED BY: Excavator													-			
REMARKS:						DATE: [	Decemb	er 16	, 2024		HO	LE NO.	: T	P 2-24	4	
					S	AMPLE			- 1	PEN. RE	SIST. (	BLOWS/	0.3m)			
					-		ь		20	DCPT (	50mm	DIA. CO	NE)	20		
	Ŀ		c	5	(%		L. H	^	REMO		U SHFA		IGTH (	50 kPa)	NO	Ê
SAMPLE DESCRIPTION	PL0	<del>ا</del>			RY (°	0	CON (		UNDF	RAINED	SHEAF	R STREN	GTH (I	kPa)		NO
	ATA	Ē	Ā		OVE	R RO	НЩ В		20	4	0	60	8	30		ATI
	STR	DEP	ž		REC	ÖN	WAT		PL (%)	WAIE			/o) I	-L (%)	LIEZ CON	Ē
TOPSOIL				-					20	4	0	00		50		
GIACIAL TILL: Compact to very dense brown silty	<u> </u>	_						:	-				-			-
sand some gravel cobbles and boulders	~ ~ ~ ~ ~	-														-
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- Increasing boulder content by 2.7 m depth	~ ~ ~ ~ ~ ~ ~ ~	_														-
3.00m [ 92.89m ]	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-							-	-						93-
End of Test Pit		3-														
Practical refusal to excavation at 3.00 m depth		-														-
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Groundwater infiltration was observed the bottom of		-												· · · · · · · · · · · · · · · · · · ·		-
the test pit		-							-							-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS THE		ERTY			RSO								UCED.	THIS SH	HEET SHOUL	D BE
TEAD IN CONJUNCTION WITH ITS CORRESPONDING REPORT	JINI. FA		UN OF	1001	10	NUT RESP						00E U		UAIA.	PAGE:	1/1



**Supplemental Geotechnical Investigation** 5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	5639.5	3				NORTHIN	<b>NG</b> : 50	0376	62.56	6		E	LEV		<b>N:</b> 97.1	15		
PROJECT: Proposed Mixed-Use Development												FIL	E NO	<b>)</b> . :	PG4	216		
ADVANCED BY: Excavator														IO ·	тр	2 24		
REMARKS:						DATE: [	Decemb	er 1	6, 20	024						5-24		
					S	AMPLE				∎ Pi	EN. RE DCPT (	SIST. 50mm	(BLO) 1 DIA.	WS/0.3 CONE	im) E)			
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SAMPLE DESCRIPTION	LOT	_			Y (%)	_	ITNO		RE			SHEA	R ST	RENG	TH (kPa TH (kPa	1) )	CTIO	L N
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TOPSOIL					_		-		:	20	4	FO	0	0	80			-
0.20m [ 96.95m ]	~ ~ ~ ~	-											- - - -					97 -
GLACIAL TILL: Compact, brown silty sand, some	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-							-	-	-		-		-	-		-
graver and cobbles, occasional boulders	~ ~ ~ ~ ~	-		-			13		0									-
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1.95m [ 95.20m ]	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	_							-				-					-
End of Test Pit		2-							 		•	)	[••••• [		•••••	••••••••		-
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No groundwater infiltration was observed upon		-							: 				- 					-
completion of the test pit		-							-	-	-	•	-		-			-
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# SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5453.4	5			NORTHI	<b>NG:</b> 500	0376	7.76			ELEV	ATION	l: 94.94	ł		
PROJECT: Proposed Mixed-Use Development											FILE N	0. :	PG42	216		
ADVANCED BY: Excavator										ŀ			<b>TD</b> 4	04		
REMARKS:					DATE: [	Decemb	er 16	6, 202	24		HOLE	NO. :	1P 4 <sup>.</sup>	-24		
				;	SAMPLE				PEN. F		ST. (BLO	WS/0.3	m)			
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SAMPLE DESCRIPTION	Ŀ		Š	(%)		NTE	Δ	REN	IOULDE	D S	HEAR ST	RENG	H (kPa)		R IO	<u> </u>
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GROUND SURFACE	ى: N		⊢ ⊢		z	3		2	)	40	6	0	80		ĒŪ	
TOPSOIL		· -						· · ·	-		-	· · ·				-
Compact, brown SILT, trace clay and sand		-						· · · · · ·	•••••	· · · .		· · · · · · · · · · · · · · · · · · ·	••••	· · · · · · ·		
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Test pit terminated on bedrock surface		-						· · ·								
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Groundwater infiltration was observed at 1.30 m		-									-			-		
depth		-														
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY	OF PAT	ERS	ON GROUP	AND THE	CLIE	ENT F	OR WHO	DM IT	T WAS PF	RODUC	ED. THIS	SHEE	T SHOUL	.D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	JRT. PA	TERSC	ON GRC	OUP IS	S NOT RESP	VONSIBLI	E FOI	k the	UNAUT	HOF	RIZED US	EOFT	HIS DAT.	A.	PAGE:	1/1



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# SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 433	5320.8	6			NORT	HING: 50	037	04.85	5		E	ELEV	ATION	<b>:</b> 94.	65		
PROJECT: Proposed Mixed-Use Development											FIL	E NC	<b>D</b> . :	PG	4216		
REMARKS:					DATE	: Decemb	per 1	6, 20	024		нс		10. :	ТΡ	5-24		
				s	SAMPLE				P	EN. RES	SIST.	(BLO)	WS/0.3	m)			
						E			ا 20	DCPT (	<b>50mn</b>	n DIA. 6	CONE	) 80			
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	A PL	Ē	ą	ERY	B	(%) CO		U	NDRA		SHEA	R STF		H (kPa	a)	AETE RUC	ION
	RAT	PTH	PE /	000	OR R	ATER ()		PL (	<u>20</u> (%)	WATE	ER CC	NTEN	UT (%)	LL	(%)		EVAL
GROUND SURFACE	ST	ä	₽	2	ž	Ź			20	4	0	5 6	0	80		E S	Ш
TOPSOIL 0 20m [ 94 45m ]								-	-		-	-					
Compact, brown SILT, some sand		-													· · · · · · · · · · · · · · · · · · ·		-
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1 25m [ 93 40m ]		-							-		•	-	· · ·				-
End of Test Pit		-									• • • • • • •				•••••••••••••••••••••••••••••••••••••••		
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Test pit terminated on bedrock surface		-						÷	-		•	-	· · ·				93-
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No groundwater infiltration was observed upon		-							-	i	•	-	· · ·				
completion of the test pit		2-													· · · · (· · · · ·		-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH READ IN CONJUNCTION WITH ITS CORRESPONDING REP	e Prof Ort. P/	PERTY	of Pat N Gro	ERSC UP IS	ON GROU	JP AND THE	E CLI	ENT OR TH	FOR IE UN	WHOM IAUTHC	IT W. Orize	AS PR ED US	RODUC E OF T	ED. TH HIS D	HIS SHE ATA.	ET SHOUL	.D BE
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Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 43	5449.3	0			NORTHI	NG: 50	0364	2.99		E	LEVATIO	N: 95.32		
PROJECT: Proposed Mixed-Use Development										FIL	E NO. :	PG4216		
ADVANCED BY: Excavator					D 4 7 7					нс		TD 6-24		
REMARKS:					DATE:	Jecemb	ber 1	6, 2024						
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SAMPLE DESCRIPTION	A PLC	<u>ا</u>	R R	ERY (	B	CON (%	•			SHEA		ſH (kPa)	RUCT	NOI
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GROUND SURFACE	ST	B	Ł	R	z	<b>N</b>		20	4	0	→ <u>60</u>	80	E S	Ш
TOPSOIL 0.10m [95.22m]		· _						· · ·	-	•				
GLACIAL TILL: Compact, brown silty sand, with		-												05 –
gravel, cobbles and boulders		-	5			13		0	-	•				
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1.05m [94.27m ]	v v v v	1							•••					
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Test pit terminated on bedrock surface		-							-	-				94 -
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No groundwater infiltration was observed upon		-						· · ·	-	•				
completion of the test pit		-												
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Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5565.1	0				NORTHIN	<b>IG</b> : 500	0357	4.64		E	LEVATI	<b>DN:</b> 96.9	3		
PROJECT: Proposed Mixed-Use Development	:CT: Proposed Mixed-Use Development ICED BY: Excavator RKS: DATE: Decem															
ADVANCED BY: Excavator												. =				
REMARKS:						DATE: D	)ecemb	er 16	6, 2024		но	LE NO.	: IP/	-24		
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SAMPLE DESCRIPTION	LOT	Ē			X (%)	_	ILNO	∆ ▲	REMO	ULDED	SHEA SHEAF	R STREN R STREN	GTH (kPa GTH (kPa)	)	IER	m) N
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	STR	DEP.			REC	NON	WAT		PL (%)	WATE			6) LL (%	%)	PIEZ	ELEV
TOPSOIL 0.15m [06 79m]				-					20	4	ŧU	00	00			-
GLACIAL TILL: Compact, brown silty sand, some	<u> </u>	-														-
gravel and cobbles, occasional boulders		-								-				:		-
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2.75m [ 94.18m ]	<u> </u>	-														
End of Test Pit		-								-						94 –
Test nit terminated on bedrock surface		3-							· · · · · · · · · · · · · · · · · · ·	•••				· · · · · · · · · · · · · · · · · · ·		
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Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5618.8	0				NORTHI	<b>IG</b> : 50	0368	84.	74				ELE	VATIC	N: 9	97.72			
PROJECT: Proposed Mixed-Use Development													F	LEN	10. :	Ρ	G42	16		
ADVANCED BY: Excavator													<b>—</b>			_				
REMARKS:						DATE: [	Decemb	per 1	16,	202	4		H	OLE	NO. :	Т	P 8-	24		
					S	AMPLE					PE	N. RE	SIST	. (BLC	OWS/0	.3m)				
							F	1		20	) )	CPT (	( <b>50m</b> ւՈ	m Dl/	A. CON 60	E)	30			
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SAMPLE DESCRIPTION	ЪГ	Ē			ž	R	ç S			UNE	RAI	NED	SHE	AR S	TRENG	ith (	kPa)		ETEI	NO
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GROUND SURFACE	STF	B			Ř	N	M			20	, )	4	10	0	60	, <u>-</u> 8	( <i>//0</i> / 30		₽S	E
TOPSOIL									-					-	:	-				-
0.25m [ 97.47m ]		-														- - 				-
GLACIAL TILL: Compact, brown silty sand, some	~ ~ ~ ~ ~	-							÷			-	-	÷	÷	-	-	•		-
gravel, cobbles and boulders	~ ~ ~ ~ ~	-		-			12							÷			÷			-
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2.70m [ 95.02m ]	~ ~ ~ ~ ~	-		G			10		Ċ			-	:	-	:	-	:			-
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Test pit terminated on bedrock surface		3-											5 - - -					******* * *		-
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No groundwater infiltration was observed upon		-							÷			-		-		-	-	•		-
completion of the test pit		-											:							-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY	OF P/	ATER	sol	N GROUP	AND THE	E CLI	IEN	T FC	OR W	/HON	ITV	VAS F	RODU	CED.	THIS	SHEE	T SHOUL	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	ort. Pa	TERSC	)n gf	ROUF	PIS	NOT RESP	ONSIBL	E FC	DR <sup>-</sup>	THE	UNA	UTH	ORIZ	ED U	SE OF	THIS	DATA	۱.	PAGE:	1/1



Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5764.5	6				NORTHI	<b>NG:</b> 500	03694	.37		E	LEVATI	<b>DN:</b> 95.	94		
PROJECT: Proposed Mixed-Use Development											FIL	E NO. :	PG	4216		
ADVANCED BY: Excavator																
REMARKS:						DATE: [	Decemb	er 16,	2024		НО	LE NO.	: TP	9-24		
					S	AMPLE			■ P	EN. RE	SIST. (	BLOWS/	).3m)			
							E		20	DCPT (	[ <b>50mm</b> ւՕ	<b>DIA. CO</b> 60	NE) 80			
	5		ğ		(%)		TEN	Δ	REMO	JLDED	SHEA	R STREN	GTH (kP	a)	NOI	Ē
SAMPLE DESCRIPTION	PL(	<u>E</u>	g		ž	8	s co	▲	UNDR	AINED	SHEAF	R STREN	GTH (kPa	ı)		NO
	RATA	H	м Ч		Š	R R(	ER	P	20	WATE	10 FR CO	60 NTENT (9	08 ()     ()	(%)	NST	EVAT
GROUND SURFACE	STF	DEI	ž		Ř	N	M	•	20	4	C	60	80	,,,,	E S	Ë
TOPSOIL 0.15m [ 95.79m ]								:	-	-				:		
GLACIAL TILL: Compact, brown silty sand, some	~ ~ ~ ~ ~	_												· · · · · · · · · · · · · · · · · · ·		-
gravel, cobbles and boulders	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	_		_					-							-
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2.40m [ 93.54m ]	<u> </u>	_							-	-						-
End of Test Pit		-												· · · · · · · · · · · · · · · · · · ·		-
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Test pit terminated on bedrock surface		-						••••••						· · · ·		-
No		-							-							93-
No groundwater inflitration was observed upon		3-						:						:		-
completion of the test pit		-														-
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY	OF PA	TER	SO		AND THE	CLIEN	IT FOR	WHON	I IT WA	S PROD	JCED. TH	IIS SHEE	T SHOUL	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	JKI. PA	IERSC	IN GR	UUP	'IS	NUT RESF	ONSIBL	EFOR	I HE U	NAUTH	JRIZE	USE O		λIA.	PAGE:	1/1



Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5773.4	C				NORTHI	NG: 500	)3504	4.87			ELEV	ATION	<b>1</b> : 97	7.38		
PROJECT: Proposed Mixed-Use Development											FI	LE NO	<b>D</b> . :	PG	6421	6	
ADVANCED BY: Excavator REMARKS:						DATE:	Decemb	er 16	, 2024		н		10. :	ТР	10-2	24	
					S	AMPLE				PEN. RE	SIST.	(BLO	WS/0.3	lm)			
					-		Ŀ		20	DCPT	<b>(50m</b> i 40	n DIA. 6	CONE	E) 80	)		
SAMPLE DESCRIPTION	Б		ğ		(%)		NTEN	Δ	REMO	ULDED	SHE	AR ST	° RENG	TH (k	, Pa)	TION	Ē
	A PL	(ш) Т	AND		VERY	go	۲ CO (%)	<b></b>	UNDF 20		SHE# 40	AR STI 6	RENGT	F <b>H (kf</b> 80	<b>Pa)</b>	METE	TION
	TRAT	EPTH	۲e		ECO	ORF	ATE		PL (%)	WAT	ER CO		NT (%)	LL	_(%)	IEZOI	
GROUND SURFACE	S			•	8	z	5	:	20		40	6	0	80	)'	<u> </u>	ш
0.20m [ 97.18m ]	~ ~ ~ ~									-	-	-	· · ·				-
GLACIAL TILL: Compact, brown silty sand, some		-									•	-					97-
gravel, cobbies and boulders	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-		5			14		0	· · · · ·					· · · · · .		-
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2.30m [ 95.08m ]	~ ~ ~ ~ ~ ~	-							· · · · · · · · ·		· · · · · ·	- - - -			· · · · · · · · · · · · · · · · · · ·		-
End of Test Pit		-															95-
Test pit terminated on bedrock surface		-								-				-	:		-
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No groundwater infiltration was observed upon		-							-	-	-	-		-			-
completion of the test pit		3-										-					-
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READ IN CONJUNCTION WITH ITS CORRESPONDING REP	DRT. PA	TERSC	N GR	ROUF	PIS	NOT RESP	PONSIBLE	EFOF	RTHEL	INAUTH	ORIZ	ED US	E OF 1	THIS [	DATA.	PAGE	1/1



Supplemental Geotechnical Investigation

COORD. SYS.: UTM ZONE 18 EASTING: 435	5928.9	C				NORTHIN	<b>IG:</b> 50	0370	1.30		E	ELEVA	TION	: 94.8	7		
PROJECT: Proposed Mixed-Use Development											FIL	E NO	.:	PG4	216		
ADVANCED BY: Excavator																	
REMARKS:						DATE:	Decemb	er 16	6, 2024		HC	DLE N	<b>)</b> . :	1 P1	1-24		
					S	AMPLE			■ P	EN. RE	SIST.	(BLOW	S/0.3r	n)			
							5		20	DCPT (	<b>50mn</b> 0	n DIA. ( 60	CONE)	80			
	5		ğ		(%)		LEN	Δ	REMO	ULDED	SHEA	AR STR	ENGT	H (kPa)		NOI	<u>ا</u>
SAMPLE DESCRIPTION	PL(	<u>ا</u>			ERY	B	°) col	•			SHEA		ENGTI	H (kPa)		IETE RUC <sup>-</sup>	NOI
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GROUND SURFACE	STI	DE	È		RE	N	M		20	4	0	Э <u>60</u>	(,,,	80	-,	불응	ELE
TOPSOIL												-		-			
0.25m [ 94.62m ]		-															
GLACIAL TILL: Compact, brown silty sand, clay, with		_		-						-							-
gravel, some cobbles, boulders and clay		-		G			13		0				· · · · .				
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1.80m [ 93.07m ]	~ ~ ~ ~	-							· · · · · · · · · · · · · · · · · · ·								
End of Test Pit		-								-			÷	÷			93-
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lest pit terminated on bedrock surface		-															
No groundwater infiltration was observed upon		-							· · ·	-							
completion of the test nit		-															
completion of the test pit		-								-				÷			
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH	E PROF	PERTY	OF P/	ATEF	RSO	N GROUP /	AND THE		ENT FOR	WHOM	IT W	AS PRO	DUCE	ED. THI	S SHEE	ET SHOUL	D BE
READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT	ort. Pa	TERSC	)n gf	Roui	P IS	NOT RESP	ONSIBL	E FOI	R THE U	NAUTHO	ORIZE	ED USE	OF TH	HIS DA	ΓA.	PAGE: '	1/1


# SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	5480.1	5				NORTHIN	<b>IG:</b> 500	)351	7.81		E	LEVATI	ON:	95.92			
PROJECT: Proposed Mixed-Use Development											FIL	E NO. :	Р	G42 <sup>-</sup>	16		
ADVANCED BY: Excavator												. =	-	<b>D</b> 40	•		
REMARKS:						DATE:	Decemb	er 16	6, 2024		но	LE NO.	:	P12-	-24		
					SA	AMPLE			■ P	EN. RES	SIST. (	BLOWS/	0.3m)				
							5		20	DCPT (5	<b>50mm</b> 0	DIA. CO 60	NE)	80			
	ы		ġ		(%)		E E	Δ	REMO		SHEA	R STREM	NGTH	(kPa)		LION NOI	Ē
	L P	<u>ا</u>	R		ERY	8	0 (%	<b></b>					IGTH (	kPa)		RUC.	NOI
	<b>ATP</b>	PTH	Щ Ц Ц	i	S	NR R(	TER		20 PL (%)	WATE	0 R CO	NTENT (	%)	<u>80</u> LL (%)		NOZ	EVAT
GROUND SURFACE	STI	DE	Σ		Ä	N	W		20	4	0	60	,	80		≣ S	Ш
TOPSOIL									-								
<u>CLACIAL TILL:</u> Compact to loose brown sitty sand	~ ~ ~ ~ ·	-						•									
some gravel occasional cobbles and boulders	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	_		-							-		-				
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- Grey by 1.60 m depth	~ ~ ~ ~ ~ ~ ~ ~ ~ ~	-		_													
1.00m [ 04.02m ]		-		Ö			7	0				· · · · · · · · · · · · · · · · · · ·					
Fnd of Test Pit	~ ~ ~ ~	- 2_															94 —
		2-															
Test pit terminated on bedrock surface		-															
		-															
Groundwater infiltration was observed at 1.40 m		-							• • • • • • • • •								
depth		-											-				
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DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS THE		PERTY	OF PA	ATEF	RSO			CLIE		WHOM				. THIS	SHEE	T SHOUL	D BE
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# SOIL PROFILE AND TEST DATA

Supplemental Geotechnical Investigation

5970 and 6038 Ottawa Street, Ottawa, Ontario

COORD. SYS.: UTM ZONE 18 EASTING: 435	577.2	1				NORTHIN	<b>IG</b> : 50	0341	0.85		E	ELEV	ATIO	<b>N</b> : 96	.69		
PROJECT: Proposed Mixed-Use Development											FI	LE NO	0. :	PG	4216		
ADVANCED BY: Excavator																	
REMARKS:						DATE: [	Decemb	er 1	6, 2024		Н	OLE N	10. :	TP	13-24		
					s	AMPLE			■ F	PEN. RE	SIST. 50mr	(BLO n DIA.	WS/0.3 CONE	Bm) E)			
			Ċ				ENT		20	4	10	6	0	80		z	-
SAMPLE DESCRIPTION	PLOT	(L	N D		RY (%	Δ	CONT	▲		ULDED	She/ She/	AR ST AR STI	RENG RENG	TH (kf FH (kP	Pa) 'a)	UCTIC	m) NC
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	STR	DEP	Τ		22 22	IO N	WAT		PL (%)	WATE			NI (%)	80	(%) ⊣	PIEZ	Ē
TOPSOIL											10			00			
0.25m[96.44m]		_										-					
GLACIAL TILL: Compact, brown silty sand, some	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	_		- 0			21		о		-	-					
gravel, occasional cobbles and boulders		-													· · · · · · · · · · · · · · · · · · ·		
Weathered BEDROCK		_							· · ·		-	-	· · ·				06 –
End of Test Pit		_							· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · · · · ·	- 	· · · · · · · · · · · · · · · · · · ·		• • • • • • • • • • • •		. 30
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Test pit terminated on bedrock surface		-							· · · · · · · · · · · · · · · · · · ·			-					
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No groundwater infiltration was observed upon		_								-	- - -	-	· · ·				
completion of the test pit		-										 	· · · · · · · · · · · · · · · · · · ·	•••••	· · · ·		
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		-								· · · · · · · · · · · · · · · · · · ·		- 	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		
		5							· · · · ·		<u> </u>	-					
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS TH READ IN CONJUNCTION WITH ITS CORRESPONDING REPO	e prof Drt. pa	PERTY	of Pa N gr	TERS OUP	SOI IS	N GROUP / NOT RESP	AND THE ONSIBL	E CLII	ENT FOF R THE U	R WHOM	i it w Orizi	ias pf Ed Us	RODUC E OF 1	ed. T This d	HIS SHE	ET SHOUL	D BE

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9 Auriga Drive. Ottawa. Ontario K2E 7T	9	<sup>2</sup> P	Eng	ineers	Ge Pr	eotechnic oposed [	al Invest Developn	tigation nent - Eagl	eson Road	at Ottawa	St.
EASTING: NORTHING	:			ELEVA		tawa, Or : 94.63	itario		FILE NO.	PG421	6
<b>DATUM:</b> Ground surface elevation <b>REMARKS:</b>	ns we	re refe	erence	ed to a g	geod	letic datu	m.		HOLE NO.	10421	<b>.</b>
BORINGS BY: Hydraulic Shovel				D	ATE:	2019 F	-ebruary	27		TP 1	
SAMPLE DESCRIPTION	PLOT		SAN			DEPTH (m)	ELEV. (m)	Pen. R ● 50	esist. Blow ) mm Dia. C	s/0.3m Cone	ETER CTION
	RATA	ΥPE	MBER	% OVER'	RQD			• w	ater Conte	nt %	EZOME
Ground Surface	ST	F	N	REC	z s	0-	-04 63	20	40 60	80	E O O
TOPSOIL						0	94.03				-
<u>0.30</u>	D										
											-
		G	1								
						1-	-93.63				
											-
GLACIAL TILL: Loose to		-									
compact, grey-brown silty sand with clay, gravel and cobbles		G	2								
- some rootlest at upper 0.2m						2-	-92.63				-
depth			2			_					-
			5								
		G	4								-
						3-	-91.63				
		G	5								⊻
End of Test Pit	D[^^^^/										
(Groundwater infiltration at 3.5m											
								20 Shor	40 60	80 1 (kPa)	+ 00
								▲ Undist	urbed $\triangle \operatorname{Re}$	moulded	

natersonar		In	Con	sulting		SOIL	- PRO	FILE AN		ST DATA	
		٩Þ	Eng	ineers	G Pi	eotechnic roposed [	al Invest Developn	igation nent - Eag	leson Ro	ad at Ottawa	St.
EASTING: NORTHING:				ELEV		ttawa, Or 1: 94.42	ntario		FILE NO		
DATUM: Ground surface elevation	s wer	e refe	erence	ed to a	geo	detic datu	m.			PG421	6
BORINGS BY: Hydraulic Shovel				[	DATE	: 2019 F	ebruary	27	HOLE NO	). TP 2	
	ГОТ		SAN	IPLE		DEPTH	ELEV.	Pen. R	lesist. Bl	ows/0.3m	R NO
SAMPLE DESCRIPTION	TA P		ER	ERY	۳a	(m)	(m)	• 51		a. Cone	
	TRA	ТҮРІ	IUMB	scovi	I VAL or RQ			• <b>v</b>	later Cor	ntent %	PIEZC
Ground Surface	0		~	R	2	- 0-	-94.42	20	40 €	60 80	<u>-0</u>
TOPSOIL 0.30											
Very stiff, grey-brown <b>SILTY</b>		G	1							>1	30
		_				1-	-93.42				
depth		-	2							>1	30
- grey by 1.0m depth		-	2								<b>1</b>
2 00		_ G	3								
<u>_</u>		_ •	Ū			2-	-92.42				
		_									
		G	4								
<b>GLACIAL TILL:</b> Grey silty clay with sand, gravel, cobbles and											
boulders		– G	5			3-	-91.42				_
		- G	6				• • • • •				
		-									
3 70		_ C	7								
End of Test Pit	<u>^.^.</u>	_ 0	1								
(TP dry upon completion)											
								20	40 6	i i i i i i i i i i i i i i i i i i i	00
								Shea	ar Streng turbed △	<b>th (kPa)</b> Remoulded	

natersonar		ın	Con	sulting		SOIL	_ PRO	FILE AN		T DATA	
9 Auriga Drive, Ottawa, Ontario K2E 7T	9	μ	Eng	ineers	G	eotechnic roposed [	al Invest Developn	igation nent - Eag	leson Road	at Ottawa	St.
EASTING: NORTHING	):			ELEVA		t <b>tawa, Or</b> I: 94.48	ntario		FILE NO.	<b>DO 404</b>	•
<b>DATUM:</b> Ground surface elevatio	ns we	re refe	erence	ed to a	geod	detic datu	m.			PG4210	<b>b</b>
BORINGS BY: Hydraulic Shovel		1		[	DATE:	2019 F	- ebruary	27	HOLE NO.	TP 3	1
SAMPLE DESCRIPTION	PLOT		SAN	MPLE		DEPTH	ELEV.	Pen. R ● 50	esist. Blov 0 mm Dia. (	vs/0.3m Cone	CTION
	<b>IRATA</b>	ТҮРЕ	JMBER	% coverv	VALUE r RQD	(,	(,	• <b>v</b>	later Conte	ent %	IEZOME
Ground Surface	S		ž	RE	z°	- 0-	-94.48	20	40 60	80	°₽
TOPSOIL	0										
<u></u>											
		G	1							>1	30
		G	2			1-	-93.48				
Very stiff, brown SILTY CLAY											
- grey by 1.6m depth											
		G	3								
						2-	-02 /8				
						2	52.40				
0.5		G	4								
2. <u>0</u>		•									
		G	5								
GLACIAL TILL: Grey silty clay with sand, gravel, cobbles and						3-	-91.48				
boulders											
<u>3.5</u>	0	G	6								
End of Test Pit											
(Water infiltration at base of test pit)											
								20 Shea	40 60 ar Strength	80 1 (kPa)	00
								▲ Undist	turbed $\triangle R$	emoulded	

natersonar		ır	Con	sulting	,	SOIL	- PRO	FILE AI	ND TES	T DATA	
patersongi			Eng	ineers	G Pi	eotechnic roposed E	al Invest Developn	tigation nent - Eag	leson Roa	d at Ottawa	St.
9 Auriga Drive, Ottawa, Ontario K2E 71	9				0	ttawa, Or	ntario .				
DATUM: Ground surface elevation	ns we	re refe	erence	ed to a	geod	detic datu	m.		FILE NO.	PG421	6
REMARKS: BORINGS BY: Hvdraulic Shovel						: 2019 F	- ebruarv	27	HOLE NO.	TP 4	
	ОТ		SAN	IPLE			<b>,</b>	Pen. R	esist. Blo	ws/0.3m	~ Z
SAMPLE DESCRIPTION	A PL(		~	2		DEPTH (m)	ELEV. (m)	• 5	0 mm Dia.	Cone	IETER JCTIO
	RAT/	YPE	MBEF	% OVEF	RQD			• <b>v</b>	later Cont	tent %	EZON
Ground Surface	ST	F	N	REC	z s	0	-03 63	20	40 60	80	COP
TOPSOIL							90.00				
<u>0.3</u>											
		G	1							>1	30
			2			1-	-92.63			>1	 30 ⊈
			2								
Very stiff, brown <b>SILTY CLAY</b>		G	3							>1	30
		G	4			2-	-91.63				
			5								
			5								
- grey by 2.8m depth						3-	-90.63				
		G	6								
3.7	0	G	7								
End of Test Pit		T									
(Groundwater infiltration at 1.0m depth)											
								20 Shea	40 60 ar Strenati	) 80 1 n (kPa)	oo
								▲ Undist	turbed $\Delta$	Remoulded	

natersona	ro	ıır	Con	sulting		SOIL	- PRO	FILE AI	ND TES	T DATA	
9 Auriga Drive, Ottawa, Ontario K2E		ЧР	Eng	ineers	Ge Pr	eotechnic oposed E	al Invest Developn	tigation nent - Eag	leson Roa	nd at Ottawa	St.
EASTING: NORTH	ling:			ELEVA		<b>tawa, Or</b> : 94.28	ntario		FILE NO.	DC 494	6
<b>DATUM:</b> Ground surface eleva <b>REMARKS:</b>	ations w	ere ref	erence	ed to a	geod	letic datu	m.		HOLE NO	PG421	0
BORINGS BY: Hydraulic Shovel				D	ATE:	2019 F	ebruary	27		TP 5	
SAMPLE DESCRIPTION	РГОТ		SAN			DEPTH	ELEV.	Pen. R ● 50	esist. Blo 0 mm Dia	ows/0.3m . Cone	TER
	RATA	YPE	MBER	% OVERY	RQD	(11)	(11)	• <b>v</b>	later Con	tent %	EZOME
Ground Surface	ST		N	REC	Z S	0-	-04 28	20	40 60	0 80	
TOPSOIL						0-	-94.20				
'	0.30	Ð									
		G	1							>1	30
Very stiff, brown SILTY CLAY		G	2			1-	-93.28			>1	30
- grey-brown by 1.0m depth											₽
		G	3								
- grey by 1.8m depth						0	00.00				
		G	4			Ζ-	-92.28				
		G	5								
						3-	-91.28				-
		G	6								
	<u>3.50</u>	G	7								_
End of Test Pit											
3.50m depth											
(Groundwater infiltration at 1.2m											
								20 Shea	40 60 ar Strengt	0 80 1 h (kPa)	UU
								Undist	turbed △	Remoulded	

patersong	rn	ur	Con	sulting		SOIL	- PRO	FILE AI	ND TEST	DATA	
	779		Eng	ineers	Ge Pr	eotechnic oposed E	al Invest Developn	igation nent - Eag	leson Road	at Ottawa	St.
EASTING: NORTHI	NG:			ELEVA		<b>tawa, Or</b> : 94.03	ntario		FILE NO.		
DATUM: Ground surface elevat	ions we	ere refe	erence	ed to a	geod	letic datu	m.			PG421	6
BORINGS BY: Hydraulic Shovel		1		D	ATE:	2019 F	ebruary	27	HOLE NO.	TP 6	
	ГОТ		SAN	IPLE		DEPTH	ELEV.	Pen. R	Resist. Blow	s/0.3m	NON NON
SAMPLE DESCRIPTION	TAP		ER	ERY	۳a	(m)	(m)	• 5	u mm Dia. C	one	RUCT
	TRA	ТҮРІ	IUMB	scovi	I VAL or RQ			• <b>v</b>	later Contei	nt %	PIEZC
Ground Surface	0)		2	R	2	0-	-94.03	20	40 60	80	Ö
TOPSOIL	.30										
											-
		G	1								
Very stiff to stiff, brown <b>SILTY</b>		G	2			1-	-93.03			>1	30
CLAY											
		G	3								
- firm and grey by 1.8m depth											¥
		G	4			2-	-92.03				
			5								
2	80		5								
						3-	-91.03				-
		G	6								
GLACIAL TILL: Grey silty clay											
boulders		G	7								
<u>3</u> . End of Test Pit	.80										
Practical refusal to excavation at											
3.80m depth											
(Groundwater infiltration at 1.8m depth)											
								20	40 60	80 1	00
								Shea	ar Strength ( turbed △ Re	<b>kPa)</b> moulded	

	In	Con	sulting		SOIL	- PRO	FILE AND TEST DATA
		Engi	ineers	G Pi O	eotechnic roposed E ttawa. Or	al Invest Developn ntario	tigation nent - Eagleson Road at Ottawa St.
is wei	e refe	erence	ELEVA ed to a		I: 94.46	m	FILE NO. PG4216
	0 1010		.u to u		2010 5	 	HOLE NO. 27 TP 7
Б		SAM	IPLE	AIL.	20131	ebidary	Pen. Resist. Blows/0.3m
A PL(		~	RY	ш _	DEPTH (m)	ELEV. (m)	● 50 mm Dia. Cone
TRAT	түре	UMBE	cove	VALU or RQE			• Water Content %
S		z	RE	z	- 0-	-94.46	20 40 60 80 3
	G	1					
	_						
	_ G	2			1-	-93.46	
	_						
	_	0					
	_ G	3					
	_				2-	-92.46	
	G	4					
	G	5					
	G	6			3-	-91.46	
	_						
	– G	7					
	-	-					
							20         40         60         80         100           Shear Strength (kPa)           ▲ Undisturbed         △ Remoulded
		S were references	Severe references Severe references SAM BAL BAL BAL BAL BAL BAL BAL BAL	OUDEngineers         ELEVA         swere referenced to a         Image: Consulting transmission of the system of the	OUD Consulting Recevent of a construction swere referenced to a good         Image: state of a construction of a cons	SOIL       SOIL         Geotechnic       Proposed I         OUDPENDING       ELEVATION:       94.46         swere referenced to a geodetic datu       DATE:       2019 F         Image: Sample       DEPTH       Image: Sample       DEPTH         Image: Sample       Image: Sample       DEPTH       Image: Sample       Image: Sample         Image: Geotechnic       Gotechnic       Image: Sample       Image: Sample	SOLL PRO SOLL PRO SOLL PRO Geotechnical Invest Proposed Developm Ottawa, Ontario ELEVATION: 94.46 Is were referenced to a geodetic datum. DATE: 2019 February TOTAL TABLE UTAL SAMPLE UTAL SA

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9 Auriga Drive, Ottawa, Ontario K2E 7T	÷	μ	Eng	ineers	Ge Pr	eotechnic oposed E	al Invest Developn	tigation nent - Eag	leson Road	l at Ottawa	St.
EASTING: NORTHING	:			ELEVA		: 94.53	itario		FILE NO.	DC/21	6
<b>DATUM:</b> Ground surface elevation <b>REMARKS:</b>	ns we	re refe	erence	ed to a	geod	letic datu	m.			PG4210	0
BORINGS BY: Hydraulic Shovel		1		D	ATE:	2019 F	ebruary	27		TP 8	
SAMPLE DESCRIPTION	PLOT		SAN	IPLE		DEPTH	ELEV.	Pen. R ● 50	esist. Blov 0 mm Dia.	ws/0.3m Cone	TER
	RATA	ζPE	ABER	% DVERY	ALUE RQD	(m)	(11)		later Cont	ent %	ZOME:
Ground Surface	STF	ĥ.	NUN	RECO	N N		04.50	20	40 60	80	CON
TOPSOIL						0-	-94.53				
<u>0.30</u>											
		G	1								
Very stiff, brown <b>SILTY CLAY</b>						1-	-93 53				
- grey-brown by 0.8m depth		G	2				00.00				
- grey by 1.4m depth											
		G	3								
		-									
						2-	-92.53				Į Į
		G	4								
		G	5								
2.80		1									-
						3-	-91.53				-
		G	6								
GLACIAL TILL: Grey silty clay with sand, gravel, cobbles and											
boulders		G	7								
3.80 End of Test Pit											
Practical refusal to excavation at 3.80m depth											
(Groundwater infiltration at 1.9m depth)											
								20 Shea ▲ Undist	40 60 ar Strength turbed △ F	80 10 ( <b>kPa)</b> Remoulded	 00

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9 Auriga Drive, Ottawa, Ontario K2E 7T9		<b>7</b> P	Eng	ineers	G	eotechnic roposed [	al Invest Developn	tigation nent - Eagle	son Road a	at Ottawa	St.
EASTING: NORTHING:				ELEVA		1: 97.18	itario		FILE NO.	PG4216	3
<b>DATUM:</b> Ground surface elevation <b>REMARKS</b> :	s wei	re refe	erence	ed to a	geod	detic datu	m.	-	HOLE NO.		<b>,</b>
BORINGS BY: Hydraulic Shovel				[	DATE:	2019 F	-ebruary	27		TP 9	
SAMPLE DESCRIPTION	PLOT		SAN			DEPTH	ELEV. (m)	Pen. Re	sist. Blow mm Dia. C	s/0.3m one	ETER CTION
	RATA	түре	JMBER	% SOVER	VALUE r RQD			○ Wa	iter Conter	nt %	IEZOME NSTRU
Ground Surface	S		ž	REC	z °	- 0-	-97 18	20	40 60	80	⊡ ⊡ C
TOPSOIL							01110				
Brown SILTY SAND with rootlets											
GLACIAL TILL: Brown silty sand						1-	-96.18				
some clay											
1.80		G	1								
End of Test Pit											
Practical refusal to excavation at 1.80m depth											
(TP dry upon completion)											
								20 Shear ▲ Undistur	<b>40 60</b> <b>Strength (</b> rbed △ Rei	80 10 kPa) moulded	00

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9 Auriga Drive, Ottawa, Ontario K2	2E 7T9		Engil	neers	Ge Pro	eotechnic oposed [ tawa	al Invest Developn	igation nent - Eagl	leson Roa	d at Ottawa	St.
EASTING: NOR	THING:	ro rof	oronoo	ELEVA		: 97.48			FILE NO.	PG421	6
REMARKS:	valions we	le lei	erence	uioaų	Jeou	elic dalu	[[].		HOLE NO.		
BORINGS BY: Hydraulic Shovel				D,	ATE:	2019 F	- ebruary	27		TP 9A	
SAMPLE DESCRIPTION	PLOT		SAM	PLE		DEPTH	ELEV.	Pen. R ● 50	lesist. Blo 0 mm Dia.	ws/0.3m Cone	TER
	RATA	LYPE	MBER	% OVER		(,	(,	• <b>N</b>	later Cont	tent %	EZOME
Ground Surface	ST		N	REC	źō	0.	07 49	20	40 60	80	GP
TOPSOIL Brown SILTY SAND, trace rootlets	0.30					0-	-97.48				
		*				1-	-96.48				
<b>GLACIAL TILL:</b> Light brown to grey silty sand with clay, gravel, cobbles and boulders											
End of Test Pit	_ <u>2.40</u>					2-	-95.48				
Practical refusal to excavation at 2.40m depth											
(TP dry upon completion)											
								20 Shea ▲ Undist	40 60 ar Strengtl turbed △	) 80 10 h (kPa) Remoulded	00

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9 Auriga Drive, Ottawa, Ontario K2E 7T9		μ	Eng	ineers	Ge Pro	otechnic oposed I	al Invest Developm	igation nent - Eagl	eson Roa	d at Ottawa	St.
EASTING: NORTHING:		e rofe		ELEVA		95.63			FILE NO.	PG421	6
REMARKS:	s wei	ereie	erence		yeou	elic ualu			HOLE NO.		
BORINGS BY: Hydraulic Shovel				D	ATE:	2019 F	ebruary	27		TP10	
SAMPLE DESCRIPTION	PLOT		SAN			DEPTH	ELEV.	Pen. R ● 50	esist. Blo ) mm Dia.	ows/0.3m Cone	TER
	RATA	түре	JMBER	% SOVERY	VALUE r RQD	()	(,	0 <b>N</b>	ater Con	tent %	IEZOME
Ground Surface	ร		۲ ۲	REC	z °	0-	-05 63	20	40 60	80	E O C
TOPSOIL       0.35         Very stiff, red-brown SILTY       CLAY, some sand, trace organics       0.65         GLACIAL TILL: Brown silty sand with gravel and sand       0.90         End of Test Pit       Practical refusal to excavation at 0.90m depth         (TP dry upon completion)       (TP dry upon completion)		G	1 2			0-	-95.63				
								20 Shea ▲ Undist	40 60 ar Strengtl urbed △	) 80 10 h (kPa) Remoulded	1 DO

natersona	roi	Ir	Con	sulting	3	SOIL	_ PRO	FILE AI		T DATA	
9 Auriga Drive, Ottawa, Ontario K2E	7T9	ЧŅ	Eng	ineers	G Pi	eotechnic roposed [ ttawa_Or	cal Invest Developn	igation nent - Eag	leson Road	l at Ottawa	St.
EASTING: NORTHI	NG:			ELEV		N: 94.45			FILE NO.	PG421	6
<b>DATUM:</b> Ground surface elevation <b>REMARKS</b> :	ions we	re refe	erence	ed to a	geo	detic datu	m.		HOLE NO.		
BORINGS BY: Hydraulic Shovel				I	DATE	: 2019 F	-ebruary	27		TP11	
SAMPLE DESCRIPTION	PLOT		SAN	MPLE ►		DEPTH (m)	ELEV. (m)	Pen. R ● 5	esist. Blov 0 mm Dia.	ws/0.3m Cone	ETER CTION
	<b>IRATA</b>	ТҮРЕ	JMBER	% COVER	VALUE r RQD			• <b>v</b>	later Conte	ent %	IEZOMI
Ground Surface	<u></u>		ž	REC	z °	- 0-	-94.45	20	40 60	80	₽S
FILL: Sand with cobbles	.25	XXX									-
		G	1			1-	-93.45				
GLACIAL TILL: Loose to											
with clay, gravel, cobbles and											
		G	2								
							00.45				
		G	3			Z-	-92.45				
		G	4								
2	.80										
End of Test Pit											
2.80m depth											
(TP dry upon completion)											
								20	40 60	80 1	 00
								Snea ▲ Undis	turbed $\triangle R$	(KPa) emoulded	

## SYMBOLS AND TERMS

#### SOIL DESCRIPTION

Behavioural properties, such as structure and strength, take precedence over particle gradation in describing soils. Terminology describing soil structure are as follows:

Desiccated	-	having visible signs of weathering by oxidation of clay minerals, shrinkage cracks, etc.
Fissured	-	having cracks, and hence a blocky structure.
Varved	-	composed of regular alternating layers of silt and clay.
Stratified	-	composed of alternating layers of different soil types, e.g. silt and sand or silt and clay.
Well-Graded	-	Having wide range in grain sizes and substantial amounts of all intermediate particle sizes (see Grain Size Distribution).
Uniformly-Graded	-	Predominantly of one grain size (see Grain Size Distribution).

The standard terminology to describe the strength of cohesionless soils is the relative density, usually inferred from the results of the Standard Penetration Test (SPT) 'N' value. The SPT N value is the number of blows of a 63.5 kg hammer, falling 760 mm, required to drive a 51 mm O.D. split spoon sampler 300 mm into the soil after an initial penetration of 150 mm.

Relative Density	'N' Value	Relative Density %
Very Loose	<4	<15
Loose	4-10	15-35
Compact	10-30	35-65
Dense	30-50	65-85
Very Dense	>50	>85

The standard terminology to describe the strength of cohesive soils is the consistency, which is based on the undisturbed undrained shear strength as measured by the in situ or laboratory vane tests, penetrometer tests, unconfined compression tests, or occasionally by Standard Penetration Tests.

Consistency	Undrained Shear Strength (kPa)	'N' Value
Very Soft	<12	<2
Soft	12-25	2-4
Firm	25-50	4-8
Stiff	50-100	8-15
Very Stiff	100-200	15-30
Hard	>200	>30

## SYMBOLS AND TERMS (continued)

### **SOIL DESCRIPTION (continued)**

Cohesive soils can also be classified according to their "sensitivity". The sensitivity is the ratio between the undisturbed undrained shear strength and the remoulded undrained shear strength of the soil.

Terminology used for describing soil strata based upon texture, or the proportion of individual particle sizes present is provided on the Textural Soil Classification Chart at the end of this information package.

#### **ROCK DESCRIPTION**

The structural description of the bedrock mass is based on the Rock Quality Designation (RQD).

The RQD classification is based on a modified core recovery percentage in which all pieces of sound core over 100 mm long are counted as recovery. The smaller pieces are considered to be a result of closely-spaced discontinuities (resulting from shearing, jointing, faulting, or weathering) in the rock mass and are not counted. RQD is ideally determined from NXL size core. However, it can be used on smaller core sizes, such as BX, if the bulk of the fractures caused by drilling stresses (called "mechanical breaks") are easily distinguishable from the normal in situ fractures.

#### RQD % ROCK QUALITY

90-100	Excellent, intact, very sound
75-90	Good, massive, moderately jointed or sound
50-75	Fair, blocky and seamy, fractured
25-50	Poor, shattered and very seamy or blocky, severely fractured
0-25	Very poor, crushed, very severely fractured

#### SAMPLE TYPES

- SS Split spoon sample (obtained in conjunction with the performing of the Standard Penetration Test (SPT))
- TW Thin wall tube or Shelby tube
- PS Piston sample
- AU Auger sample or bulk sample
- WS Wash sample
- RC Rock core sample (Core bit size AXT, BXL, etc.). Rock core samples are obtained with the use of standard diamond drilling bits.
- P Split-spoon pushed through sampling interval which was also tested using a vane apparatus and resulted in a obtaining a sample of disturbed material (i.e., blow-counts not reflective of undisturbed, in-situ soils and not considered relevant)

## SYMBOLS AND TERMS (continued)

#### **GRAIN SIZE DISTRIBUTION**

MC%	-	Natural moisture content or water content of sample, %
LL	-	Liquid Limit, % (water content above which soil behaves as a liquid)
PL	-	Plastic limit, % (water content above which soil behaves plastically)
PI	-	Plasticity index, % (difference between LL and PL)
Dxx	-	Grain size which xx% of the soil, by weight, is of finer grain sizes These grain size descriptions are not used below 0.075 mm grain size
D10	-	Grain size at which 10% of the soil is finer (effective grain size)
D60	-	Grain size at which 60% of the soil is finer
Сс	-	Concavity coefficient = $(D30)^2 / (D10 \times D60)$
Cu	-	Uniformity coefficient = D60 / D10
Cc and (	Cu are i	used to assess the grading of sands and gravels:

Well-graded gravels have: 1 < Cc < 3 and Cu > 4Well-graded sands have: 1 < Cc < 3 and Cu > 4Well-graded sands have: 1 < Cc < 3 and Cu > 6Sands and gravels not meeting the above requirements are poorly-graded or uniformly-graded. Cc and Cu are not applicable for the description of soils with more than 10% silt and clay (more than 10% finer than 0.075 mm or the #200 sieve)

## **CONSOLIDATION TEST**

p'o	-	Present effective overburden pressure at sample depth
p'c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'c)
Сс	-	Compression index (in effect at pressures above p'c)
OC Ratio		Overconsolidaton ratio = p'c / p'o
Void Ratio	D	Initial sample void ratio = volume of voids / volume of solids
Wo	-	Initial water content (at start of consolidation test)

#### PERMEABILITY TEST

k - Coefficient of permeability or hydraulic conductivity is a measure of the ability of water to flow through the sample. The value of k is measured at a specified unit weight for (remoulded) cohesionless soil samples, because its value will vary with the unit weight or density of the sample during the test.

## SYMBOLS AND TERMS (continued) STRATA PLOT Topsoil Asphalt Peat Sand Silty Sand Fill $\nabla$ Sandy Silt Clay Silty Clay Clayey Silty Sand Glacial Till Shale Bedrock

## MONITORING WELL AND PIEZOMETER CONSTRUCTION



PIEZOMETER CONSTRUCTION









	Scale:		Date:
		1:5000	02/2020
	Drawn by:		Report No.:
		RCG	PG4216-1
ONTARIO	Checked by:		Dwg. No.:
		KP	DC/216 5
	Approved by:		F G4210-5
		FA	Revision No.: 3



















































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	т (	Taggart Con Geotechnica	struction	tion - G	Prono	sed		FILE NO. <b>PG4216</b>
							· · ·	·
	Ð	170	65	54	20	29		Cn - morganic clays of high plasticity
	⊕ ·	TP 7	G 6	27 54	21	6 20		CL-ML - Inorganic silt with some clay with low pl
	△ .	TP 6	G 5	36	19	17		CL - Inorganic clay with low plasticity
	0	TP 5	G 6	52 51	21 23	28		CH - Inorganic clays of high plasticity
	0	TP 3	G 4	33	21	12		CL - Inorganic clay with low plasticity
	* .	TP 2	G 3	33	21	12		CL - Inorganic clay with low plasticity
		BH 8	SS 2	29	19	10		CL - Inorganic clay with low plasticity
		вн 2 BH 3	552 SS3	35 29	21 19	14 10		CL - Inorganic clay with low plasticity
	Sp	ecimen Ider	ntification		PL	PI	Fines	Classification
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40								
50						$\smile$		
60					6		(CH)	
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