230 and 240 The Donway West, Toronto, ON

M3B 2V8

Hydrogeological Investigation

Client:
Donway Co-operative Development Corporation

Attention:
Mr. Geoffrey McGrath, Director of Development

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EXP Services Inc.
1595 Clark Boulevard
Brampton, ON, L6T 4V1
t: 905.793.9800
f: 905.793.0641

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1. Introduction

1.1 Project Description

EXP Services Inc. (EXP) was retained by Donway Co-operative Development Corporation to prepare a Hydrogeological Investigation Report associated with the proposed development located at 230 and 240 The Donway West, Toronto, Ontario (hereinafter referred to as the 'Site').

The Site is currently occupied by a church and the Brighton School that leases a portion of the property. The Site covers an area of approximately 2.55 acres. It is our understanding that the Site is to be re-developed. The proposed development plan comprises a six (6)-storey residential medium-rise structure with three (3) levels of underground parking, which will include an integrated church. The Site location plan is shown on Figure 1.

EXP conducted a Preliminary Geotechnical Investigation and Environmental Site Assessment for the Site in conjunction with this investigation. The pertinent information gathered from the noted investigations is utilized for this report.

1.2 Project Objectives

The main objectives of the Hydrogeological Investigation are as follows:

- Establish the local hydrogeological settings within the Site;
- Access short-term dewatering flow rates for the construction phase, as well as the potential impacts;
- Assess long-term foundation sub-drain flow discharge volumes for the post-construction phase;
- Assess groundwater quality;
- Prepare a Hydrogeological Investigation Report;

1.3 Scope of Work

To achieve the objectives of this Hydrogeological Investigation, EXP has completed the following scope of work:

- Reviewed available geological and hydrogeological information for the Site;
- Developed and conduct Single Well Response Tests (SWRTs) on monitoring wells to assess hydraulic conductivities of the saturated soils at the Site;
- Collected one (1) groundwater sample for analyses of the City of Toronto's Sanitary and Storm Sewer Use By-Law parameters;
- Evaluated the information collected during the field investigation program, including borehole geological information, SWRT results, groundwater level measurements and groundwater water quality;
- Prepared site plans, cross-sections, geological mapping, and groundwater contour mapping for the Site;
- Estimated construction dewatering flow rates (short-term);
- Provided preliminary estimates for sub-drain discharge volumes (long-term):
- Assessed potential impacts and recommend mitigation measures;
- Completed nine (9) rounds of groundwater measurements at all monitoring wells as part of a three (3) month-monitoring program required by the City of Toronto;

- Provided recommendations on the Ministry of Environment, Conservation and Parks (MECP) Water Taking Permits and the City of Toronto's Sewer Discharge Agreements (SDA) for the construction and post-construction phases; and
- Prepared a Hydrogeological Investigation Report.

The hydrogeological investigation was prepared in accordance with the Ontario Water Resources Act, Ontario Regulation 387/04, and Toronto Municipal Code 681-Sewers. The scope of work outlined above is prepared to assess dewatering and does not include a review of Environmental Site Assessments (ESA).

1.4 Review of Previous Reports

The following reports were reviewed as part of this Hydrogeological Investigation:

- EXP Services Inc. (October 15, 2021), Supplementary Geotechnical Investigation, Proposed Mid-Rise Residential Development, 230 The Donway West, Toronto, ON, prepared for Donway Co-operative Development Corporation.
- EXP Services Inc. (September 6, 2019), Geotechnical Investigation, Proposed Mid-Rise Residential Development, 230 The Donway West, Toronto, ON, prepared for Donway Co-operative Development Corporation.
- EXP Services Inc. (March 25, 2019), Phase Two Environmental Site Assessment, 230 The Donway West, Toronto, ON, prepared for Donway Co-operative Development Corporation.

2. Hydrogeological Setting

2.1 Regional Setting

2.1.1 Regional Physiography

The Site is located within a physiographic region named the South Slope, and the physiographic landform is known as the Till Plains. The South Slope lies between the Peel Plain in the north and the Iroquois Plain to the south (Chapman & Putnam, 2007). The topography of the South Slope is relatively flat with a gradual slope to the south, toward Lake Ontario.

2.1.2 Regional Geology and Hydrogeology

The surficial geology can be described as stone-poor, carbonated-derived silty to sandy till (Ministry of Northern Development and Mines, 2012). The surficial geology of the Site and surrounding areas is shown on Figure 2.

According to the Oak Ridges Moraine Groundwater Program (ORMGP, 2019) online mapping, the overburden within the Site boundary and surroundings is up to 122 meters thick. The subsurface stratigraphy of the Site from top to bottom can be described in the following sequence (TRCA, 2009 and ORMGP, 2019):

- **Halton Till**: This lithologic unit typically consists of sandy silt to clayey silt till interbedded with silt, clay, sand and gravel. Top elevation of this unit within the proposed development area is only shown on the southwest portion of the Site, but the top elevation has not been specified.
- **Oak Ridges Moraine**: This geology unit mainly consists of interbedded fine-grained sand and silt deposits where coarse-grained sand and gravel along with clay laminae are locally reported. Top elevation of this unit within the proposed development area approximately ranges from 140 masl to 141 masl.
- **Newmarket Till**: This lithologic unit mainly consist of a massive and dense silty sand unit. Top elevation of this unit within the Site boundary is approximately at 136 masl.
- **Thorncliffe Formation**: This formation generally consists of glaciofluvial (sand, silty sand) or glaciolacustrine deposits (silt, sand, pebbly silt and clay). Top elevation of this geology unit is approximately at 131 masl.
- **Sunnybrook Formation**: This lithologic unit predominately consists of silt and clay. Top elevation of this geology unit is mapped within the proposed development area is approximate at 121 masl.
- **Scarborough Formation**: This geological unit consists of peat sand overlaying silt and clay deposits. Top elevation of this unit is within the proposed development area is approximately at 116 masl. (Oak Ridge Moraine Groundwater Program, 2018).
- **Georgian Bay Formation**: Bedrock primarily consists of interbedded shale, limestone, dolostone, and siltstone of Upper Ordovician age (Ministry of Northern Development and Mines, 2012). Top of this unit within the proposed development is approximately at 20 masl.

Regional groundwater across the area is expected to flow southeast, towards Lake Ontario (ORMGP, 2019). Local deviation from the regional groundwater flow direction may occur in response to changes in topography and/or soils, as well as the presence of surface water features and/or existing subsurface infrastructure.

2.1.3 Existing Water Well Survey

Water Well Records (WWRs) from the database maintained by the Ministry of the Environment, Conservation and Parks (MECP) were reviewed to determine the number of wells present within a 500-m radius of the Site boundaries.

The MECP WWR database indicates that a total of twenty-five (25) records exist within a 500-m radius from the Site centroid. No well records are found onsite. The locations of the MECP WWRs are shown on Figure 3. A summary of the WWR is included in Appendix A.

The database indicates that the offsite wells are at an approximate distance of two-hundred and ninety-eight (298) m or greater from the Site centroid. All offsite wells were reportedly identified as monitoring and observation wells, test holes, abandoned and/or listed with unknown use. The reported depth to water table ranged from 1.0 to 8.5 meters below ground surface (mbgs).

2.2 Site Setting

2.2.1 Site Topography

The Site is in an urbanized area. The topography is considered relatively flat, with a gradual northeasterly slope towards the Don River. As indicated on the borehole logs included in Appendix B, the surface elevation of the Site approximately ranges from 141.41 to 142.85 meters above mean sea level (masl).

2.2.2 Local Surface Water Features

The Site is located within the Don River Watershed. No surface water features exist onsite. The nearest surface water feature is a small tributary of the Don River East Branch, located approximately 400 meters northeast of the Site boundary. The Don River East Brach is approximately 770 meters northeast of the Site. Roughly 1,1 km southwest flows Wilket Creek, a tributary of the Don River West Branch. Lake Ontario is approximately 8.8 kilometers southeast of the Site boundary.

2.2.3 Local Geology and Hydrogeology

A summary of subsurface soil stratigraphy is provided in the following paragraphs. The soil descriptions are based on the Geotechnical Investigation report (EXP, 2019) and they are summarized for the hydrogeological interpretations. As such, the information provided in this section should not be used for the construction design purposes.

The detailed soil profiles encountered in each borehole and the results of moisture content determinations are presented on the attached borehole logs (Appendix B). The interpreted geological cross-sections are also presented on Figures 5A and 5B. It should be noted that the soil boundaries indicated on the borehole logs are inferred from non-continuous sampling and observations during drilling. These boundaries are intended to reflect approximate transition zones for the purpose of hydrogeological investigation and should not be interpreted as exact planes of geological change.

The "Notes on Sample Description" preceding the borehole logs form an integral part of the noted borehole logs and should be read in conjunction with this report. The following is a brief description of the soil conditions encountered during the investigation.

Based on the results of the Geotechnical Investigations, the general subsurface soil stratigraphy consists of the following units:

Asphalt

Asphalt, about 40 to 115 mm thick, was encountered at the ground surface of Boreholes 1, 2 and 3.

As per the 2021 supplementary geotechnical investigation (EXP, 2021), Asphalt of about 75 mm in thickness was encountered at the ground surface of Boreholes 101, 108 and 109

Top Soil

Topsoil cover of about 140 and 150 mm in thickness was encountered at the ground surface of Boreholes 4 and 5, respectively.

As per the 2021 supplementary geotechnical investigation (EXP, 2021), Topsoil cover of about 100 and 175 mm in thickness was encountered at the ground surface of Boreholes 102 to 107.

Fill

Fill, comprising sand and gravel to clayey silt was encountered below the asphalt and topsoil at all borehole locations. The fill material contains a trace of gravel, some sand and occasional topsoil inclusions. Hydrocarbon odor was noted in some of the fill samples recovered from Borehole 6 which is in the former underground storage tank area. The fill has a moisture content ranging from about 11 to 20 percent of dry mass and extending to depths ranging from about 1.4 to 3.7 m below existing ground surface (El. ~141.5 to 138.2 m).

As per the 2021 supplementary geotechnical investigation (EXP, 2021), Fill, comprising sand and gravel to clayey silt was encountered below the asphalt and topsoil at all borehole locations. The fill material generally contains a trace of gravel, some sand and occasional topsoil inclusions. The fill has a moisture content ranging from about 9 to 22 percent of dry mass and extending to depths ranging from about 0.7 to 2.1 m below existing ground surface (El. ~141.7 to 138.9 m).

Sandy to Clayey Silt

As per the 2021 supplementary geotechnical investigation (EXP, 2021) , the fill was underlain by a sandy to clayey silt deposit at all borehole locations. This deposit contains a trace of gravel with a trace of wet sand seams. A trace of oxidized zones and silt seams were also noted in some of the recovered samples. This deposit is generally brown in colour and becoming grey with depth, has moisture contents of about 10 to 22 percent of dry mass and has a soft to hard consistency (recorded 'N'-value of 2 to 32). The sandy to clayey silt extends to depths ranging from about 4.5 to 10.5 m below existing ground surface (El. ~138.1 to 129.6 m).

Silty Sand to Sandy Silt Till

The fill was underlain by a silty sand to sandy silt till deposit at all borehole locations. The silty sand to sandy silt till contains a trace of gravel, some clay with occasional wet sand seams Clayey zones were noted in Boreholes 4 and 5 between 6 to 8 m depth. It is generally brown in color and becoming grey with depth. This deposit has moisture contents of about 8 to 24 percent of dry mass and is in a loose to very dense state of compactness (recorded 'N'-value of 6 to over 100). Boreholes 1, 2, 4, 5 and 6 were terminated in the silty sand to sandy silt till deposit at depths of about 8.2 to 12.8 m below existing ground surface (El. ~133.6 to 128.6 m).

As per the 2021 supplementary geotechnical investigation (EXP, 2021), a silty sand to sandy silt till deposit was encountered below the sandy to clayey silt at all borehole locations, except for boreholes 103, 104 and 106,. The silty sand to sandy silt till is brown to grey in colour, contains a trace of gravel, some clay with occasional wet sand seams. This deposit has moisture contents of about 7 to 11 percent of dry mass and is in a compact to very dense state of compactness (recorded 'N'-value of 10 to over 100).

Clayey Silt Till

In Borehole 3, a clayey silt till deposit was encountered below the silty sand to sandy silt till at about 11.5 m below existing ground surface. The clayey silt till is grey in color and contained a trace of gravel and sand pockets. With recorded 'N'-value of

82 to over 100, the clayey silt till has a hard consistency. The clayey silt till deposit extended to the termination depth of about 15.7 m below existing grade in Borehole 3 (El. ~126.7 m).

As per the 2021 supplementary geotechnical investigation (EXP, 2021), a clayey silt till deposit was encountered below the sandy to clayey silt in Boreholes 103, 104 and 106; and below the silty sand to sandy silt till in Boreholes 102, 102, 105, 107, 108 and 109. The clayey silt till is grey in colour and contained a trace of gravel, a trace of sand and some silt seams. With recorded 'N'-value of 25 to over 100, the clayey silt till has a very stiff to hard consistency. The clayey silt till deposit extended to about 20 m below existing grade in Borehole 103 (El. ~122.8 m). The remaining boreholes were terminated in the clayey silt till between depths of about 15.7 and 20.4 m below existing grade (El. ~126.9 to 120.6 m).

Silty Sand

As per the 2021 supplementary geotechnical investigation (EXP, 2021), the clayey silt till deposit encountered in Borehole 103 was underlain by a silty sand deposit. This deposit is grey in colour and is in a very dense state of compactness with recorded 'N'-value of over 100. Borehole 103 was terminated at a depth of about 20.2 m below existing grade (El. ~122.5 m).

3. Results

3.1 Monitoring Well Details

The onsite network of monitoring wells, which was installed as part of the Geotechnical and Environmental Investigations at the Site, consists of the following:

- A total of two (2) shallow wells, including BH/MW 2 and BH/MW 6 were installed to an approximate depth range from 6.2 to 7.6 mbgs;
- A total of three (3) intermediate wells, including BH/MW 1, BH/MW 4, and BH/MW 6 were installed to an approximate depth range from 11.5 to 12.2 mbgs;
- Three (3) deep monitoring wells, including BH/MW 3, BH/MW 101, and BH/MW 106 were installed to an approximate depth ranged from 15.3 to 19.7 mbgs;
- Each monitoring well is equipped with a 50-mm diameter PVC casing with three (3)-meter long screen;
- Each monitoring wells is covered with a flush mount well protective casing.

Borehole logs and monitoring well installation details are provided in Appendix B. The monitoring well locations are outside of the existing building (s) and are shown on Figure 4.

3.2 Water Level Monitoring

As part of the Hydrogeological Investigation, static water levels in the monitoring wells were recorded in nine (9) monitoring events between August 8 and October 6, 2021. A summary of all static water level data as it relates to the elevation survey is provided in Table 3-1 below.

The groundwater elevations recorded for the shallow wells ranged from 139.60 (2.27 mbgs at BH/MW 6 on August 27, 2019) masl to 141.86 masl (0.99 mbgs at BH/MW 2 on August 9, 2019). The groundwater elevations recorded for the intermediate wells ranged from 131.75 masl (9.66 mbgs at BH/MW 5 on August 13, 2019) to 142.01 masl (0.56 mbgs at BH/MW 1 on November 1, 20219). The groundwater elevations recorded for deep wells ranged from 123.62 masl (19 mbgs at BH/MW 101 on September 28, 2021) to 135.13 masl (7.27 mbgs at BH/MW 3 on September 20, 2021).

One (1) map shows onsite groundwater contours for the intermediate water-bearing zone (Figure 6). Accordingly, the groundwater flow direction in the intermediate zone is interpreted to be northwest of the Site. The inferred local groundwater flow direction is consistent with the ORMGP online mapping. According to ORMGP (2019), groundwater flow diverts northeast from the Site boundary, and eventually discharges into the Don River East Branch.

A downward hydraulic gradient is inferred when comparing the measured groundwater elevations of the shallow, intermediate and deep water-bearing zones.

It should be noted that groundwater levels are expected to show seasonal fluctuations and vary in response to prevailing climate conditions; this may also affect the direction and rate of flow. It is recommended to conduct seasonal groundwater level measurements to provide more information on seasonal groundwater level fluctuations.

Table 3-1: Summary of Measured Groundwater Elevations

Monitoring Well ID	Ground Surface Elevation (masl)	Approximate Full Well Depth (mbgs)	Depth	8-Aug-19	13-Aug-19	27-Aug-19	23-Sep-19	15-Oct-19	1-Nov-19	20-Sep-21	28-Sep-21	6-Oct-21
BH/MW1	142.56	12.2	mbgs	1.02	1.16	1.18	1.13	1.31	0.56	1.54	1.03	1.00
			masl	141.55	141.40	141.38	141.44	141.25	142.01	141.02	141.53	141.56
BH/MW2	142.85	6.2	mbgs	0.99	1.21	1.31	1.39	1.51	Inaccessible	1.63	1.40	1.35
			masl	141.86	141.64	141.54	141.46	141.34		141.22	141.45	141.50
BH/MW3	142.39	15.2	mbgs	9.75	12.91	9.18	9.15	8.82	8.31	7.27	7.41	7.36
			masl	132.64	129.48	133.21	133.24	133.57	134.08	135.13	134.98	135.03
BH/MW4	142.53	11.5	mbgs	2.09	2.28	1.58	1.84	1.82	1.68	2.25	2.32	2.26
			masl	140.44	140.25	140.96	140.70	140.71	140.85	140.29	140.21	140.27
BH/MW5	141.41	12.2	mbgs	1.57	9.66	1.60	1.62	1.62	1.24	1.86	1.74	1.76
			masl	139.84	131.75	139.82	139.79	139.79	140.17	139.56	139.67	139.65
BH/MW6	141.86	7.6	mbgs	2.12	2.26	2.27	2.34	2.39	2.61	2.81	2.56	2.47
			masl	139.74	139.61	139.60	139.52	139.47	139.25	139.06	139.30	139.39
BH/MW 101	142.62	19.7	mbgs	-	-	-	-	-	-	18.51	19.00	18.20
			masl							124.11	123.62	124.42
BH/MW 106	142.43	19.2	mbgs	-	-	-	-	-	-	16.24	16.73	14.44
			masl							126.20	125.70	127.99

Notes:
mbgs: meters below ground surface
masl: meters above mean sea level
* Based on field measurements
Underlined: indicates that groundwater level did not reach static level after well development. The hydraulic conductivity tests in the corresponding wells were completed during the consecutive event when the groundwater level was at the static level (refer to section 3.3 of this report).

3.3 Hydraulic Conductivity Testing

A total of eight (8) Single Well Response Tests (SWRT's) were completed in all monitoring wells onsite (BH/MW1 through BH/MW 6 on August 13 and 27 of 2019, as well as BH/MW 101 and BH/MW 106 on September 28 and October 6, 2021, respectively). The tests were completed to estimate the saturated hydraulic conductivity (K) of the soils at the well screen depths.

The static water level within each monitoring well was measured prior to the start of testing. In advance of performing SWRTs, each monitoring well underwent development to remove fines introduced into the screens following construction. The development process involved purging of the monitoring wells to induce the flow of fresh formation water through the screen. Each monitoring well was permitted to fully recover prior to performing SWRTs.

Hydraulic conductivity values were calculated from the SWRT data as per Hvorslev's solution included in the AQTESOLV Pro. V.4.5 software package. The semi-log plots for normalized drawdown versus time are included in Appendix C.

A summary of the hydraulic conductivity (K) values estimated from the SWRTs are provided in Table 3-2 below.

Table 3-2: Summary of Hydraulic Conductivity Testing

Monitoring Well	Well Depth (mbgs)*	Screen Interval (mbgs)		Soil Formation Screened **	Estimated Hydraulic Conductivity (m/s)
		From	To		
BH/MW 1	12.2	9.2	12.2	Silty Sand to Sandy Silt Till	4.2×10^{-8}
BH/MW 2	6.2	3.2	6.2	Silty Sand to Sandy Silt Till	1.6×10^{-7}
BH/MW 3	15.2	12.3	15.2	Clayey Silt Till	9.0×10^{-9}
BH/MW 4	11.5	7.8	11.5	Silty Sand to Sandy Silt Till	4.8×10^{-8}
BH/MW 5	12.2	8.7	12.2	Silty Sand to Sandy Silt Till	2.5×10^{-7}
BH/MW 6	7.6	4.6	7.6	Silty Sand to Sandy Silt Till	2.1×10^{-8}
BH/MW 101	19.7	16.7	19.7	Clayey Silt Till	2.1×10^{-7}
BH/MW 106	19.2	16.2	19.2	Clayey Silt Till	4.9×10^{-7}
				Highest Estimated K Value for shallow and deep wells	4.9×10^{-7}
				Highest Estimated K Value for shallow wells	2.5×10^{-7}
				Arithmetic Mean of Estimated K Values	1.5×10^{-7}
				Geometric Mean of Estimated K Values	7.9×10^{-8}

Notes:
mbgs: meters below ground surface
* Based on field measurements
** Based on geotechnical borehole logs

SWRTs provide estimates of K for the geological formation in the immediate media zone surrounding the well screens and may not be representative of bulk formation hydraulic conductivity. As shown in Table 3-2, the highest K for the tested water-bearing zones is estimated to be 4.9 x 10^{-7} m/s, and the arithmetic and geometric means of the K values are 1.2 x 10^{-7} and 7.9 x 10^{-8} m/s, respectively.

3.4 Groundwater Quality

To assess the suitability for discharge of pumped groundwater to the sewer system owned by the City of Toronto during dewatering activities, two (2) groundwater samples were collected from monitoring wells BH/MW 2 on August 13, 2019 and BH/MW 106 on October 7, 2021, using a peristaltic pump and a bailer, respectively. Prior to the collection of noted water sample, approximately three (3) standing well volumes of groundwater were purged from the noted well.

The samples were collected unfiltered and placed into pre-cleaned laboratory-supplied vials and/or bottles provided with analytical test group specific preservatives, as required. Dedicated nitrile gloves were used during sample handling. The groundwater samples were submitted for analysis to Bureau Veritas, a CALA certified independent laboratory in Mississauga, Ontario.

In addition to the results from the water samples collected for this hydrogeological study, the water quality results of the groundwater samples collected for ESA were also compared to the Sanitary and Storm Sewer Use By-Law guidelines. It should be mentioned that the ESA water samples were collected according to the MOECP's protocols.

The laboratory Certificate of Analysis (CofA) showed that all parameters conform the Sanitary and Combined Sewer Use By-Law limits (Table 1).

When compared to the Storm Sewer Use By-Law Limits (Table-2), the concentration of Total Manganese (Mn) exceeded the Storm Sewer Use By-Law criteria.

Based on the water quality results for one (1) water sample collected for the ESA, the concentrations of all tested parameters were reported below both, Sanitary and Storm Sewer Use By-Law limits.

Table 3-3 shown below summarizes the concentrations of the parameters exceeded the Sanitary Sewer Use By-Law (Table-1) and Storm Sewer By-Law (Table-2) criteria. The laboratory CofA is provided in Appendix D.

Table 3-3: Summary of Analytical Results

Parameter	City of Toronto Sanitary and Combined Sewer Discharge Limit (Table 1)	City of Toronto Storm Sewer Discharge Limit (Table 2)	Concentration	
			BH/MW 2 August 13, 2019	BH/MW 106 October 7,2021
Total Manganese (Mn) (µg/L)	5,000	50	**140**	**65**

Note:
Bold: indicates the concentration exceeded the Storm Sewer By-Law Limit.

For the short-term dewatering system (construction phase), it is anticipated that TSS levels and some other parameters (for example, Total Manganese) in the pumped groundwater may become elevated and exceed both, Sanitary and Storm Sewer Use By-Law limits. To control the concentration of TSS and associated metals, it is recommended that a suitable treatment method be implemented (filtration or decantation facilities and/ or any other applicable treatment system) during construction dewatering activities to discharge to the applicable sewer system. The specifications of the treatment system will need to be adjusted to the reported water quality results by the treatment contractor/process engineer.

For long-term dewatering (post-construction), the water is suitable to be released into the Sanitary Sewer system without treatment, However, the pumped water is unsuitable to be discharged into the Storm Sewer system without implementing a suitable pre-treatment system, as required.

It is noted that the water quality results presented in this report may not be representative of the long-term groundwater quality conditions. As such, regular water quality monitoring is recommended for the post-construction phase as required by the City.

An agreement to discharge to the sewers owned by the City of Toronto will be required prior to releasing dewatering effluent.

The Environmental Site Assessment Report(s) should be reviewed for more information on the groundwater quality conditions at the Site.

4. Dewatering Assessment

It is our understanding that the proposed development plan comprises a six (6)-storey residential medium-rise structure with three (3) levels of underground parking. For this assessment, it was assumed that the proposed construction plans include an excavation with a temporary shoring system (i.e. soldier pile and lagging), extending to the Site boundaries. EXP should be retained to review the assumptions outlined in this section, should the proposed shoring design change. Table 4-1 presents the assumptions used to calculate the dewatering rate for the Site.

Based on the geotechnical investigation report (EXP, 2019), the foundations of the proposed structure are anticipated to rest on the native compact silty sand to sandy silt till. Further, the proposed structure is projected to be supported on either conventional strip and spread footings or raft foundation (EXP, 2019).

Table 4-1 Dewatering Estimate Assumptions

Input Parameter		Assumption for P2	Notes
Ground Surface Elevation		142.85 masl	Highest ground surface elevation shown on the geotechnical borehole logs (EXP, 2021)
Groundwater Elevation		142.01 masl	The highest representative groundwater elevation measured across the Site at BH/MW 1 on November 1, 2021.
Lowest Top Slab Elevation		133.3 masl	It is anticipated to be 9.55 mbgs
Lowest Foundation Elevation		131.8 masl	Assumed to be 1.5 m below top of slab elevation.
Dewatering Elevation Target	Short-Term	130.8 masl	Assumed to be approx. 1 m below the lowest foundation elevation.
	Long-Term	132.8 masl	
Hydraulic Conductivity (K)		1.5×10^{-7} m/s	Arithmetic mean of estimated K-value.

Pits (elevator, sump pits) are assumed to have depth of excavation with the same dewatering target as main excavation; deeper pits may require localized dewatering and revised dewatering estimates.

4.1 Dewatering Flow Rate Estimate and Zone of Influence

The Dupuit-Forcheimer equation for radial flow to both sides of an excavation through an unconfined aquifer resting on a horizontal impervious surface was used to obtain a flow rate estimate. Dewatering flow rate is expressed as follows:

$$Q_w = \frac{\pi K (H^2 - h^2)}{Ln\left[\frac{R_o}{r_e}\right]}$$

$$r_e = \frac{a+b}{\pi} \qquad R_o = R_{cj} + r_e$$

Where:

Qw = Rate of pumping (m^3/sec)
X = Length of excavation (m)
K = Hydraulic conductivity (m/sec)
H = Hydraulic head beyond the influence of pumping (static groundwater elevation) (m)
h = Hydraulic head above the base of aquifer in an excavation (m)
R_0 = Radius of Influence (m)
R_{cj} = Cooper Jacob Radius of Influence (m)
r_e = Equivalent perimeter (m)
a = Length of the excavation area (m)
b = Width of the excavation area (m)

It is expected that the initial dewatering rate will be higher to remove groundwater from within the overburden formation. The dewatering rates are expected to decrease once the target water level is achieved in the excavation footprint as groundwater will have been removed, primarily from storage, resulting in lower seepage rates into the excavation.

It is expected that the initial dewatering rate will be higher to remove groundwater from within the overburden formation. The dewatering rates are expected to decrease once the target water level is achieved in the excavation footprint as groundwater will have been removed, primarily from storage, resulting in lower seepage rates into the excavation.

4.2 Cooper-Jacob's Radius of Influence

The radius of influence (Rcj) for the construction dewatering was calculated based on Cooper-Jacob equation. This equation is used to predict the distance at which the drawdown resulting from pumping is negligible. The estimated radius of influence due to pumping is based on Cooper-Jacob formula as shown below. The calculations are provided in Appendix E.

$$R_{cj} = \sqrt{2.25KDt/S}$$

Where:

Rcj = Estimated radius of influence (m)
D = Aquifer thickness (original saturated thickness) (m)
K = Hydraulic conductivity (m/sec)
S = Storage coefficient
t = Duration of pumping (s)

4.3 Stormwater

Additional pumping capacity may be required to maintain dry conditions within the excavation during and following significant precipitation events. Therefore, the dewatering rates at the Site should also include removing stormwater from the excavation.

A 15 mm precipitation event was utilized for the estimate. Given that the total area of the excavation is approximately 10,140 m^2 the estimated stormwater volume to be collected in the excavation is approximately 152 m^3 for a 15 mm precipitation event. The calculations for the stormwater estimate are included in Appendix E.

It is noted that a two (2) year storm event over a 24-hour period is approximately 57 mm. During large precipitation events, the water should be retained onsite to not exceed the allowable water taking and discharge limits as necessary.

4.4 Results of Dewatering Rate Estimate

4.4.1 Construction Dewatering Rate Estimate

For this assessment, it was assumed that the proposed construction plans include an excavation with shoring extending to the Site boundaries. EXP should be retained to review the assumptions outlined in this section, should the assumed shoring design change. Short-term (construction) dewatering calculations are presented in Appendix E. Based on the assumptions provided in this report, the results of the dewatering rate estimate are summarized in Table 4-2

Table 4-2 Summary of Dewatering Flow Rate Estimate

Peak Dewatering Flow Rate Including Rain Collection Volume and Zone of Influence		
Description	**Units**	**Value**
Estimated Short Term Dewatering Rate (without safety factor or precipitation)	L/day	73,000
From Precipitation Event of 15 mm in one day	L/day	152,000
With Factor of Safety of 2 (excluding Precipitation) for designs and budgeting	L/day	145,000
Without Factor of Safety (including Precipitation)	L/day	225,000
With Factor of Safety of 2 (including Precipitation)	L/day	298,000
Radius of Influence from sides of excavation	m	8

This peak dewatering flow rates accounts for accumulation of some precipitation, seasonal fluctuations in the groundwater table, flow from beddings of existing sewers, and variation in hydrogeological properties beyond those encountered during this study. This peak dewatering flow rate also provides additional capacity for the dewatering contractor.

Localized dewatering may be required for pits (elevator pits, sump pits) if they extend deeper than the dewatering target. Dewatering estimates should be reviewed once the pit dimensions are available.

It is noted that the maximum flow estimate equation calculated with a high K-value, provides a conservative estimate to account for higher-than-expected flow rates during the construction dewatering.

Please note that it is the responsibility of the contractor to ensure dry conditions are always maintained within the excavation at all costs.

4.4.2 Post-Construction Dewatering Rate Estimate

It is our understanding that the development plan includes a permanent foundation sub-drain system that will ultimately discharge to the municipal sewer system if conventional footings are installed.

As of January 1, 2022, the foundation drainage policy from the City of Toronto prohibits post construction discharge of groundwater into the municipal sewer system.

The long-term dewatering was based on the same equations as construction dewatering shown in Section 4.1.

The calculation for the estimated flow to the future sub-drain system (with no cutoff walls) is provided in Appendix E. The dewatering target for the foundation drainage system is taken at 0.5 m below the lowest slab elevation.

The foundation drain analysis provides a flow rate estimate. Once the foundation drain is built, actual flow rate measurements of the sump discharge will be required to confirm the estimated flow rate.

Seasonal and daily fluctuations are expected. These estimates may be affected by hydrogeological conditions beyond those encountered at this time, fluctuations in groundwater regimes, surrounding Site alterations, and existing and future infrastructures.

For the design of shallow foundations without perimeter and/or foundation drainage system, shallower wells need to be considered to evaluate the shallow groundwater table. The hydrogeologist needs to be consulted during the design process.

Table 4-3: Summary of Long-Term Dewatering Rate

Long-Term Dewatering Flow Rate	Building with P3 (L/day)
Long-Term Dewatering Rate without Safety Factor	8,000
Long-Term Dewatering Rate with Safety Factor of 1.5 for design, budgeting and permitting	11,000

The long term dewatering rate of 11,000 L/day is same as before stated in the hydrogeological report dated January 13, 2022.

Intermittent cycling of sump pumps and seasonal fluctuation in groundwater regimes should be considered for pump specifications. A safety factor was applied to the flow rate to account for water level fluctuations due to seasonal changes.

These estimates assume that pits (elevator and/or sump pits) are made as watertight structures (without drainage), if their depths extend below the dewatering target, as previously stated. The dewatering assumptions are based on using shoring system without open cuts. Open cuts can act as preferential groundwater pathways in the long-term and cause foundation drainage volumes to increase.

The sub-drain rate estimate is based on the assumptions outlined in this report. Any variations in hydrogeological conditions beyond those encountered as part of this investigation may significantly influence the sub-drain discharge volumes.

4.5 MECP Water Taking Permit

4.5.1 Short-Term Discharge Rate (Construction Phase)

In accordance with the Ontario Water Resources Act, if the water taking for the construction dewatering will be more than 50 m^3/day but less than 400 m^3/day, then an online registration in the Environmental Activity and Sector Registry (EASR) with MECP is required. If groundwater dewatering rates exceed 400 m^3/day, then an application for a Category 3 Permit to Take Water (PTTW) will be required from the MECP.

As of July 1, 2021, an amendment of O. Reg. 63/16 has come into effect and replaced the former subsection 7 (5) such that the water taking limit of 400,000 L/day would apply to groundwater takings of each dewatered work area only, excluding stormwater.

The maximum flow estimate, which was calculated with a representative K-value, provides a conservative estimate to account for higher-than-expected flow rates during construction dewatering. The dewatering estimate including a safety factor and excluding precipitation is stated below. The MECP construction dewatering rate excludes the precipitation amount and is the rate used for the permit application. Based on the MECP construction dewatering an EASR will be required to facilitate the construction dewatering program of the Site.

Table 4-4: MECP Construction Dewatering Flow Rate

Scenario	Building with P1 (L/day)
MECP Construction Dewatering Flow Rate **With Safety Factor** of 2 (excluding rainwater collection)	145,000

A Discharge Plan (dewatering sketch, sewer discharge agreement) must be developed and applied for any discharges from the Site. Monitoring of both water quantity and water quality must be carried out for the entire duration of the construction dewatering phase. During this phase, the Discharge Plan and the daily water taking records must be available onsite.

The EASR, Discharge Plan, hydrogeological investigation report, and geotechnical assessment of settlements must also be available at the construction Site during the entire construction dewatering. EXP should be notified immediately about any changes to the construction dewatering schedule or design, since the EASR will need to be updated to reflect these modifications. Altogether, the hydrogeological report, EASR, Discharge Plan and geotechnical assessment constitute the Water Taking Plan which needs to be available onsite during the construction dewatering.

4.5.2 Long-Term Discharge Rate (Post Construction Phase)

In accordance with the Ontario Water Resources Act, if the water taking for the construction dewatering is more than 50,000 L/day, then an application for a Category 3 Permit to Take Water (PTTW) will be required from the MECP.

The maximum flow rate, which was calculated with a representative K-value, provides a conservative estimate to account for higher-than-expected flow rates during post-development dewatering. Based on the dewatering estimate of approximately 11,000 L/day (applying a safety factor of 1.5) for this project, no permit to take-water will be required for the post-development phase.

The safety factor for construction (short-term) dewatering is selected larger than for long-term to account for anticipated greater groundwater volumes during initial dewatering. The applied analytical formula is adequate for long-term (steady state) conditions as it omits specific yield and time dependency. When the formula is used for short-term conditions a larger safety

factor is recommended to cover a larger initial dewatering rate, which is required to remove stored groundwater. Moreover, a large initial construction dewatering rate is favorable, as it supports reducing the time to reach the dewatering target elevation.

6. Environmental Impact

6.1 Surface Water Features

The Site is located within the Don River Watershed. No surface water features exist onsite. The nearest surface water feature is a small tributary of the Don River East Branch, located approximately 400 meters northeast of the Site boundary. The Don River East Brach is approximately 770 meters northeast of the Site. Roughly 1,1 km southwest flows Wilket Creek, a tributary of the Don River West Branch. Lake Ontario is approximately 8.8 kilometers southeast of the Site boundary.

Due to the limited extent of zone of influence and the large distance of the nearest surface water feature, no impacts to surface water features are expected during construction activities.

6.2 Groundwater Sources

Well Records from the MECP Water Well Record (WWR) Database were reviewed to determine the number of water supply wells present within a 500 m radius of the Site centroid. Given that the dewatering zone of influence, no dewatering related impact is expected on the water wells in the area.

6.3 Geotechnical Considerations

Under certain conditions, dewatering activities can cause settlements due to an increase of the effective stress in the dewatered soil. A letter related to geotechnical issues (i.e. settlement) as it pertains to the Site is recommended to be completed under a separate cover.

6.4 Groundwater Quality

It is our understanding that the potential discharge from the dewatering system during the construction will be directed to the municipal sewer system. As such, the quality of groundwater discharge is required to conform the City of Toronto Sewer Use By-Law.

Based on the water quality results for the water sample collected for ESA, the concentrations of all tested parameters were reported below both Sanitary and Storm Sewer Use By-Law limits. For the short-term dewatering system (construction phase), it is anticipated that TSS levels and some other parameters (for example, Total Manganese) in the pumped groundwater may become elevated and exceed both, Sanitary and Storm Sewer Use By-Law limits. To control the concentration of TSS and associated metals, it is recommended that a suitable treatment method be implemented (filtration or decantation facilities and/ or any other applicable treatment system) during construction dewatering activities to discharge to the applicable sewer system. The specifications of the treatment system will need to be adjusted to the reported water quality results by the treatment contractor/process engineer.

Dewatering (short and long-term) may induce migration of contaminants within the zone of influence and beyond due to changing hydraulic gradients, hydrogeological conditions beyond Site boundaries and preferential pathways in utility beddings etc. The water quality sampling conducted as part of this assessment was performed under static conditions. As a result, monitoring may be required during dewatering activities (short and long-term) to monitor potential migration, and this should be performed more frequently during early dewatering stages.

Fort the long-term dewatering (post-construction), the water is suitable to be released into the Sanitary Sewer system without a treatment system. However, the pumped water is unsuitable to be discharged into the Storm Sewer system without implementing an appropriate pre-treatment system as required.

It is noted that the water quality results presented in this report may not be representative of the long-term condition of groundwater quality onsite. As such, regular water quality monitoring is recommended for the post-construction phase as required by the City.

An agreement to discharge into the sewers owned by the City of Toronto will be required prior to discharging dewatering effluent.

The Environmental Site Assessment Report(s) should be reviewed for more information on the groundwater quality conditions at the Site.

6.5 Well Decommissioning

In conformance with Regulation 903 of the Ontario Water Resources Act, the installation and eventual decommissioning of any dewatering system wells or monitoring wells must be completed by a licensed well contractor. This will be required for all wells that are no longer in use.

7. Conclusions and Recommendations

Based on the findings of the Hydrogeological Investigation, the following conclusions and recommendations are provided:

- The laboratory Certificate of Analysis (CofA) showed that all parameters conform the Sanitary and Combined Sewer Use By-Law limits (Table 1).
- When compared to the Storm Sewer By-Law Limits (Table-2), the concentration of Total Manganese (Mn) exceeded the Storm Sewer Use By-Law criteria.
- Based on the assumptions outlined in this report, the estimated peak dewatering rate for proposed construction activities is approximately 298,000 L/day. This is the rate which will be required to be discharged to the municipal sewer system.
- Based on the assumptions outlined in this report, the estimated peak MECP dewatering rate for proposed construction activities is approximately 145,000 L/day. As the dewatering flow rate estimate is between 50,000 L/day and 400,000 L/day, an EASR will be required to facilitate the construction dewatering program for the Site.
- The long-term flow rate of the foundation sub-drain is estimated to be approximately 11,000 L/day. It is recommended that once the sub-drain system is in place, a flow meter be installed at the sump(s) to record daily discharge volumes during the commissioning stage of the system. Regular maintenance/cleaning of the sub-drain system is recommended to ensure its proper operation. Permit to take water will not be required for long-term discharge.
- The construction dewatering and long-term estimate of sub-drain discharge volumes are based on the assumptions outlined in this report, and any variations in hydrogeological conditions beyond those encountered as part of this investigation may significantly influence the discharge volumes.
- As per the MECP technical requirement for EASR, the geotechnical assessment of the stability of the soils due to water taking (ex: settlement, soil loss, subsidence etc.) is required. The water taking should not have unacceptable interference on soils and underground structures (foundations, utilities etc.). A letter related to geotechnical issues as it pertains to the Site is required to be completed under a separate cover.
- The EASR registration allows construction dewatering discharge of up to 400,000 L/day. A Discharge Plan (dewatering sketch, sewer discharge agreement) must be developed and applied for any discharges from the Site. The Discharge Plan and monitoring for both water quantity and water quality must be carried at the Site during the entire construction dewatering phase. The daily water taking records must be maintained onsite for the entire construction dewatering phase. The EASR, Discharge Plan, hydrogeological investigation report, and geotechnical assessment of settlements must always also be available at the construction Site for the entire construction dewatering. EXP should be notified immediately about any changes to the construction dewatering schedule or design, since EASR will need to be updated to reflect these modifications. The hydrogeological report, EASR, Discharge Plan and geotechnical assessment constitutes the Water Taking Plan which needs to be available onsite for the duration of construction dewatering.
- For the short-term dewatering system (construction phase), it is anticipated that TSS levels and some other parameters (for example, Total Manganese) in the pumped groundwater may become elevated and exceed both, Sanitary and Storm Sewer Use By-Law limits. To control the concentration of TSS and associated metals, it is recommended that a suitable treatment method be implemented (filtration or decantation facilities and/ or any other applicable treatment system) during construction dewatering activities to discharge to the applicable sewer system. The specifications of the treatment system will need to be adjusted to the reported water quality results by the treatment contractor/process engineer.

- For the long-term dewatering (post-construction), the water is suitable to be released into the Sanitary Sewer system without a treatment system. However, the pumped water is unsuitable to be discharged into the Storm Sewer system without implementing an appropriate pre-treatment system, as required.
- It is noted that an agreement to discharge into the sewers owned by the City of Toronto will be required prior to releasing dewatering effluent.
- In conformance with Regulation 903 of the Ontario Water Resources Act, the installation and eventual decommissioning of any dewatering system wells or monitoring wells must be completed by a licensed well contractor. This will be required for all wells that are no longer in use.

The conclusions and recommendations provided above should be reviewed in conjunction with the entirety of the report where they are based on the assumptions that the present design concept described throughout the report will proceed to construction. This report is solely intended for the construction and long-term dewatering assessments. Any changes to the design concept may result in a modification to the recommendations provided in this report.

8. Limitations

This report is based on a limited investigation designed to provide information to support an assessment of the current hydrogeological conditions within the study area. The conclusions and recommendations presented within this report reflect Site conditions existing at the time of the assessment. EXP must be contacted immediately if any unforeseen Site conditions are experienced during construction activities. This will allow EXP to review the new findings and provide appropriate recommendations to allow the construction to proceed in a timely and cost-effective manner.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the geoscience/engineering profession. No other warranty or representation, either expressed or implied, is included or intended in this report.

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We trust that this information is satisfactory for your purposes. Should you have any questions or comments, please do not hesitate to contact this office.

Sincerely,

EXP Services Inc.

Amar Neku, Ph.D., P.Eng., P.Geo.
Senior Hydrogeologist
Environmental Services

Francois Chartier, M.Sc., P.Geo.
Discipline Manager, Hydrogeology
Environmental Services

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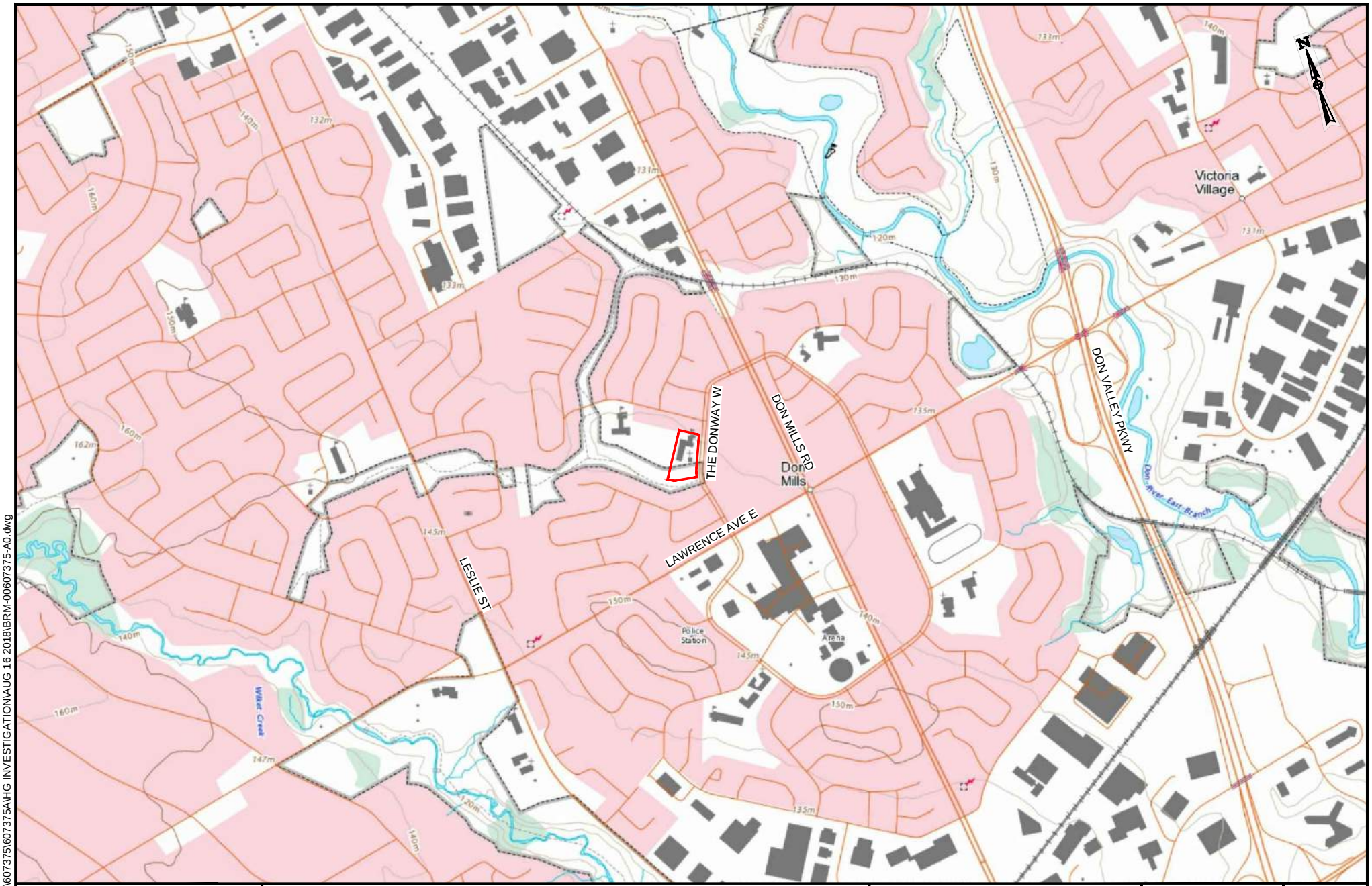
Figures



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LEGEND:

APPROXIMATE SITE BOUNDARY

TITLE AND LOCATION:

SITE LOCATION PLAN

HYDROGEOLOGICAL INVESTIGATION
230 & 240 THE DONWAY WEST
TORONTO, ONTARIO

PROJECT NO.:	DWN.:
BRM-00607375-A0	AS
SCALE:	CK:
AS NOTED	PS
DATE:	FIG. NO.:
SEPTEMBER 2019	1

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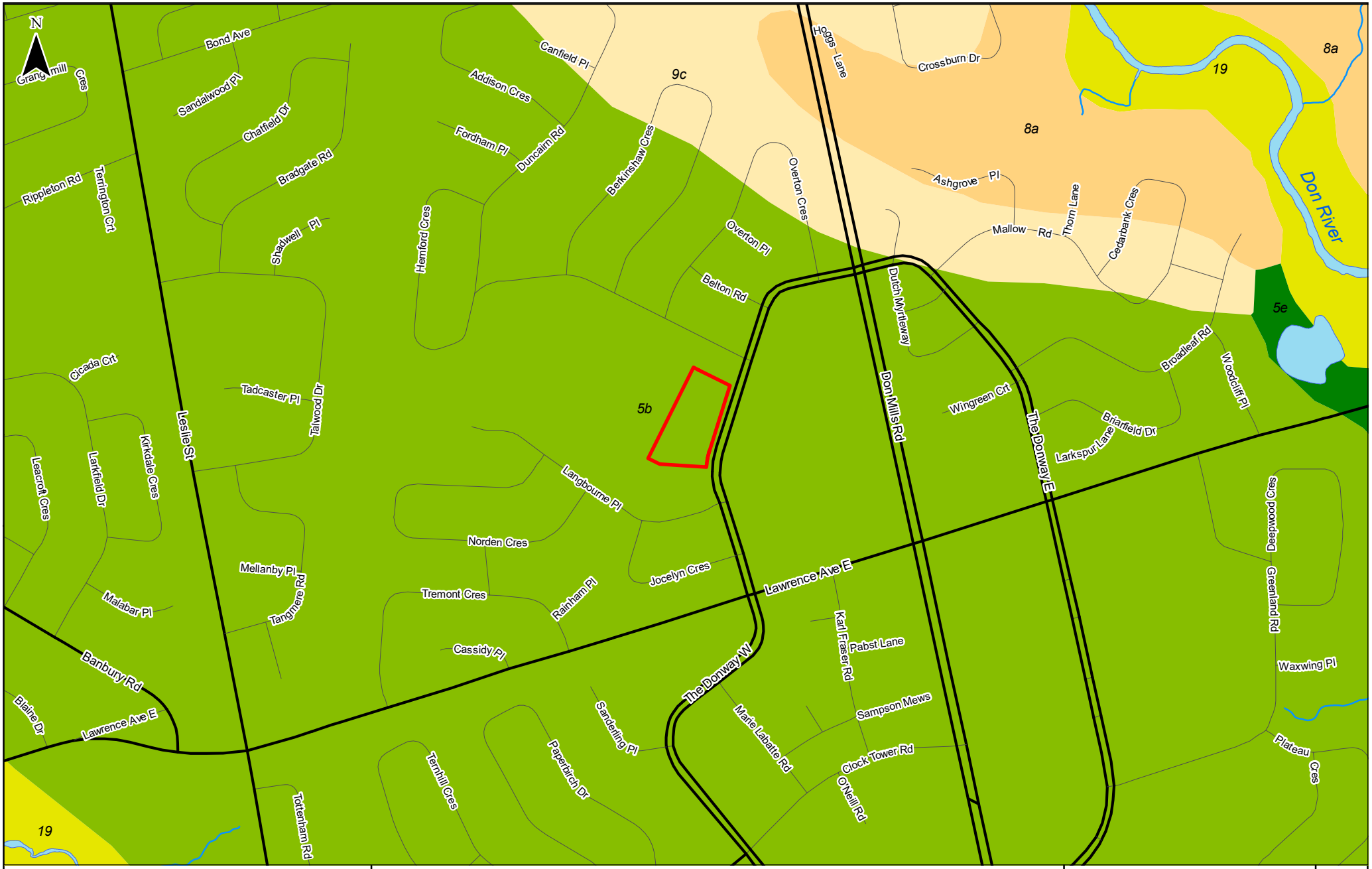


SCALE:

0 80 160 240 320 400 m

SOURCE:

BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2010

exp.

DRAWN BY:	CHECKED BY:
AC	CS

LEGEND:

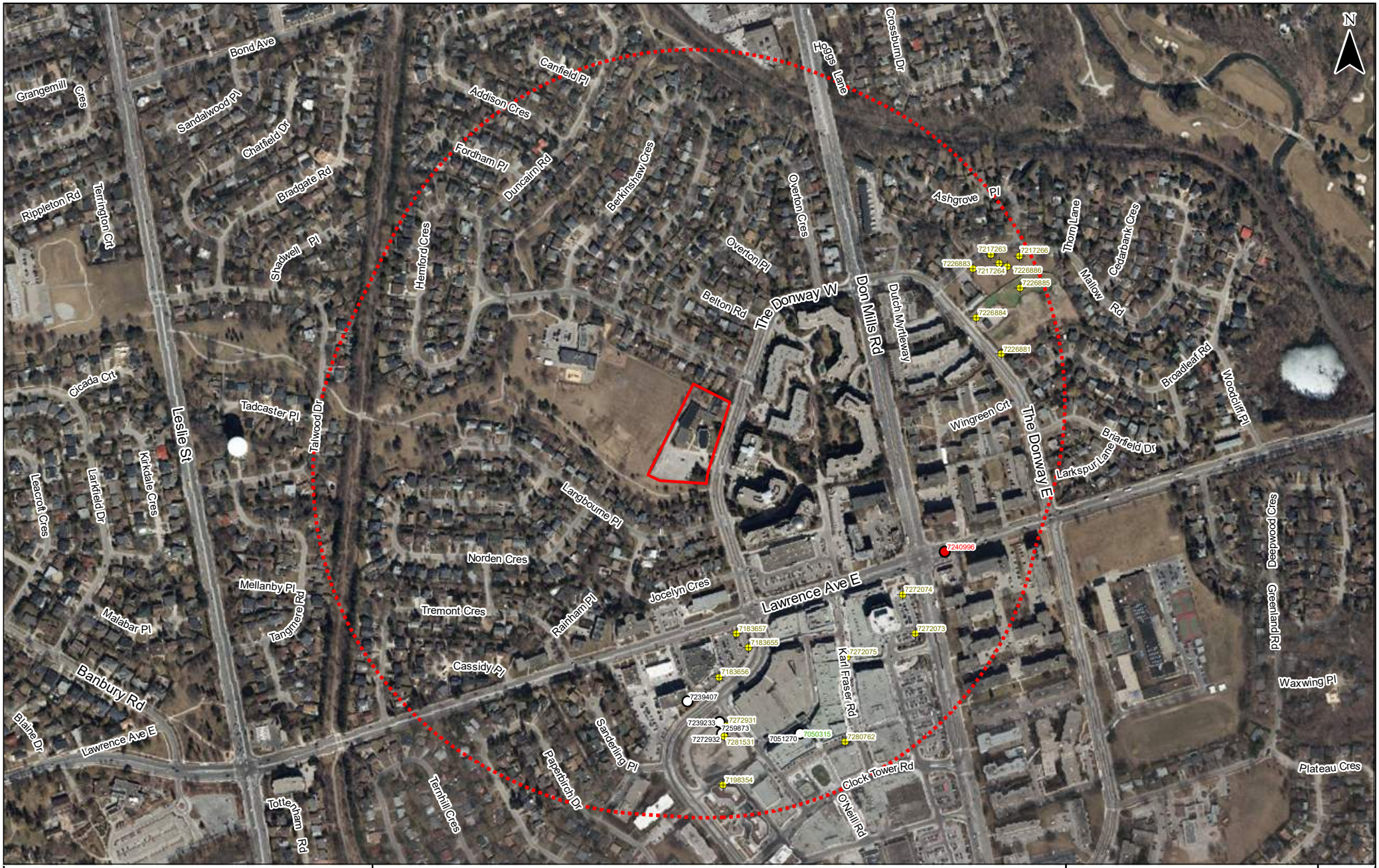
- APPROXIMATE SITE BOUNDARY
- 19: MODERN ALLUVIAL DEPOSITS
- 9C: COARSE-TEXTURED (FORESHORE-BASINAL) GLACIOLACUSTRINE DEPOSITS
- 8A: FINE-TEXTURED GLACIOLACUSTRINE DEPOSITS
- 5B: STONE-POOR, CARBONATE-DERIVED SILTY TO SANDY TILL
- 5E: UNDIFFERENTIATED OLDER TILL AND STRATIFIED SEDIMENT

SURFICIAL GEOLOGY

FIGURE: 2

HYDROGEOLOGICAL INVESTIGATION
230 & 240 THE DONWAY WEST
TORONTO, ONTARIO

PROJECT NUMBER: BRM-00607375-A0 DATE: AUGUST 2019



SCALE:
0 100 200 300 400 500 m

SOURCE:
BASED ON GOOGLE EARTH IMAGERY DATED 2018,
AVAILABLE WELL RECORD INFORMATION AS OF SEPTEMBER 2017

exp.

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AC	CS

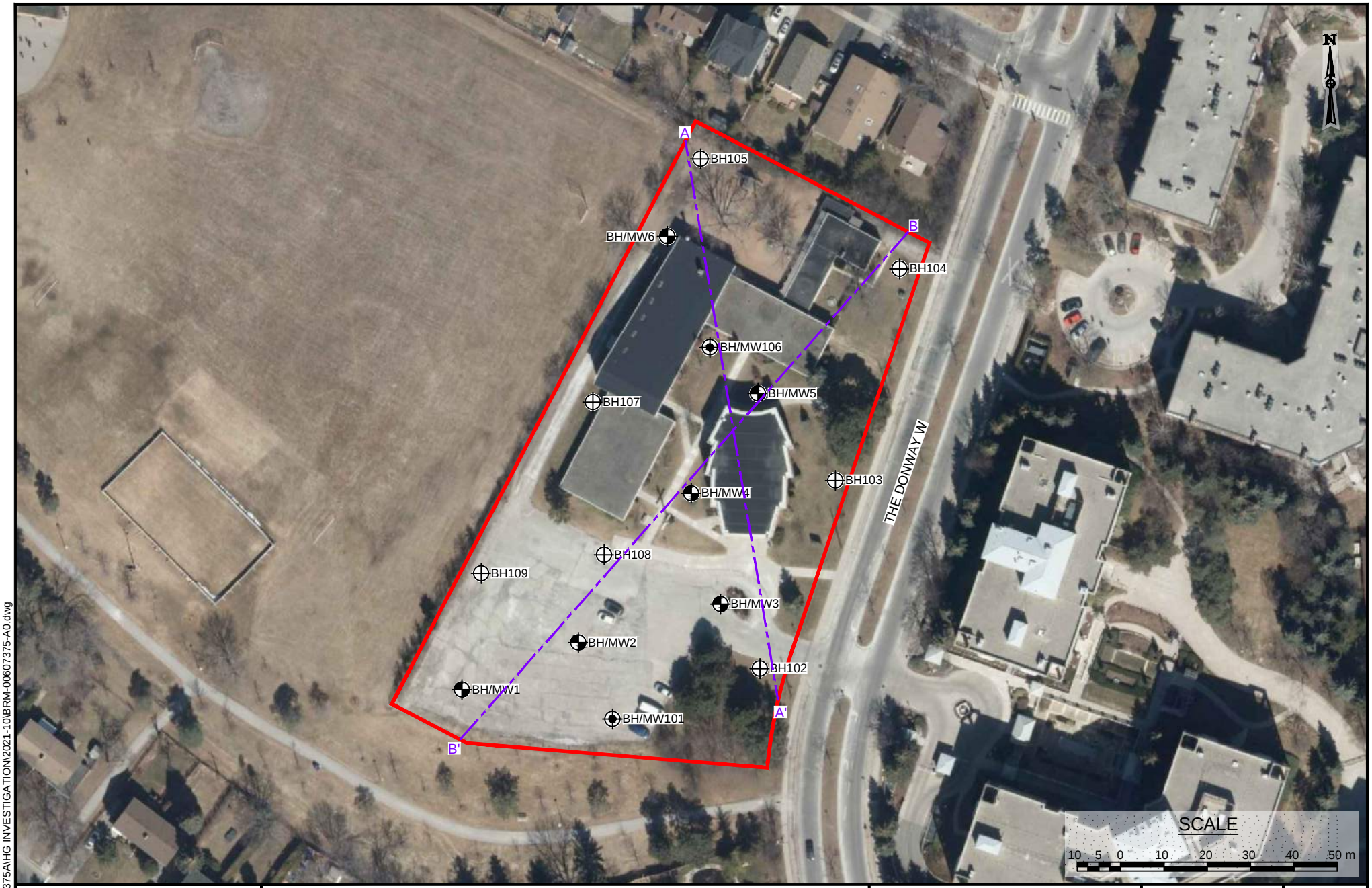
LEGEND:
- MONITORING WELL / TEST HOLE
- DEWATERING WELL
- ABANDONED WELL
- UNCLASSIFIED / UNFINISHED WELL
- 500 m ZONE
- APPROXIMATE SITE BOUNDARY

MECP WATER WELL RECORDS MAP

FIGURE: 3

HYDROGEOLOGICAL INVESTIGATION
230 & 240 THE DONWAY WEST
TORONTO, ONTARIO

PROJECT NUMBER: BRM-00607375-A0 DATE: AUGUST 2019



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LEGEND:

- APPROXIMATE SITE BOUNDARY
- BOREHOLE / MONITORING WELL LOCATION (EXP, 2019)
- BOREHOLE LOCATION (EXP, 2021)
- BOREHOLE / MONITORING WELL LOCATION (EXP, 2021)
- A-A' CROSS SECTION A-A' (SEE FIGURE 5A)
- B-B' CROSS SECTION B-B' (SEE FIGURE 5B)

TITLE AND LOCATION:

BOREHOLE / MONITORING LOCATION PLAN

HYDROGEOLOGICAL INVESTIGATION
230 THE DONWAY WEST
TORONTO, ONTARIO

PROJECT NO.: BRM-00607375-A0	DWN.: JA
SCALE: AS NOTED	CK: PS
DATE: OCTOBER 2021	FIG. NO.: 4

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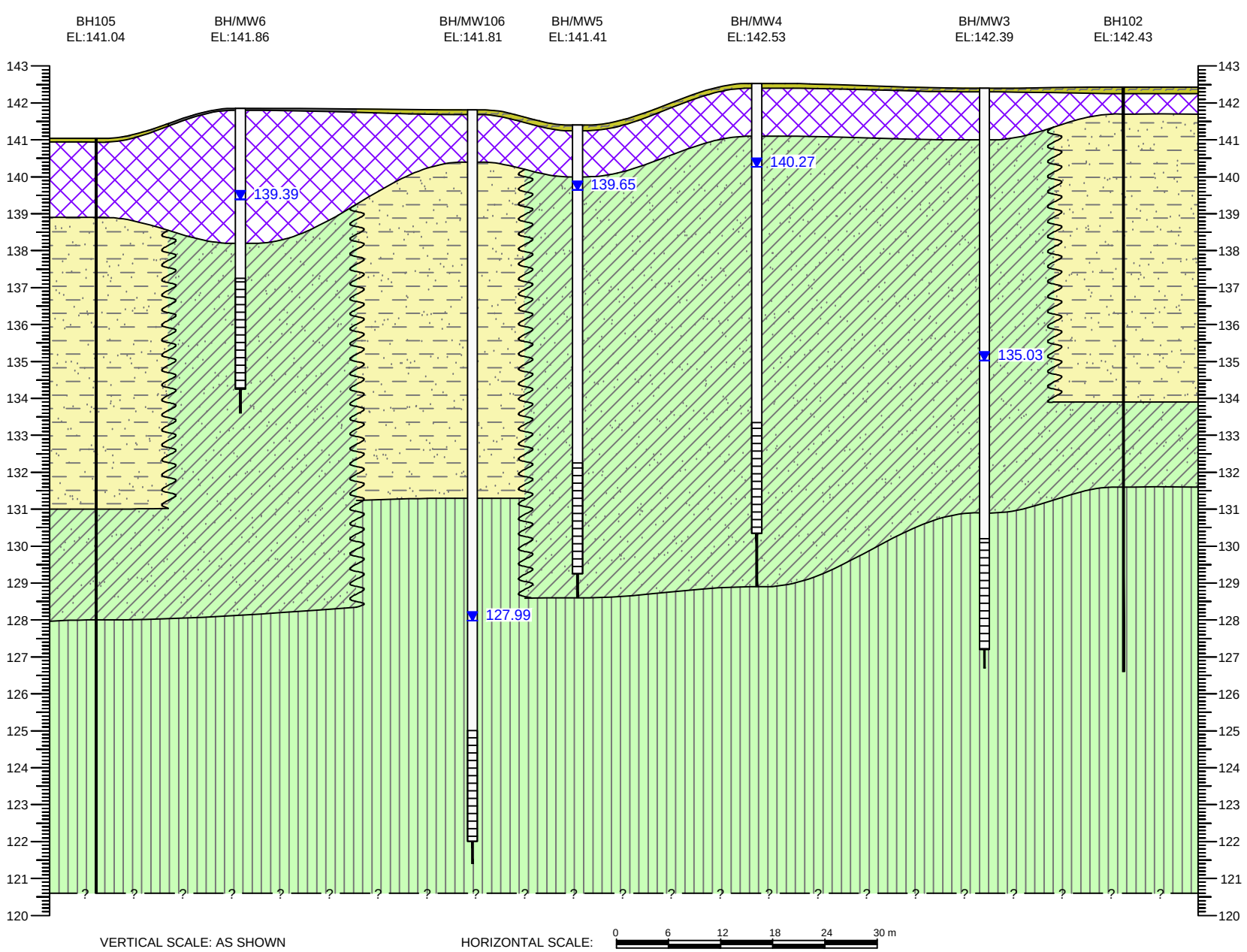

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LEGEND:

- ASPHALT / CONCRETE
- TOPSOIL
- FILL
- SILTY SAND TO SANDY SILT TILL
- CLAYEY SILT TILL
- SANDY TO CLAYEY SILT
- GROUNDWATER ELEVATION AS MEASURED ON OCTOBER 6, 2021

TITLE AND LOCATION:

CROSS SECTION A-A'

HYDROGEOLOGICAL INVESTIGATION
230 THE DONWAY WEST
TORONTO, ONTARIO

PROJECT NO.: BRM-00607375-A0	DWN.: JA
SCALE: AS NOTED	CK: PS
DATE: OCTOBER 2021	FIG. NO.: 5A

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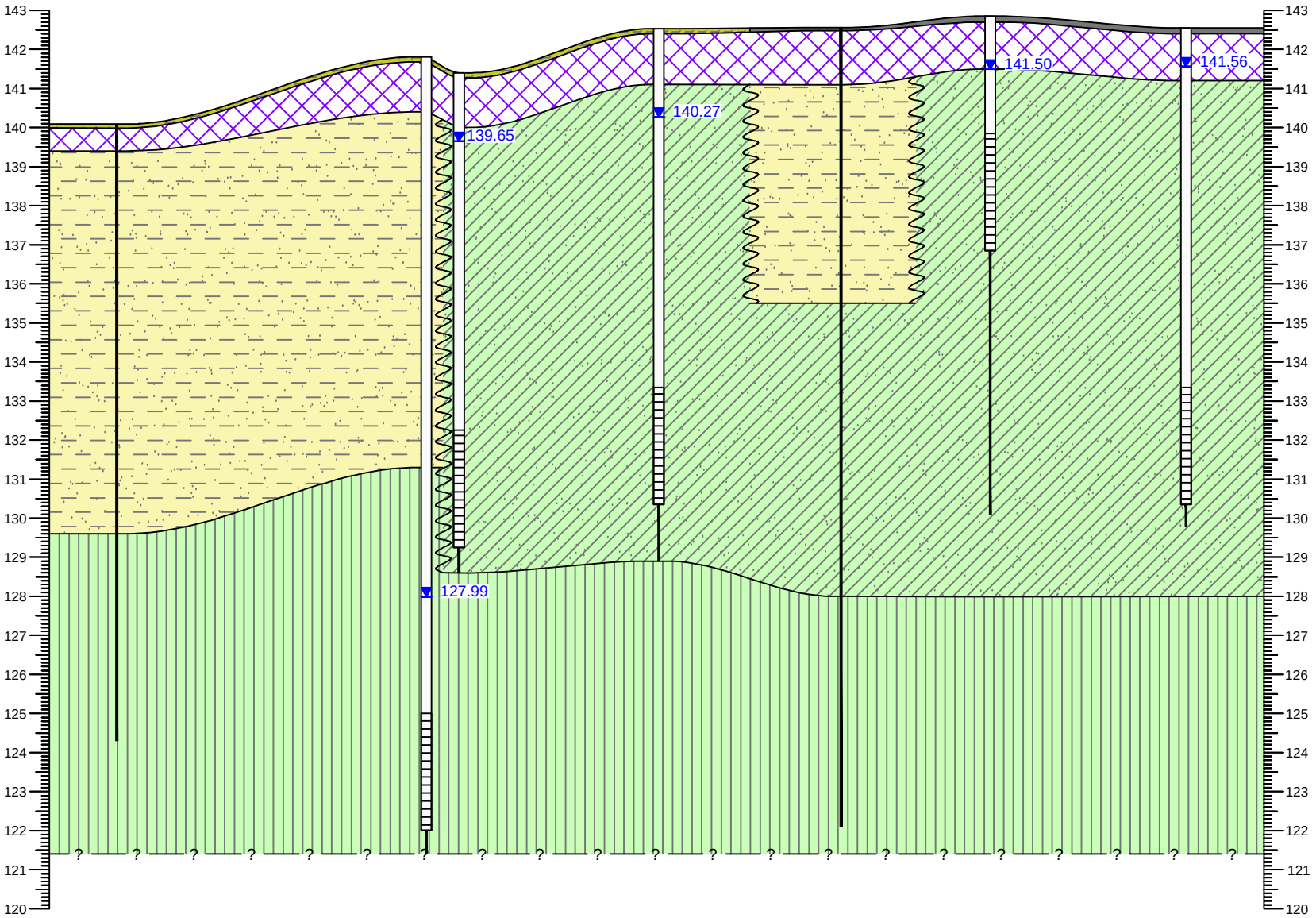
B
NORTHEAST

B'
SOUTHWEST



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE: 0 6 12 18 24 30 m

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LEGEND:

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- TOPSOIL
- FILL
- SILTY SAND TO SANDY SILT TILL
- CLAYEY SILT TILL
- SANDY TO CLAYEY SILT
- GROUNDWATER ELEVATION AS MEASURED ON OCTOBER 6, 2021

TITLE AND LOCATION:

CROSS SECTION B-B'

HYDROGEOLOGICAL INVESTIGATION
230 THE DONWAY WEST
TORONTO, ONTARIO

PROJECT NO.: BRM-00607375-A0	DWN.: JA
SCALE: AS NOTED	CK: PS
DATE: OCTOBER 2021	FIG. NO.: 5B

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LEGEND:

- APPROXIMATE SITE BOUNDARY
- BOREHOLE / MONITORING WELL LOCATION (EXP, 2019)
- GROUNDWATER CONTOURS
- [XX.XX] GROUNDWATER ELEVATION AS MEASURED ON AUGUST 27, 2019
- GROUNDWATER FLOW DIRECTION

TITLE AND LOCATION:

GROUNDWATER CONTOURS

HYDROGEOLOGICAL INVESTIGATION
230 & 240 THE DONWAY WEST
TORONTO, ONTARIO

PROJECT NO.: BRM-00607375-A0	DWN.: AS
SCALE: AS NOTED	CK: PS
DATE: SEPTEMBER 2019	FIG. NO.: 6

Appendix A – MECP WWR Summary Table

Off-Site												
BORE_HOLE_ID	WELL_ID	DATE	EAST83	NORTH83	ELEVATION (m ASL)	STREET	CITY	DISTANCE TO SITE CENTROID (m)	WATER FOUND (m BGS)	1st USE	2nd USE	FINAL STATUS
23050315	7050315	9/11/2007	633224	4843753	143.2			469	1.0	Dewatering		
1003963380	7183655	6/15/2012	633147	4843882	143.5	895 LAWRENCE AVE E	TORONTO	323		Monitoring and Test Hole		Monitoring and Test Hole
1003963383	7183656	6/15/2012	633103	4843838	144.2	895 LAWRENCE AVE E	TORONTO	358		Monitoring and Test Hole		Monitoring and Test Hole
1003963386	7183657	6/15/2012	633129	4843903	143.7	895 LAWRENCE AVE E	TORONTO	298		Monitoring and Test Hole		Monitoring and Test Hole
1004262112	7198354	2/28/2013	633109	4843677	147.0	99 THE DONWAY WEST	TORONTO	518	8.5	Monitoring and Test Hole		Test Hole
1004717749	7217263	1/20/2014	633509	4844470	134.9	15 MALLOW ROAD	Toronto	525		Test Hole		Test Hole
1004717752	7217264	1/20/2014	633521	4844457	134.9	15 MALLOW ROAD	Toronto	529		Test Hole		Test Hole
1004717758	7217266	1/20/2014	633551	4844468	134.6	15 MALLOW RD.	Toronto	560		Test Hole		Test Hole
1005117481	7226881	7/9/2014	633524	4844321	135.7	15 MALLOW RD	TORONTO	479		Monitoring and Test Hole		Test Hole
1005117487	7226883	7/6/2014	633482	4844449	135.1	15 MALLOW RD.	TORONTO	491		Monitoring and Test Hole		Test Hole
1005117490	7226884	7/6/2014	633487	4844375	135.7	15 MALLOW RD.	TORONTO	462		Monitoring and Test Hole		Test Hole
1005117493	7226885	7/6/2014	633552	4844420	134.9	15 MALLOW RD.	TORONTO	539		Monitoring and Test Hole		Test Hole
1005117496	7226886	7/6/2014	633533	4844452	134.8	15 MALLOW RD.	TORONTO	537		Monitoring and Test Hole		Test Hole
1006252423	7272073	8/29/2016	633396	4843903	142.2	7 MAGINN MEWS	TORONTO	442		Monitoring and Test Hole		Monitoring and Test Hole
1006252426	7272074	8/29/2016	633377	4843961	141.7	7 MAGINN MEWS	TORONTO	391		Monitoring and Test Hole		Monitoring and Test Hole
1006252429	7272075	8/29/2016	633294	4843868	142.4	7 MAGINN MEWS	TORONTO	399		Monitoring and Test Hole		Monitoring and Test Hole
1006270603	7272931	7/8/2016	633115	4843765	145.9			432	4.2	Monitoring		Observation Wells
1006352863	7280762	8/30/2016	633291	4843741	141.9	7 MAGINN MEWS	Toronto	507		Monitoring and Test Hole		Monitoring and Test Hole
1006356018	7281531	6/3/2016	633111	4843749	146.2	169 THE DONWAY WEST	Toronto	447		Monitoring		Observation Wells
23051270	7051270	9/27/2007	633224	4843753	143.2	DONMILLS RD & LAWRENCE AVE. EAST		469				
1005341694	7240996	2/13/2015	633440	4844025	139.8	DON MILLS RD. LAWRENCE AVE	TORONTO	413	1.4			Abandoned-Other
1006270606	7272932	7/15/2016	633108	4843753	146.1			443	7.5			
1005318851	7239233	10/14/2014	633103	4843770	145.9			425				
1005320078	7239407	4/17/2014	633056	4843801	146.2			392				
1005913647	7259873	11/23/2015	633104	4843770	145.9			425				

Appendix B – Borehole Logs

Log of Borehole 1

Project No. BRM-00607375-A0 Drawing No. 2

Project: Preliminary Environmental, Geotechnical & Hydrogeological Investigations Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

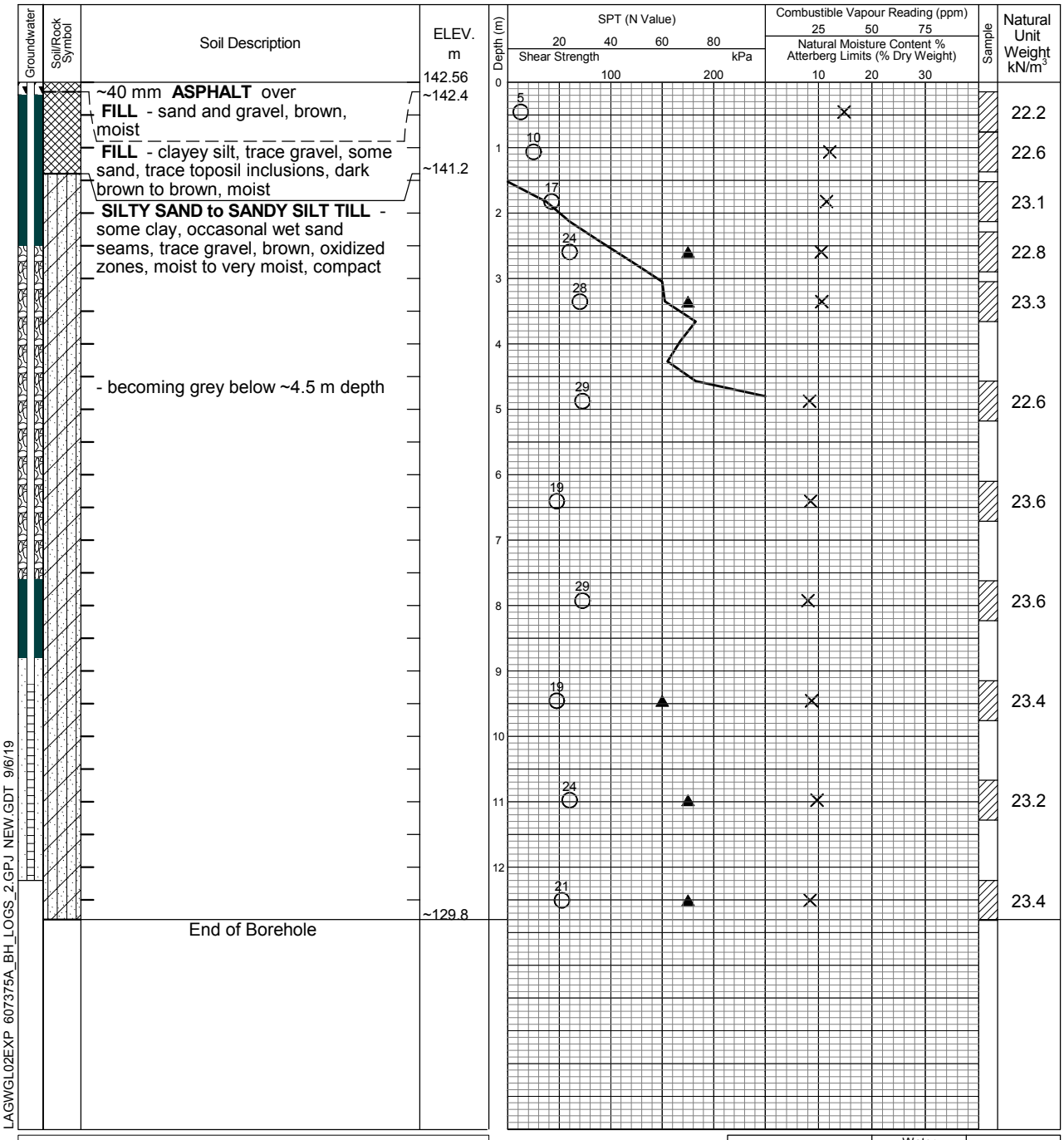
Date Drilled: August 1, 2019

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲



LAGWGL02EXP 607375A_BH_LOGS_2.GPJ NEW.GDT 9/6/19

Notes:
1. Borehole advanced to completion at ~12.8 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-A0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~11.5	Well
August 8, 2019	~1.0	Well
August 27, 2019	~1.2	Well

Log of Borehole 2

Project No. BRM-00607375-A0 Drawing No. 3

Project: Preliminary Environmental, Geotechnical & Hydrogeological Investigations Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

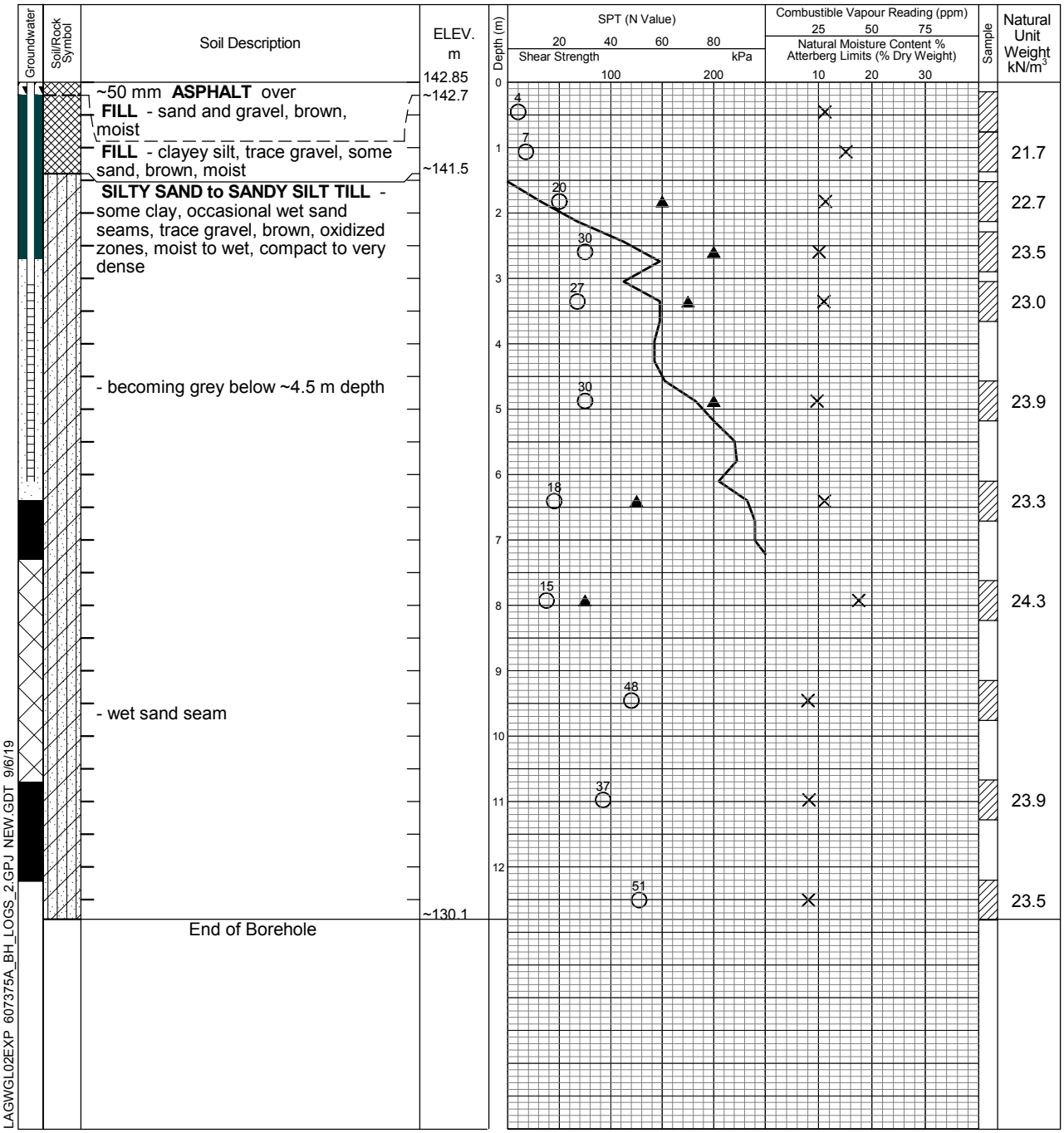
Date Drilled: July 30, 2019

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲



LAGWGL02EXP 607375A_BH_LOGS_2.GPJ NEW.GDT 9/6/19

Notes:
1. Borehole advanced to completion at ~12.8 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-A0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~9.6	Well
August 8, 2019	~1.0	Well
August 27, 2019	~1.3	Well

Log of Borehole 3

Project No. BRM-00607375-A0 Drawing No. 4

Project: Preliminary Environmental, Geotechnical & Hydrogeological Investigations Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: July 30, 2019

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢—○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)	SPT (N Value) 20 40 60 80 / Shear Strength kPa 100 200	Combustible Vapour Reading (ppm) 25 50 75 / Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30	Sample	Natural Unit Weight kN/m³
		~115 mm **ASPHALT** over	142.39	0	11	×		
		FILL - sand and gravel, brown, moist	~141.9					
		FILL - clayey silt, trace gravel, some sand, brown, moist	~141.0	1	14	×		
		SILTY SAND to SANDY SILT TILL - some clay, occasional wet sand seams, trace gravel, brown, oxidized zones, moist to wet, compact to very dense		2	21	×		23.8
				3	21	×		23.1
		- becoming grey below ~3 m depth			13	×		23.3
				4				
				5	13	×		23.0
				6				
					13	×		23.2
				7				
				8	15	×		23.6
				9				
		- wet sand seam			54	×		
				10				
				11	34	×		
			~130.9					
		CLAYEY SILT TILL - trace gravel, trace sand pockets, grey, moist, hard		12				
					82	×		
				13				
				14	89/275 mm	×		
				15				
					94	×		
		- very moist silty sand seam	~126.7					
		End of Borehole						

LAGWGL02EXP 607375A_BH_LOGS_2.GPJ NEW.GDT 9/6/19

Notes:
1. Borehole advanced to completion at ~15.7 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-A0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~13.8	Well
August 8, 2019	~9.8	Well
August 27, 2019	~9.2	Well

Log of Borehole 4

Project No. BRM-00607375-A0 Drawing No. 5

Project: Preliminary Environmental, Geotechnical & Hydrogeological Investigations Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

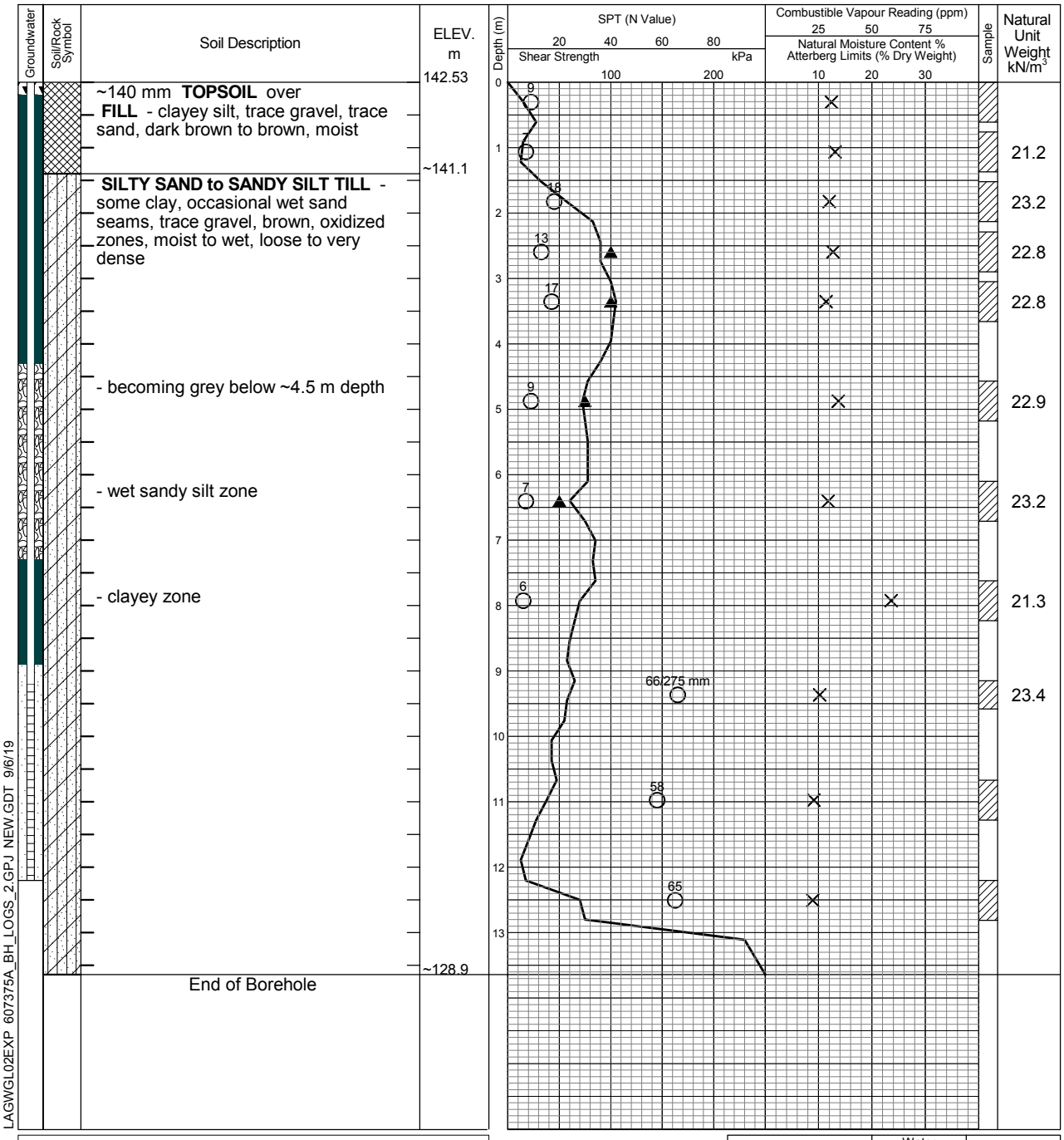
Date Drilled: July 31, 2019

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test ——
Shelby Tube ■
Field Vane Test ✚ S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit ⊢○
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲



LAGWGL02EXP 607375A_BH_LOGS_2.GPJ NEW.GDT 9/6/19

Notes:
1. Borehole advanced to completion at ~13.6 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-A0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~8.3	Well
August 8, 2019	~2.1	Well
August 27, 2019	~1.6	Well

Log of Borehole 5

Project No. BRM-00607375-A0 Drawing No. 6

Project: Preliminary Environmental, Geotechnical & Hydrogeological Investigations Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: July 31, 2019

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test (S)

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)	SPT (N Value) / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Sample	Natural Unit Weight kN/m³
		~150 mm **TOPSOIL** over **FILL** - clayey silt, trace sand, trace gravel, trace rootlets, dark brown to brown, moist	141.41	0	9			21.0
				1	8			22.1
			~140.0					
		SILTY SAND to SANDY SILT TILL - some clay, occasional wet sand seams, trace gravel, brown, oxidized zones, moist to very moist, loose to dense		2	17			23.0
				3	19			23.1
					24			23.4
		- becoming grey below ~4.5 m depth		4				
				5	23			22.6
		- clayey zone		6	6			20.3
				7				
				8	7			
				9	28			23.2
				10				
				11	41			24.0
				12	45			
			~128.6					
		End of Borehole						

LAGWGL02EXP 607375A_BH_LOGS_2.GPJ NEW.GDT 9/6/19

Notes:
1. Borehole advanced to completion at ~12.8 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-A0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~11.3	Well
August 8, 2019	~1.6	Well
August 27, 2019	~1.6	Well

Log of Borehole 6

Project No. BRM-00607375-A0 Drawing No. 7

Project: Preliminary Environmental, Geotechnical & Hydrogeological Investigations Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: August 1, 2019

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample ☒
SPT (N) Value ○ ▨
Dynamic Cone Test —
Shelby Tube ■
Field Vane Test S

Combustible Vapour Reading □
Natural Moisture ×
Plastic and Liquid Limit |—○—|
Undrained Triaxial at % Strain at Failure ⊕
Penetrometer ▲

Groundwater	Soil/Rock Symbol	Soil Description	ELEV. m	Depth (m)	SPT (N Value) / Shear Strength kPa	Combustible Vapour Reading (ppm) / Natural Moisture Content % / Atterberg Limits (% Dry Weight)	Sample	Natural Unit Weight kN/m³
		~50 mm **SAND and GRAVEL** over **FILL** - clayey silt, trace sand, trace gravel, trace rootlets in upper level, dark brown to brown, moist	141.86	0	11			
		- strong hydrocarbon odour		1	12			20.7
		- slight hydrocarbon odour		2	5			20.0
				3	11			23.1
			~138.2		10			23.2
		SILTY SAND to SANDY SILT TILL - some clay, occasional wet sand seams, trace gravel, brown to ~4.5 m depth, grey below, oxidized zones, moist to wet, loose to compact		4	21			22.8
				5	13			23.3
				6	11			22.2
				7				
		- wet sand seam		8	7			23.4
			~133.6					
		End of Borehole						

LAGWGL02EXP 607375A_BH_LOGS_2.GPJ NEW.GDT 9/6/19

Notes:
1. Borehole advanced to completion at ~8.2 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-A0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	No Free Water	Well
August 8, 2019	~2.1	Well
August 27, 2019	~2.3	Well

Log of Borehole 101

Project No. BRM-00607375-D0 | Drawing No. 2

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: September 7, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

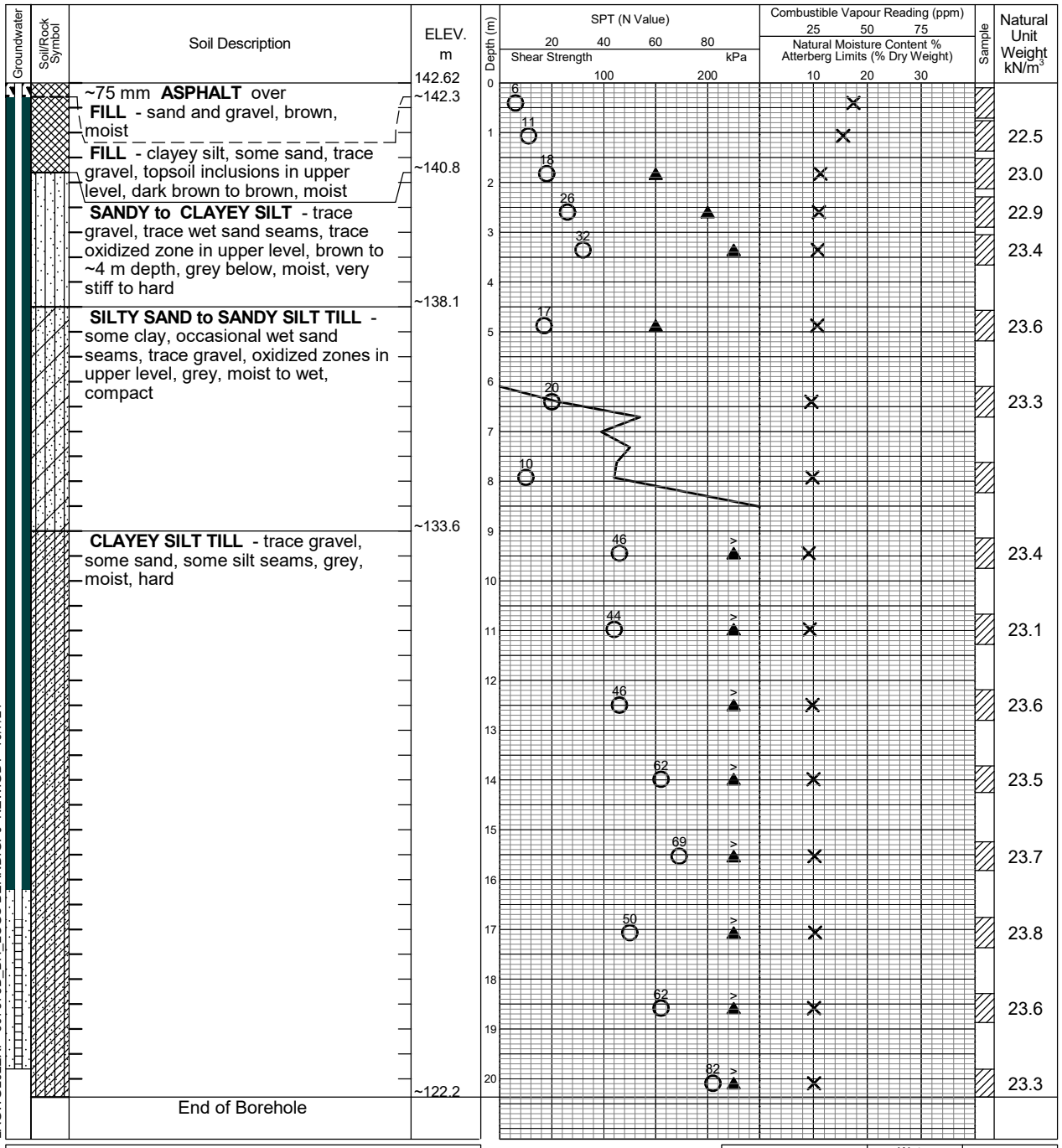
Auger Sample | Combustible Vapour Reading

SPT (N) Value | Natural Moisture

Dynamic Cone Test | Plastic and Liquid Limit

Shelby Tube | Undrained Triaxial at % Strain at Failure

Field Vane Test (S) | Penetrometer



LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Notes:
1. Borehole advanced to completion at ~20.4 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.

Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	No Free Water	~19.8
September 13, 2021	~18.9	Well
September 20, 2021	~18.5	Well

Log of Borehole 102

Project No. BRM-00607375-D0 | Drawing No. 3

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

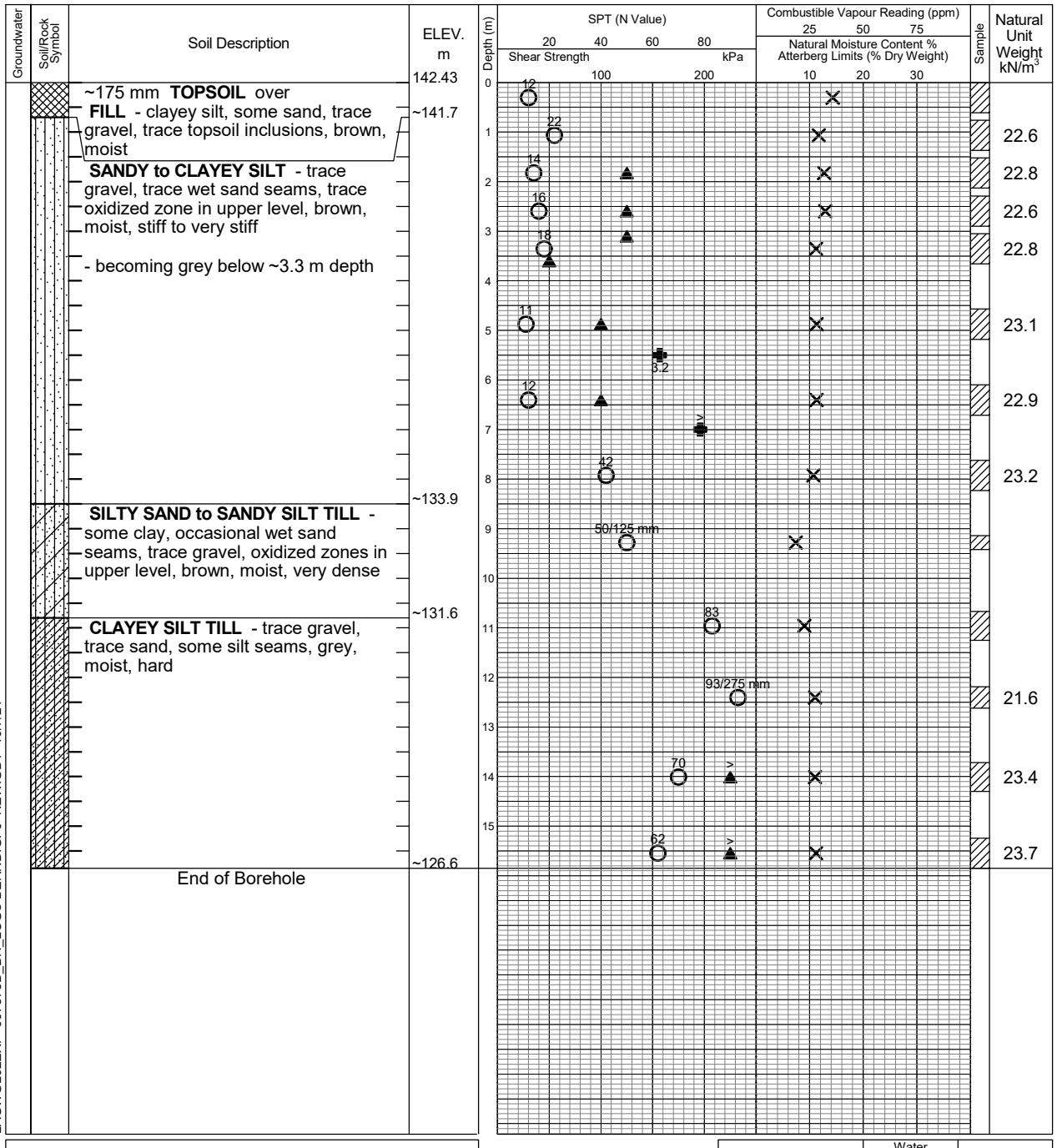
Date Drilled: September 9, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample | SPT (N) Value | Dynamic Cone Test | Shelby Tube | Field Vane Test (S)

Combustible Vapour Reading | Natural Moisture | Plastic and Liquid Limit | Undrained Triaxial at % Strain at Failure | Penetrometer



LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Notes:
1. Borehole advanced to completion at ~15.9 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.

Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	No Free Water	~7.9

Log of Borehole 103

Project No. BRM-00607375-D0 | Drawing No. 4

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

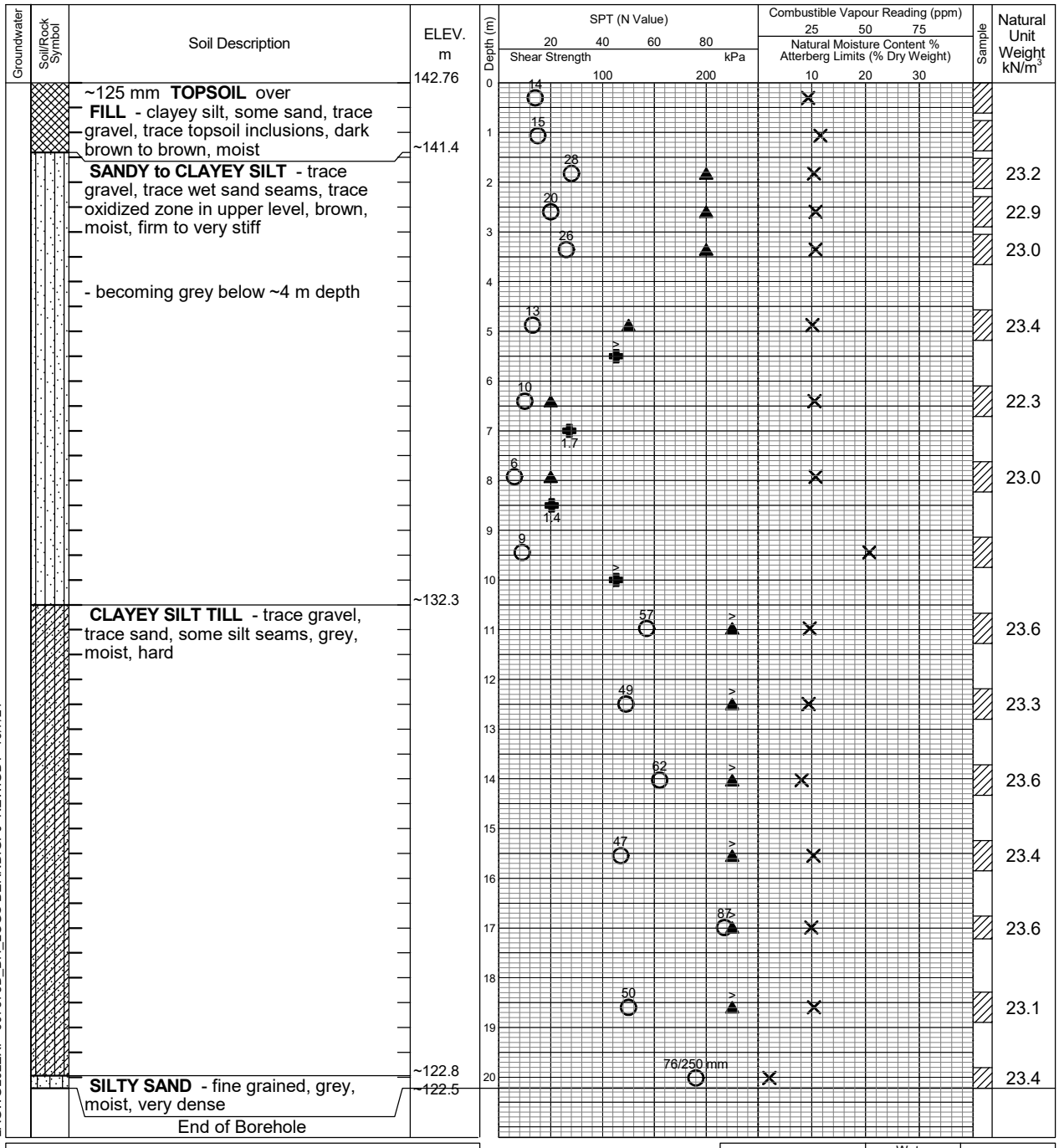
Date Drilled: September 13, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample | SPT (N) Value | Dynamic Cone Test | Shelby Tube | Field Vane Test (S)

Combustible Vapour Reading | Natural Moisture | Plastic and Liquid Limit | Undrained Triaxial at % Strain at Failure | Penetrometer



LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Notes:
1. Borehole advanced to completion at ~20.2 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	No Free Water	13.72

Log of Borehole 104

Project No. BRM-00607375-D0 | Drawing No. 5

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

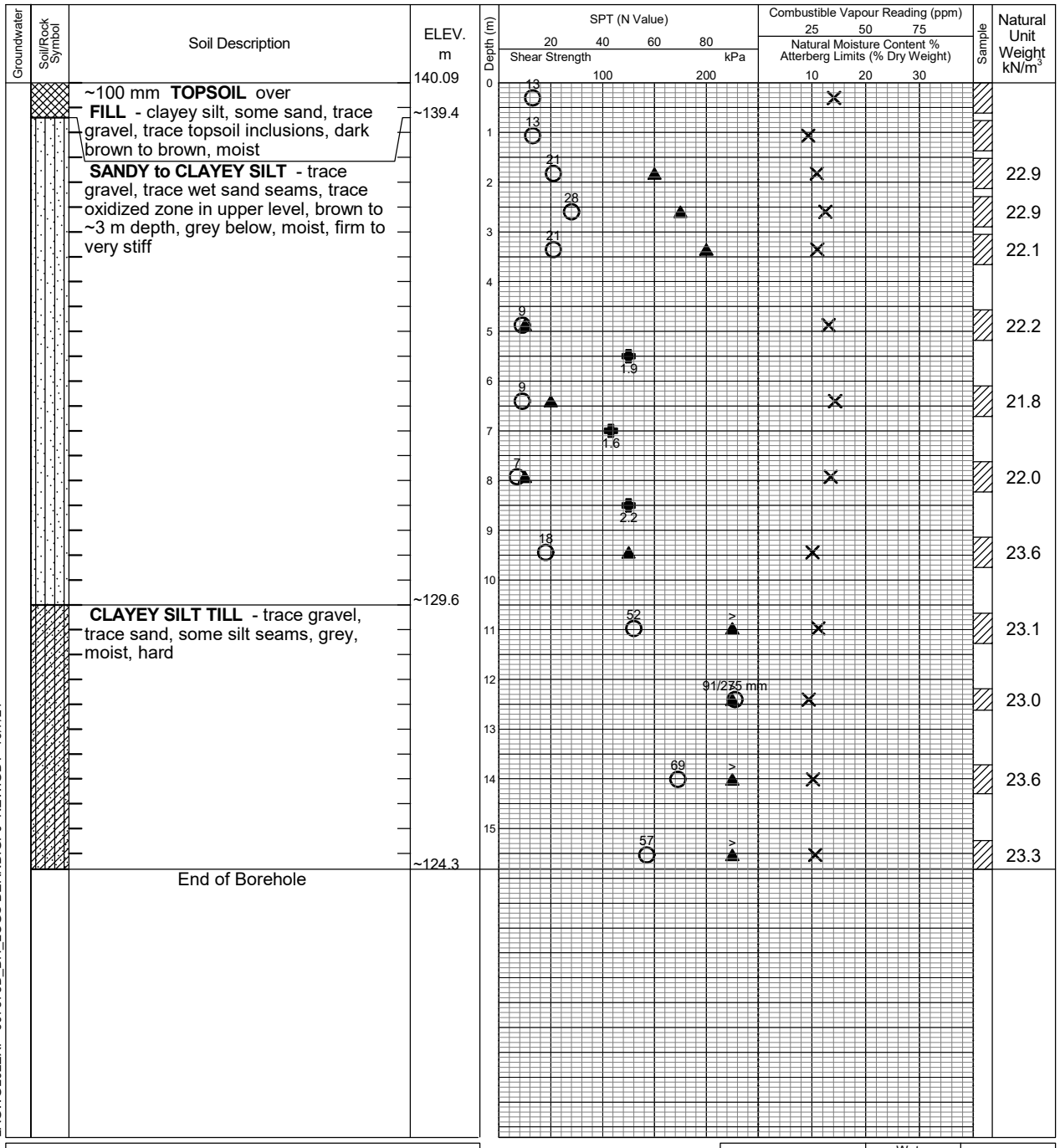
Date Drilled: September 10, 2021

Drill Type: Solid Stem Augers

Datum: Geodetic

Auger Sample | SPT (N) Value | Dynamic Cone Test | Shelby Tube | Field Vane Test (S)

Combustible Vapour Reading | Natural Moisture | Plastic and Liquid Limit | Undrained Triaxial at % Strain at Failure | Penetrometer



LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Notes:
1. Borehole advanced to completion at ~15.8 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp. Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	No Free Water	~19.8

Log of Borehole 105

Project No. BRM-00607375-D0 | Drawing No. 6

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: September 9, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample ☒ | Combustible Vapour Reading □

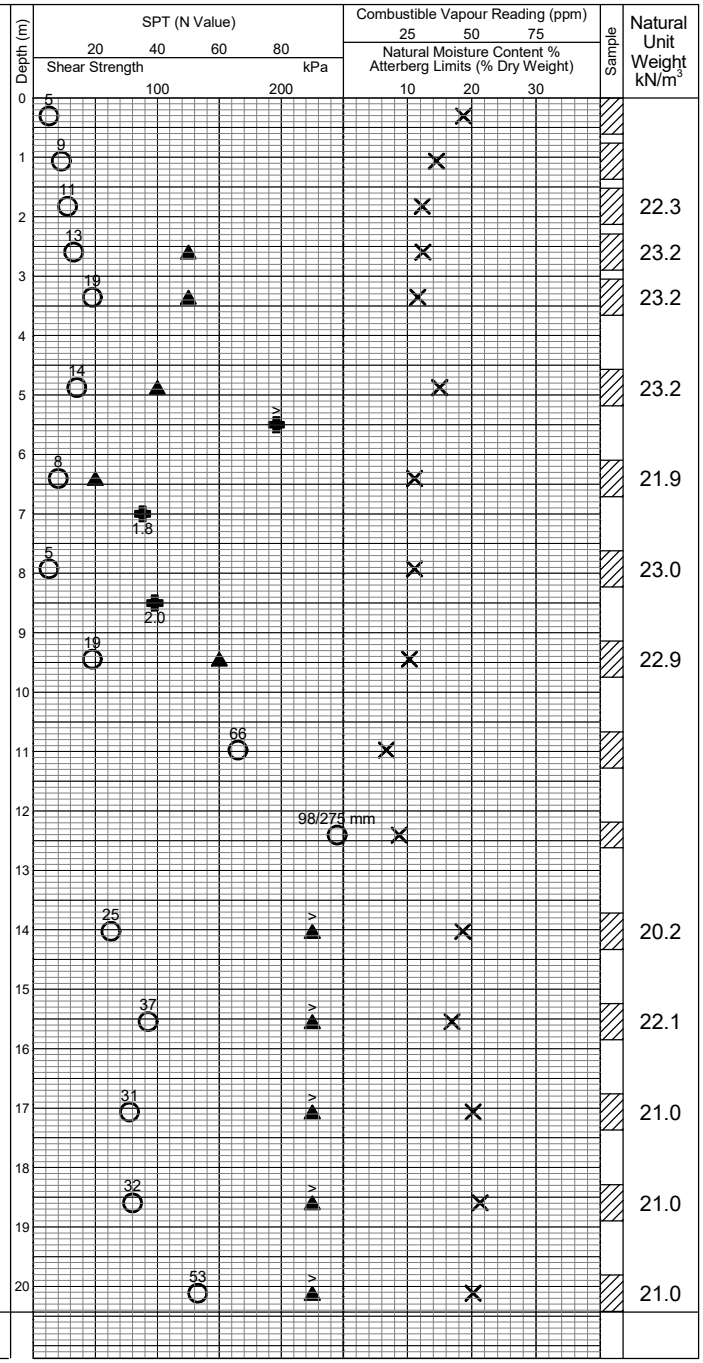
SPT (N) Value ○ ▨ | Natural Moisture ×

Dynamic Cone Test — | Plastic and Liquid Limit ⊢○

Shelby Tube ■ | Undrained Triaxial at % Strain at Failure ⊕

Field Vane Test S | Penetrometer ▲

Soil Description	ELEV. m	Natural Unit Weight kN/m³
~100 mm **TOPSOIL** over **FILL** - clayey silt, some sand, trace gravel, trace topsoil inclusions, dark brown to brown, moist	141.04	
	~138.9	22.3
SANDY to CLAYEY SILT - trace gravel, trace sand, some silt seams, trace oxized zones in upper level, brown, moist, firm to very stiff		23.2
		23.2
- becoming grey below ~4 m depth		23.2
		21.9
		23.0
		22.9
	~131.0	
SILTY SAND to SANDY SILT TILL - some clay, occasional wet sand seams, trace gravel, oxidized zones in upper level, grey, moist to wet, compact to very dense		
	~128.0	
CLAYEY SILT TILL - trace gravel, trace sand, occasional silt seams, becoming more clayey with depth, grey, moist, very stiff to hard		20.2
		22.1
		21.0
		21.0
		21.0
	~120.6	
End of Borehole		



Notes:
1. Borehole advanced to completion at ~20.4 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp. Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~17.1	~19.5

LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Log of Borehole 106

Project No. BRM-00607375-D0 | Drawing No. 7

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

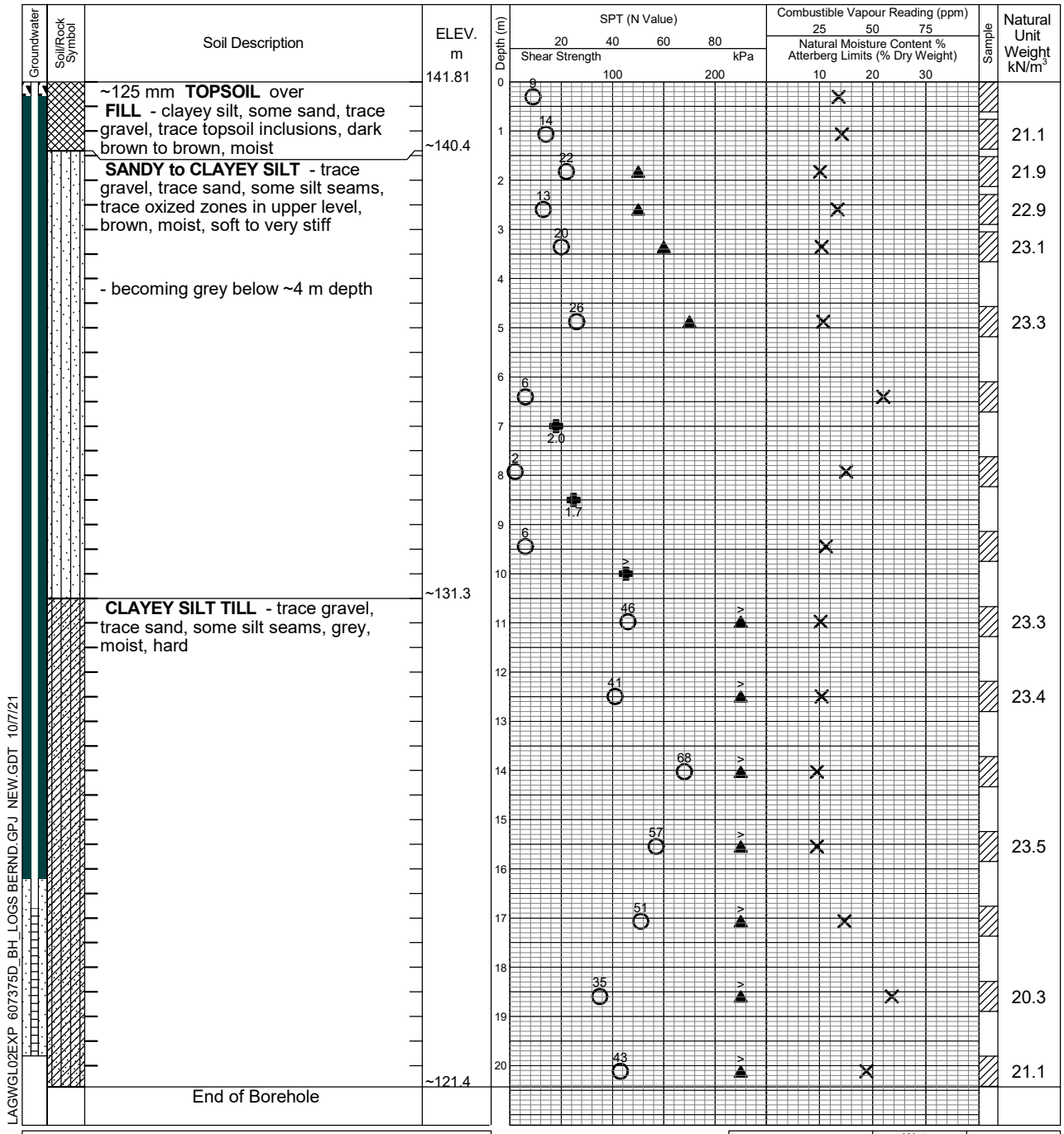
Date Drilled: September 13, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample | SPT (N) Value | Dynamic Cone Test | Shelby Tube | Field Vane Test (S)

Combustible Vapour Reading | Natural Moisture | Plastic and Liquid Limit | Undrained Triaxial at % Strain at Failure | Penetrometer



LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Notes:
1. Borehole advanced to completion at ~20.4 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.
Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~16.6	~19.8
September 20, 2021	~16.2	Well

Log of Borehole 107

Project No. BRM-00607375-D0 | Drawing No. 8

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: September 8, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

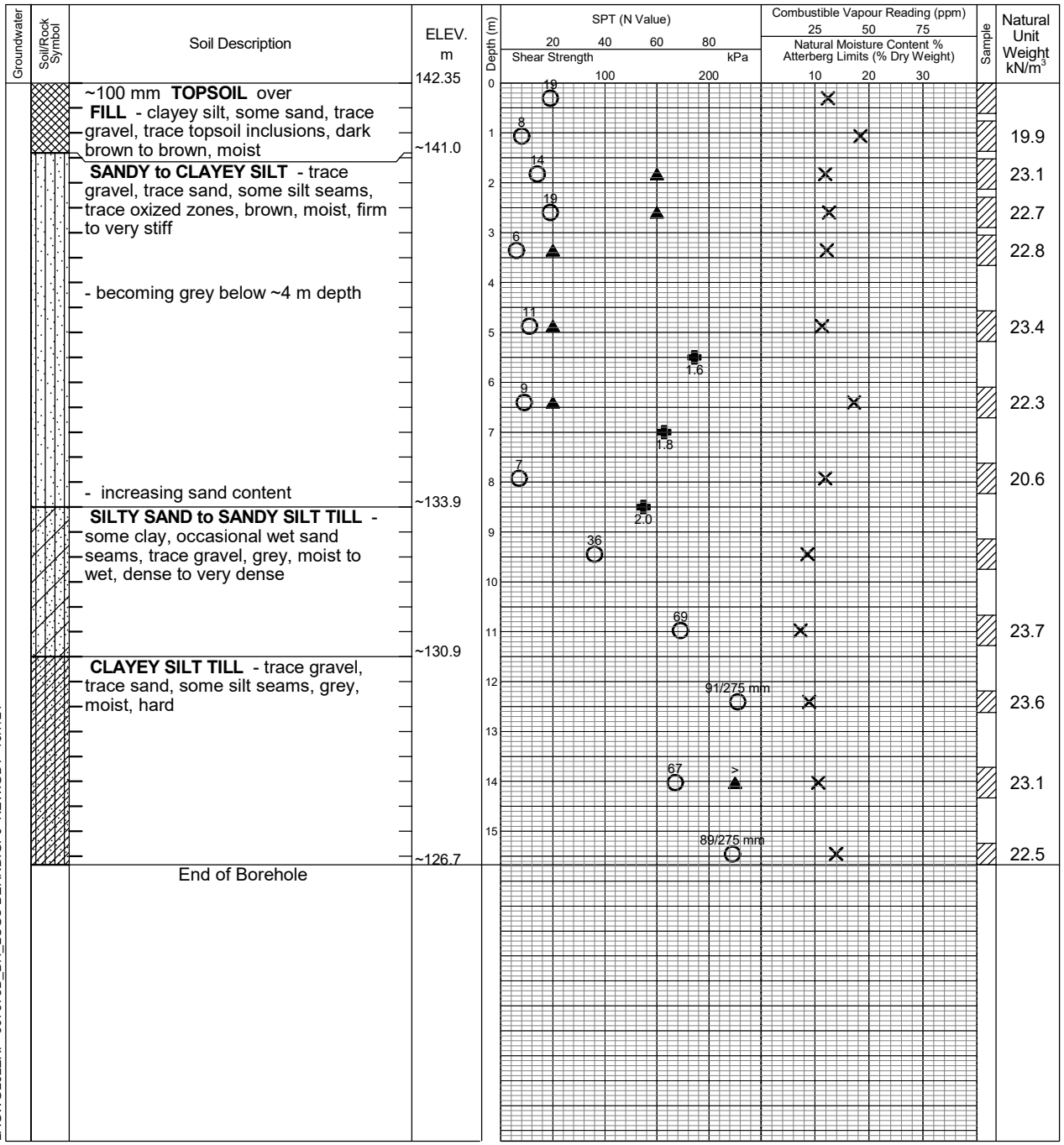
Auger Sample | Combustible Vapour Reading

SPT (N) Value | Natural Moisture

Dynamic Cone Test | Plastic and Liquid Limit

Shelby Tube | Undrained Triaxial at % Strain at Failure

Field Vane Test (S) | Penetrometer



LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Notes:
1. Borehole advanced to completion at ~15.7 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.

Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~10.7	~15.2

Log of Borehole 108

Project No. BRM-00607375-D0 Drawing No. 9

Project: Supplementary Geotechnical Investigation Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: September 8, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

Auger Sample
SPT (N) Value
Dynamic Cone Test
Shelby Tube
Field Vane Test

Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure
Penetrometer

Soil Description	ELEV. m	Depth (m)	Natural Unit Weight kN/m³
~75 mm **ASPHALT** over **FILL** - sand and gravel, brown, moist	142.50 ~142.4	0	
FILL - clayey silt, some sand, trace gravel, trace topsoil inclusions in upper level, dark brown to brown, moist	~141.1	1	22.8
SANDY to CLAYEY SILT - trace gravel, trace sand, some silt seams, trace oxized zones in upper level, brown, moist, firm to stiff		2	22.7
		3	22.9
- becoming grey below ~4 m depth		4	
		5	23.3
		6	
	~135.5	7	23.1
SILTY SAND to SANDY SILT TILL - some clay, occasional wet sand seams, trace gravel, oxidized zones in upper level, grey, moist to wet, compact to very dense		8	22.9
		9	23.6
		10	
- wet zone		11	
		12	
		13	
	~128.0	14	
CLAYEY SILT TILL - trace gravel, trace sand, some silt seams, grey, moist, hard		15	23.5
		16	
		17	20.8
		18	
		19	21.0
		20	21.1
End of Borehole	~122.1		

SPT (N Value): 4, 9, 11, 12, 16, 7, 12, 16, 59, 50/125 mm, 61, 50/125 mm, 68, 29, 37, 40

Shear Strength kPa: 20 40 60 80 / 100 200

Combustible Vapour Reading (ppm): 25 50 75

Natural Moisture Content % Atterberg Limits (% Dry Weight): 10 20 30

Sample

Notes:
1. Borehole advanced to completion at ~20.4 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp. Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~7.3	~13.7

LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Log of Borehole 109

Project No. BRM-00607375-D0 | Drawing No. 10

Project: Supplementary Geotechnical Investigation | Sheet No. 1 of 1

Location: 230 The Donway West, Toronto, Ontario

Date Drilled: September 7, 2021

Drill Type: Hollow Stem Augers

Datum: Geodetic

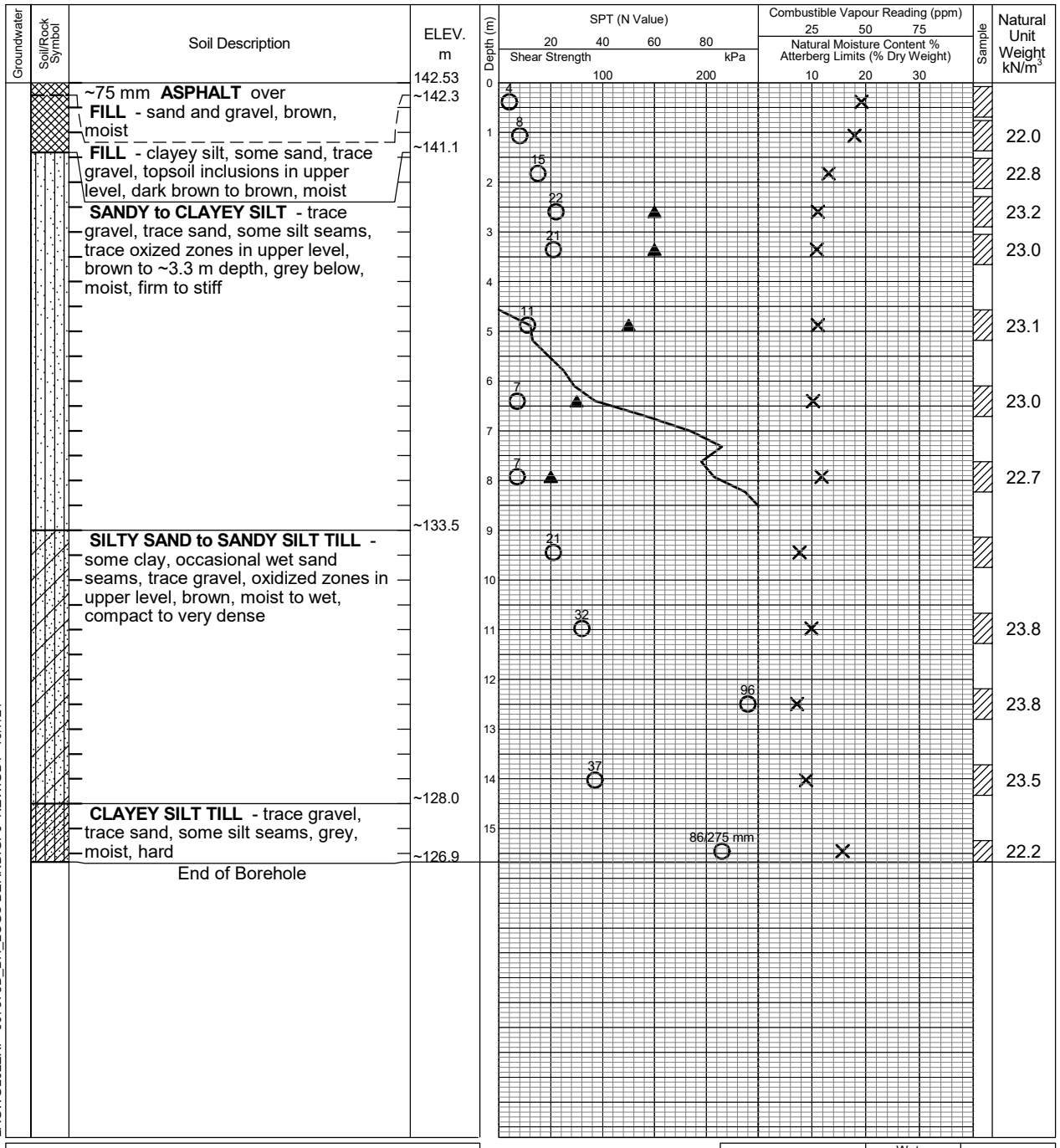
Auger Sample ☒ | Combustible Vapour Reading □

SPT (N) Value ○ ▨ | Natural Moisture ×

Dynamic Cone Test — | Plastic and Liquid Limit ⊢○

Shelby Tube ■ | Undrained Triaxial at % Strain at Failure ⊕

Field Vane Test S | Penetrometer ▲



LAGWGL02EXP 607375D_BH_LOGS BERND.GPJ NEW.GDT 10/7/21

Notes:
1. Borehole advanced to completion at ~15.7 m depth by conventional soil sampling methods using a specialist drilling subcontractor. For borehole definitions, see notes prior to logs.
2. This drawing forms part of and must be read in conjunction with the subject report (Ref. No.: BRM-00607375-D0); borehole data requires interpretation assistance by exp professional staff before use by others.

exp.

Brampton

Elapsed Time	Water Level (m)	Hole Open to (m)
On Completion	~14.6	~14.9

exp Services Inc.
1595 Clark Boulevard, Brampton
Ontario, Canada, L6T 4V1
Telephone: (905) 793-9800
Fax: (905) 793-0641

Grain Size Analysis & Hydrometer Test Report

ST08

Sample Test No.: 378451-3 **Report No.:** 1 **Date Reported:** 17-Sep-21

Project No.: brm-00607375-d0 100
Project Name: Combined Drilling Progrm

Grain Size Proportion (%)

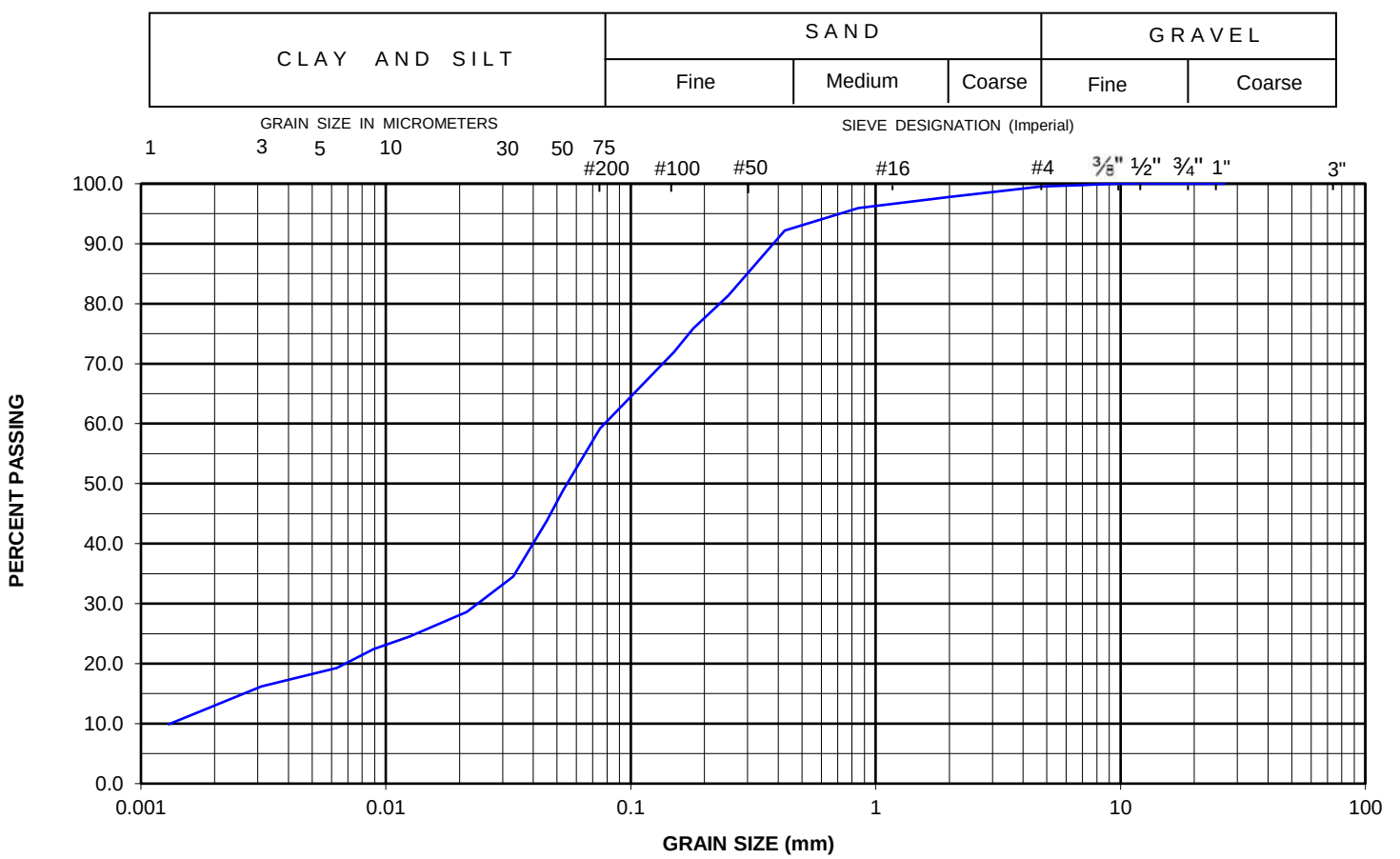
Gravel (> 4.75mm):	**0.5**
Sand (> 75µm, < 4.75mm):	**40.3**
Silt (> 2µm), < 75µm):	**46.8**
Clay (< 2µm):	**12.4**
Total:	**100.0**

Sample Information

Location: BH 101
Sample Method: SS
Sample No.: 7
Depth: 6.1 - 6.7 m
Sample Description: Silt and Sand, some Clay; trace Gravel; Grey
Sampled By: Bernd
Sampling Date: 9/7/2021
Date Received: 9/7/2021
Client Sample ID:
Comments:

Grain Size (mm)	% Passing	Grain Size (mm)	% Passing
26.5	100.0	**0.0454**	43.8
22.4	100.0	**0.0331**	34.5
19	100.0	**0.0214**	28.6
16	100.0	**0.0125**	24.5
13.2	100.0	**0.0089**	22.4
12.5	100.0	**0.0063**	19.3
9.5	100.0	**0.0031**	16.2
6.7	99.7	**0.0013**	9.9
4.75	99.5		
2	97.8		
0.85	95.9		
0.425	92.2		
0.25	81.3		
0.18	75.9		
0.15	71.9		
0.075	59.2		
0.053	48.9		

UNIFIED SOIL CLASSIFICATION SYSTEM



Project Manager: Kevin Leung **Approved By:** *Original Signed By*
Willie Rodych, Lab Supervisor
Date Approved: 17-Sep-21

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Telephone: (905) 793-9800
Fax: (905) 793-0641

Grain Size Analysis & Hydrometer Test Report

ST08

Sample Test No.: 378662-3 **Report No.:** 2 **Date Reported:** 17-Sep-21

Project No.: brm-00607375-d0 100
Project Name: Combined Drilling Progrm

Grain Size Proportion (%)

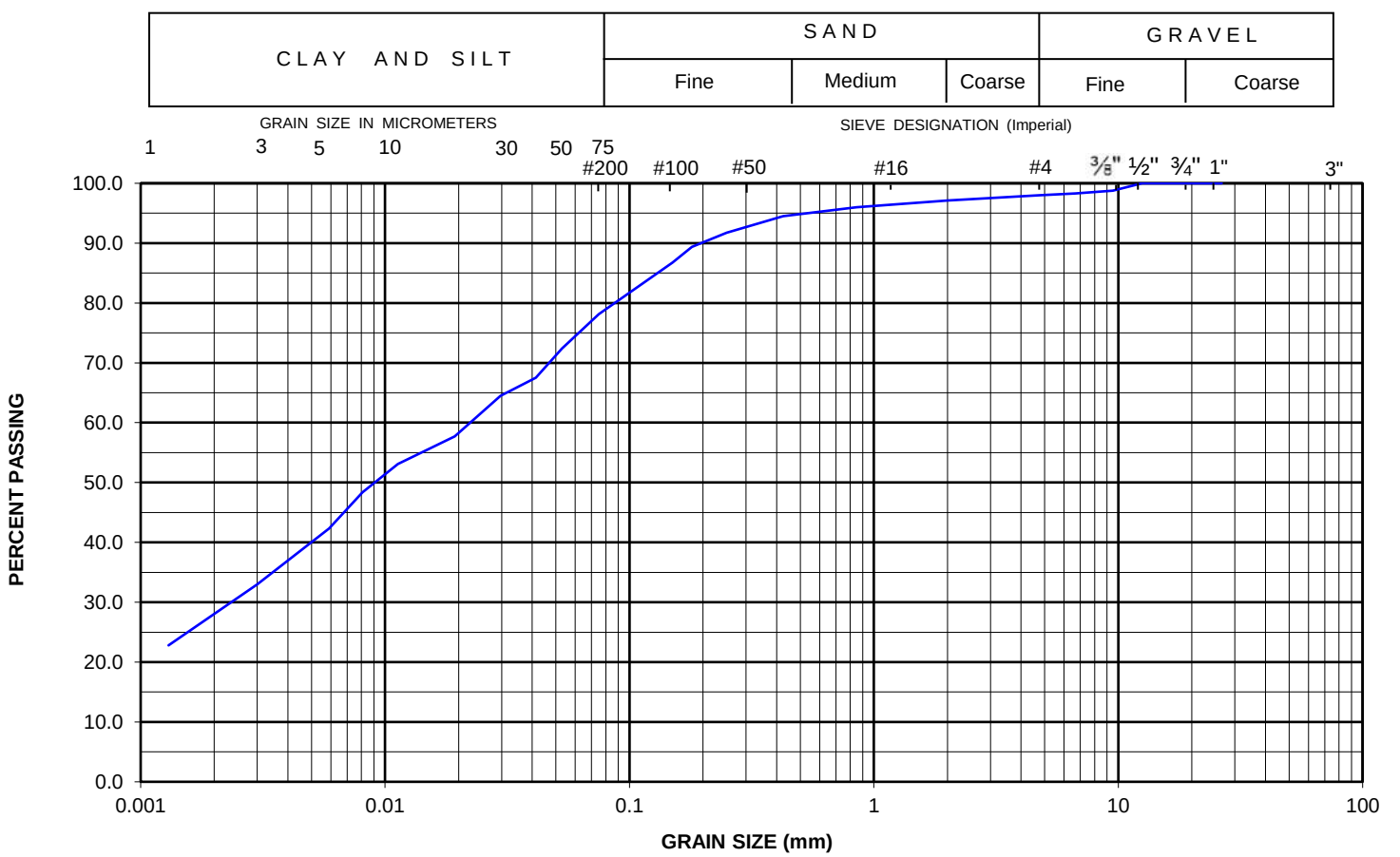
Gravel (> 4.75mm):	**2.0**
Sand (> 75μm, < 4.75mm):	**19.9**
Silt (> 2μm), < 75μm):	**51.1**
Clay (< 2μm):	**27.0**
Total:	**100.0**

Sample Information

Location: BH 102
Sample Method: SS
Sample No.: 11
Depth: 12.2 - 12.8 m
Sample Description: Clayey Silt, some Sand; trace Gravel; Grey
Sampled By: Bernd
Sampling Date: 9/9/2021
Date Received: 9/9/2021
Client Sample ID:
Comments:

Grain Size (mm)	% Passing	Grain Size (mm)	% Passing
26.5	100.0	**0.0414**	67.5
22.4	100.0	**0.0297**	64.5
19	100.0	**0.0193**	57.7
16	100.0	**0.0113**	53.1
13.2	100.0	**0.0081**	48.4
12.5	100.0	**0.0059**	42.3
9.5	98.8	**0.0030**	33.0
6.7	98.3	**0.0013**	22.8
4.75	98.0		
2	97.1		
0.85	96.0		
0.425	94.5		
0.25	91.8		
0.18	89.4		
0.15	86.8		
0.075	78.1		
0.053	72.4		

UNIFIED SOIL CLASSIFICATION SYSTEM



Project Manager: Kevin Leung **Approved By:** *Original Signed By*
Willie Rodych, Lab Supervisor **Date Approved:** 17-Sep-21

exp Services Inc.
1595 Clark Boulevard, Brampton
Ontario, Canada, L6T 4V1
Telephone: (905) 793-9800
Fax: (905) 793-0641

Grain Size Analysis & Hydrometer Test Report

ST08

Sample Test No.: 378641-3 **Report No.:** 3 **Date Reported:** 17-Sep-21

Project No.: brm-00607375-d0 100
Project Name: Combined Drilling Progrm

Grain Size Proportion (%)

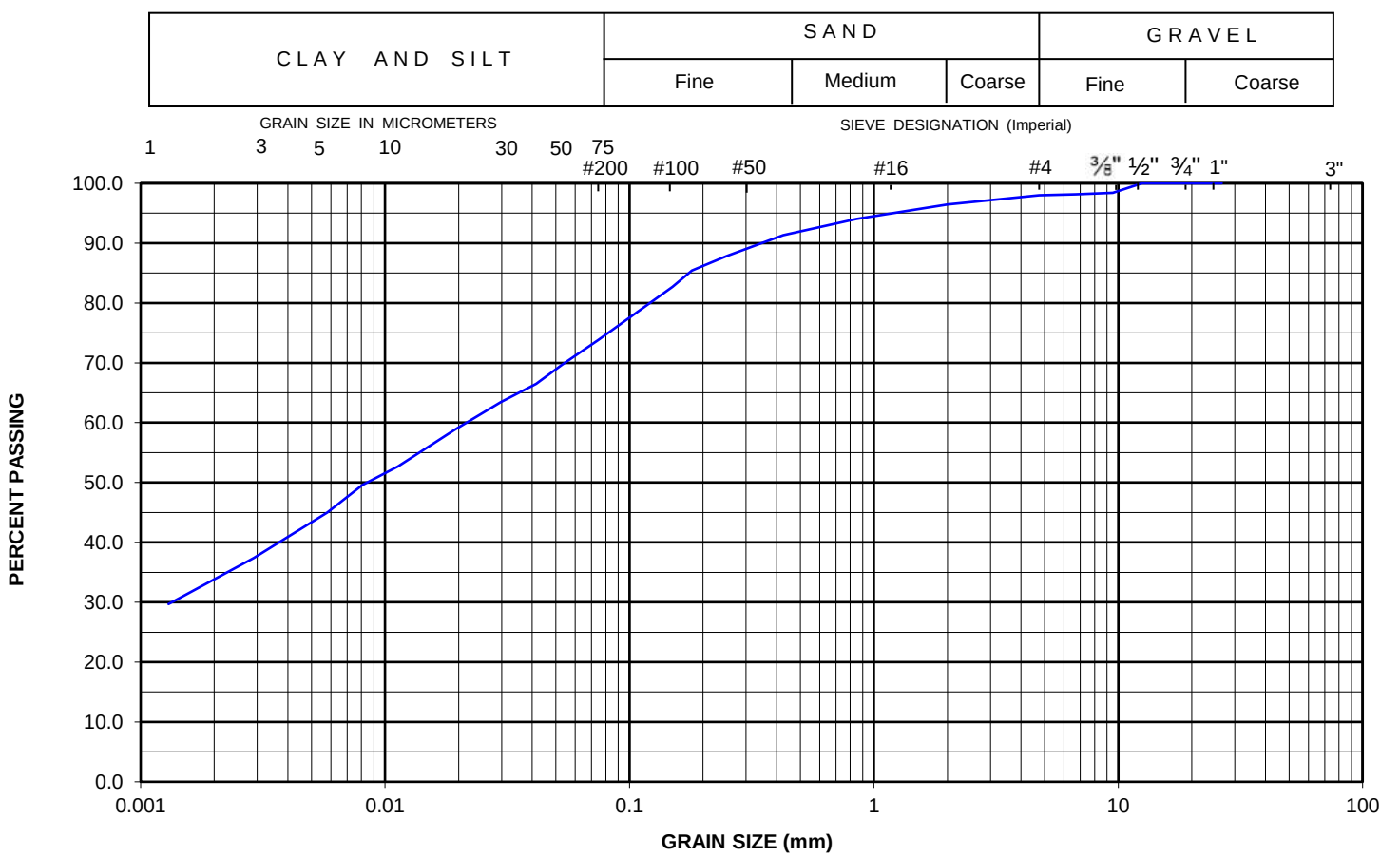
Gravel (> 4.75mm):	**2.0**
Sand (> 75μm, < 4.75mm):	**24.1**
Silt (> 2μm), < 75μm):	**40.8**
Clay (< 2μm):	**33.1**
Total:	**100.0**

Sample Information

Location: BH 105
Sample Method: SS
Sample No.: 7
Depth: 6.1 - 6.7 m
Sample Description: Sandy, Clayey Silt; trace Gravel; Grey
Sampled By: Bernd
Sampling Date: 9/9/2021
Date Received: 9/9/2021
Client Sample ID:
Comments:

Grain Size (mm)	% Passing	Grain Size (mm)	% Passing
26.5	100.0	**0.0415**	66.5
22.4	100.0	**0.0297**	63.4
19	100.0	**0.0192**	58.8
16	100.0	**0.0113**	52.7
13.2	100.0	**0.0081**	49.6
12.5	100.0	**0.0058**	45.0
9.5	98.4	**0.0029**	37.4
6.7	98.2	**0.0013**	29.7
4.75	98.0		
2	96.4		
0.85	94.1		
0.425	91.3		
0.25	87.8		
0.18	85.4		
0.15	82.7		
0.075	73.9		
0.053	69.7		

UNIFIED SOIL CLASSIFICATION SYSTEM



Project Manager: Kevin Leung **Approved By:** *Original Signed By*
Willie Rodych, Lab Supervisor **Date Approved:** 17-Sep-21

exp Services Inc.
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Ontario, Canada, L6T 4V1
Telephone: (905) 793-9800
Fax: (905) 793-0641

Grain Size Analysis & Hydrometer Test Report

ST08

Sample Test No.: 378888-2 **Report No.:** 4 **Date Reported:** 17-Sep-21

Project No.: brm-00607375-d0 100
Project Name: Combined Drilling Progrm

Grain Size Proportion (%)

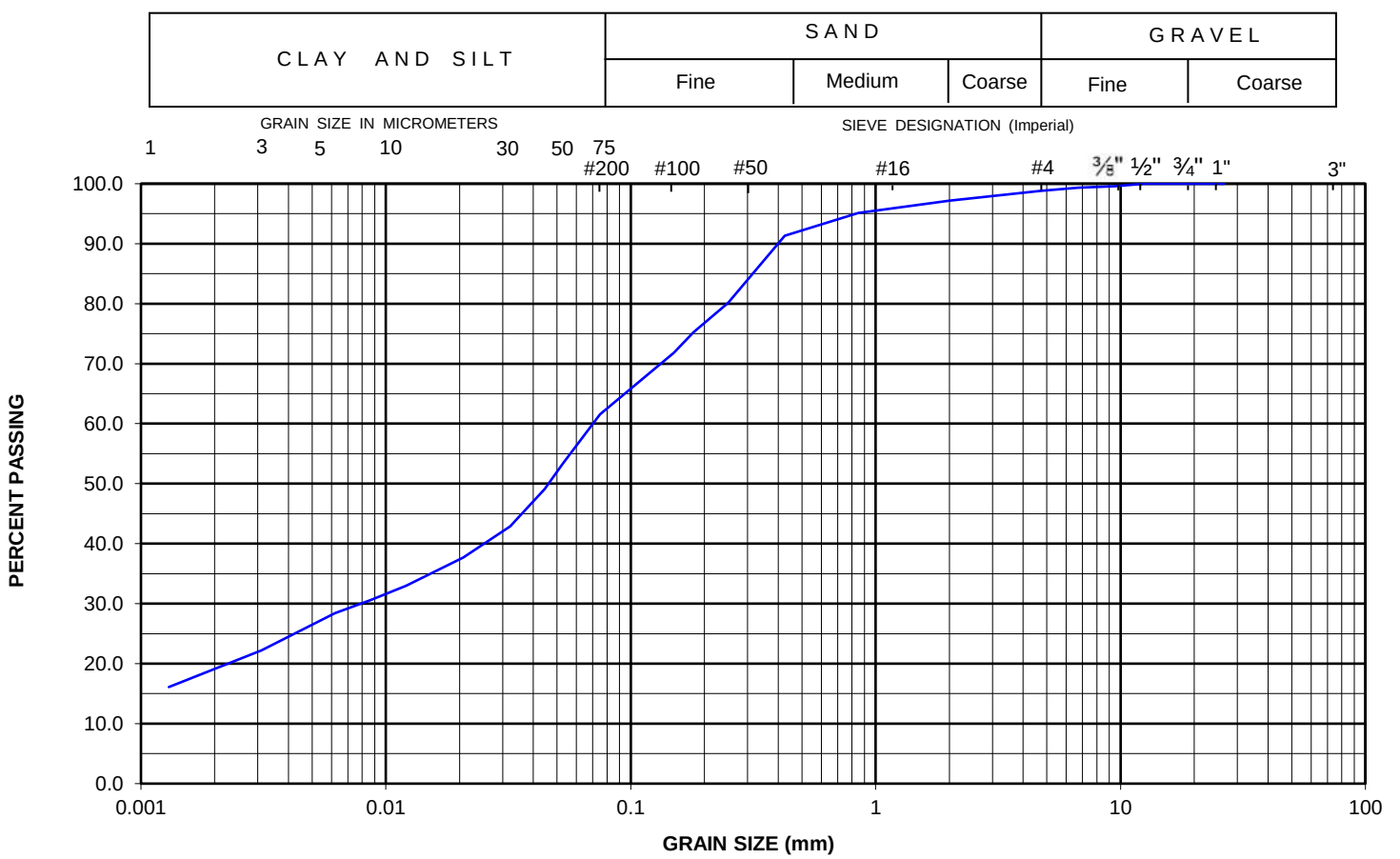
Gravel (> 4.75mm):	**1.2**
Sand (> 75µm, < 4.75mm):	**37.2**
Silt (> 2µm), < 75µm):	**43.1**
Clay (< 2µm):	**18.5**
Total:	**100.0**

Sample Information

Location: BH 106
Sample Method: SS
Sample No.: 8
Depth: 7.6 - 8.2 m
Sample Description: Silt and Sand, some Clay; trace Gravel; Grey
Sampled By: Bernd
Sampling Date: 9/13/2021
Date Received: 9/13/2021
Client Sample ID:
Comments:

Grain Size (mm)	% Passing	Grain Size (mm)	% Passing
26.5	100.0	**0.0445**	49.1
22.4	100.0	**0.0322**	42.9
19	100.0	**0.0207**	37.7
16	100.0	**0.0121**	33.0
13.2	100.0	**0.0087**	30.6
12.5	100.0	**0.0062**	28.4
9.5	99.6	**0.0031**	22.2
6.7	99.3	**0.0013**	16.1
4.75	98.8		
2	97.2		
0.85	95.1		
0.425	91.3		
0.25	80.1		
0.18	75.2		
0.15	71.8		
0.075	61.6		
0.053	53.4		

UNIFIED SOIL CLASSIFICATION SYSTEM



Project Manager: Kevin Leung **Approved By:** *Original Signed By*
Willie Rodych, Lab Supervisor
Date Approved: 17-Sep-21

exp Services Inc.
1595 Clark Boulevard, Brampton
Ontario, Canada, L6T 4V1
Telephone: (905) 793-9800
Fax: (905) 793-0641

Grain Size Analysis & Hydrometer Test Report

ST08

Sample Test No.: 378585-3 **Report No.:** 5 **Date Reported:** 17-Sep-21

Project No.: brm-00607375-d0 100
Project Name: Combined Drilling Progrm

Grain Size Proportion (%)

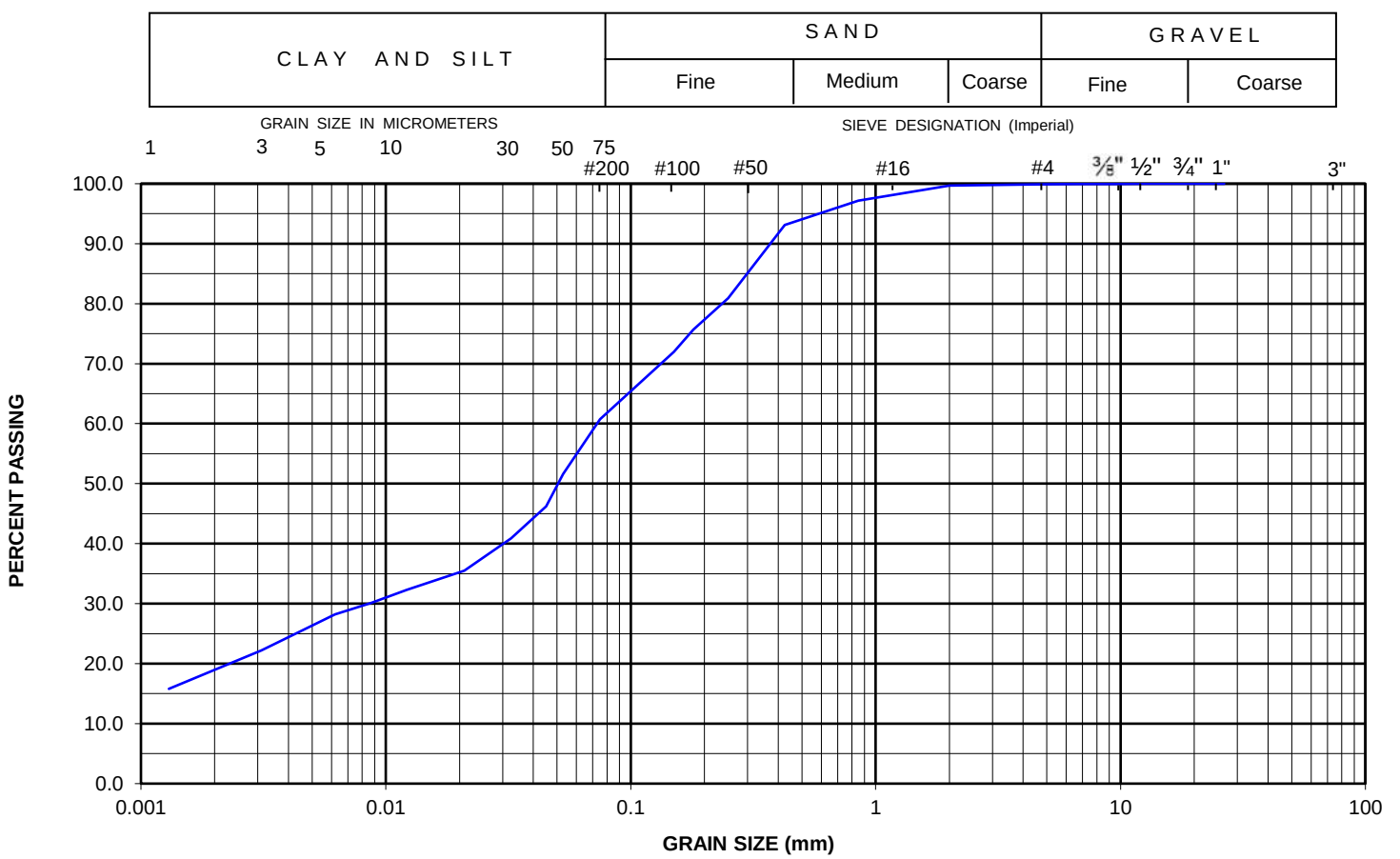
Gravel (> 4.75mm):	**0.1**
Sand (> 75µm, < 4.75mm):	**39.2**
Silt (> 2µm), < 75µm):	**42.4**
Clay (< 2µm):	**18.3**
Total:	**100.0**

Sample Information

Location: BH 108
Sample Method: SS
Sample No.: 8
Depth: 7.6 - 8.2 m
Sample Description: Silt and Sand, some Clay; trace Gravel; Grey
Sampled By: Bernd
Sampling Date: 9/8/2021
Date Received: 9/8/2021
Client Sample ID:
Comments:

Grain Size (mm)	% Passing	Grain Size (mm)	% Passing
26.5	100.0	**0.0452**	46.2
22.4	100.0	**0.0325**	40.9
19	100.0	**0.0209**	35.5
16	100.0	**0.0122**	32.3
13.2	100.0	**0.0087**	30.1
12.5	100.0	**0.0062**	28.2
9.5	100.0	**0.0031**	22.2
6.7	99.9	**0.0013**	15.8
4.75	99.9		
2	99.7		
0.85	97.2		
0.425	93.1		
0.25	80.9		
0.18	75.7		
0.15	72.0		
0.075	60.7		
0.053	51.6		

UNIFIED SOIL CLASSIFICATION SYSTEM



Project Manager: Kevin Leung **Approved By:** *Original Signed By*
Willie Rodych, Lab Supervisor
Date Approved: 17-Sep-21

exp Services Inc.
1595 Clark Boulevard, Brampton
Ontario, Canada, L6T 4V1
Telephone: (905) 793-9800
Fax: (905) 793-0641

Grain Size Analysis & Hydrometer Test Report

ST08

Sample Test No.: 378440-2 **Report No.:** 6 **Date Reported:** 17-Sep-21

Project No.: brm-00607375-d0 100
Project Name: Combined Drilling Progrm

Grain Size Proportion (%)

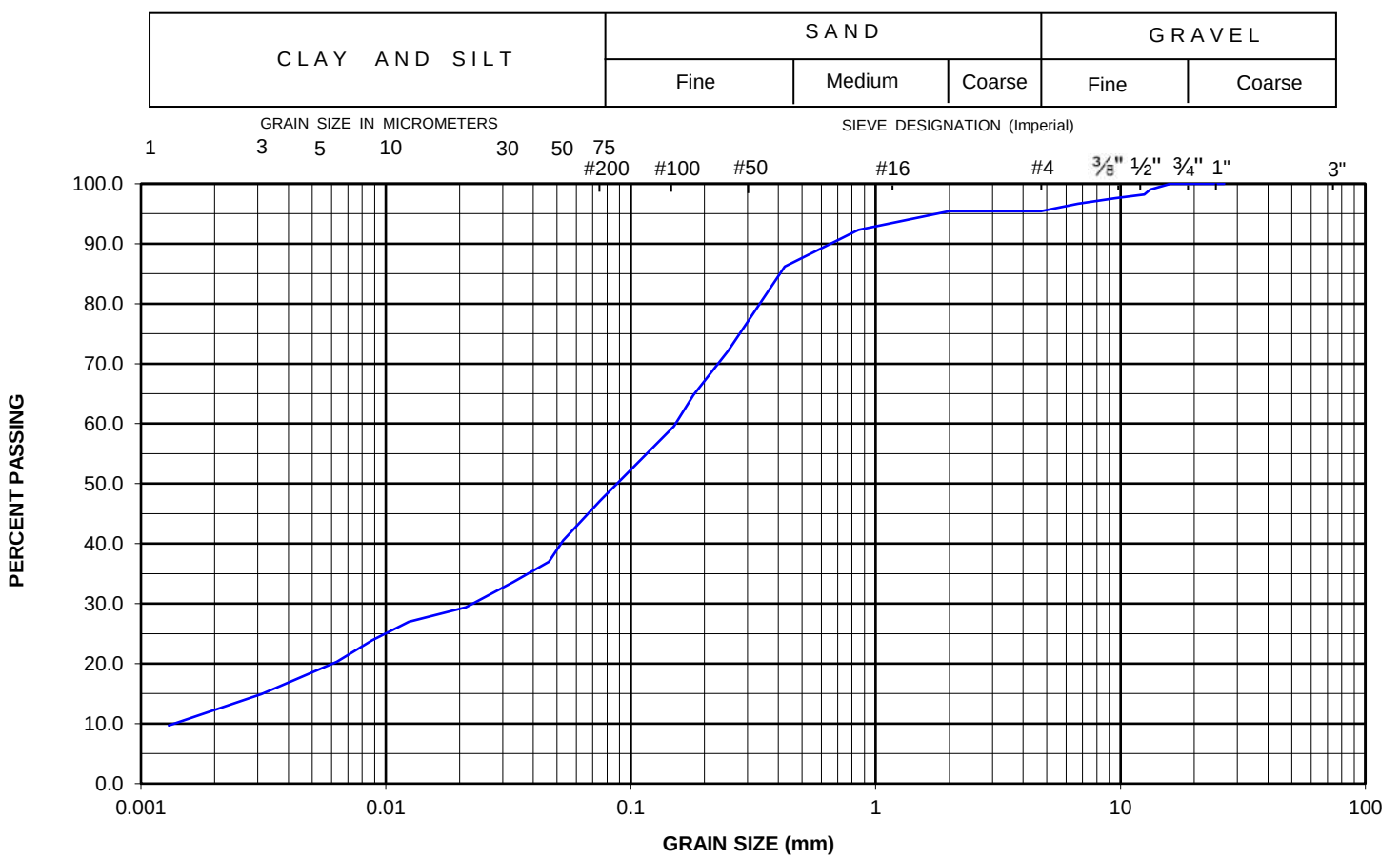
Gravel (> 4.75mm):	**4.6**
Sand (> 75µm, < 4.75mm):	**48.2**
Silt (> 2µm), < 75µm):	**35.5**
Clay (< 2µm):	**11.7**
Total:	**100.0**

Sample Information

Location: BH 109
Sample Method: SS
Sample No.: 9
Depth: 9.1 - 9.8 m
Sample Description: Sand and Silt, some Clay; trace Gravel; Grey
Sampled By: Bernd
Sampling Date: 9/7/2021
Date Received: 9/7/2021
Client Sample ID:
Comments:

Grain Size (mm)	% Passing	Grain Size (mm)	% Passing
26.5	100.0	**0.0463**	37.0
22.4	100.0	**0.0331**	33.6
19	100.0	**0.0212**	29.4
16	100.0	**0.0124**	27.0
13.2	99.0	**0.0088**	23.9
12.5	98.2	**0.0063**	20.3
9.5	97.6	**0.0031**	14.9
6.7	96.7	**0.0013**	9.7
4.75	95.4		
2	95.4		
0.85	92.3		
0.425	86.2		
0.25	72.1		
0.18	64.7		
0.15	59.6		
0.075	47.2		
0.053	40.5		

UNIFIED SOIL CLASSIFICATION SYSTEM

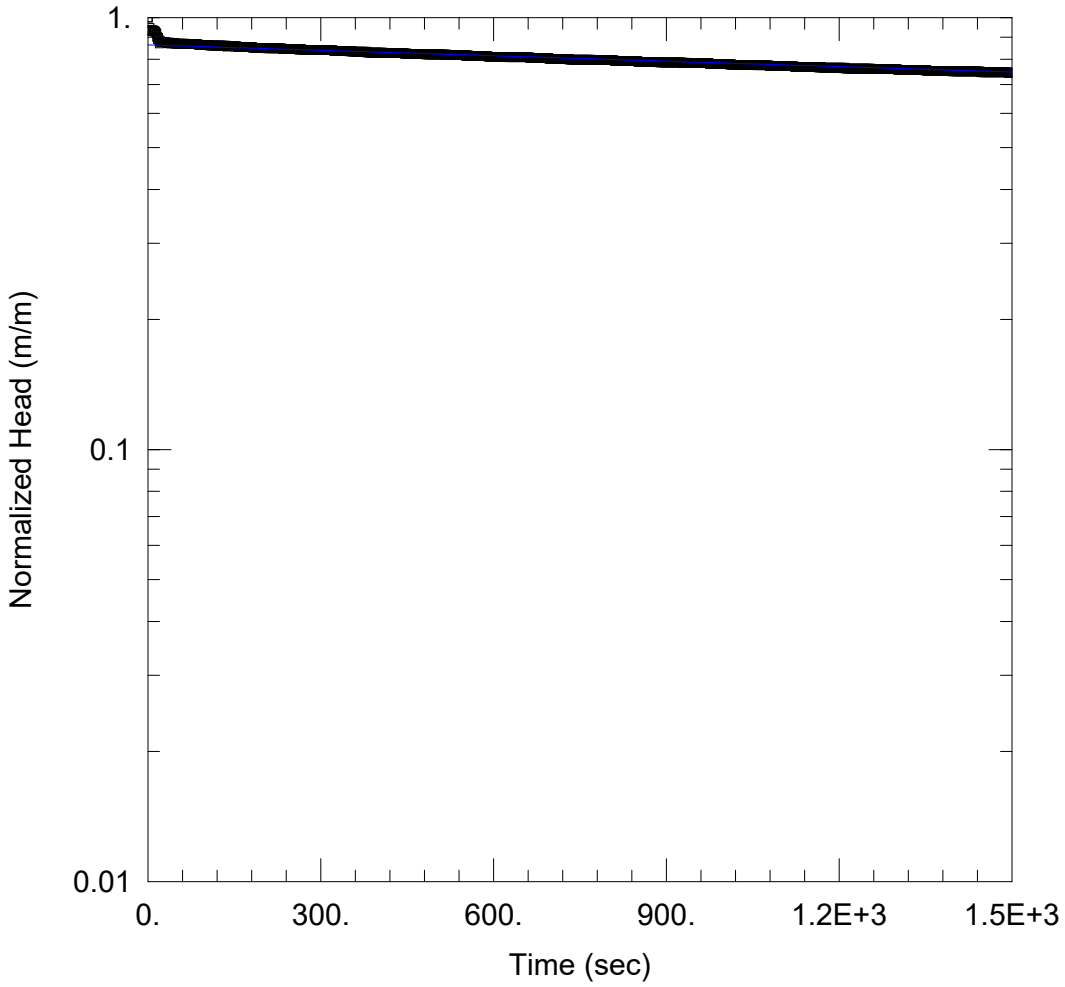


Project Manager: Kevin Leung **Approved By:** *Original Signed By*
Willie Rodych, Lab Supervisor **Date Approved:** 17-Sep-21

EXP Services Inc.

Project Number: BRM- 00607375-A0
Date: September 23, 2019
Revision 1: May 28, 2021
Revision 2: October 20, 2021
Revision 3: January 13, 2022
Revision 4: October 31, 2023

Appendix C – SWRT Procedures and Results



SWRT - FALLING HEAD - BH/MW 1

Data Set: C:\Users\simonc\Documents\BHMW1.aqt
Date: 08/20/19 Time: 10:59:30

PROJECT INFORMATION

Company: EXP Service Inc.
Client: Donway Co-operative
Project: BRM-00607375
Location: 230 The Donway W, Toronto, ON
Test Well: BH/MW 1
Test Date: August 13, 2019

AQUIFER DATA

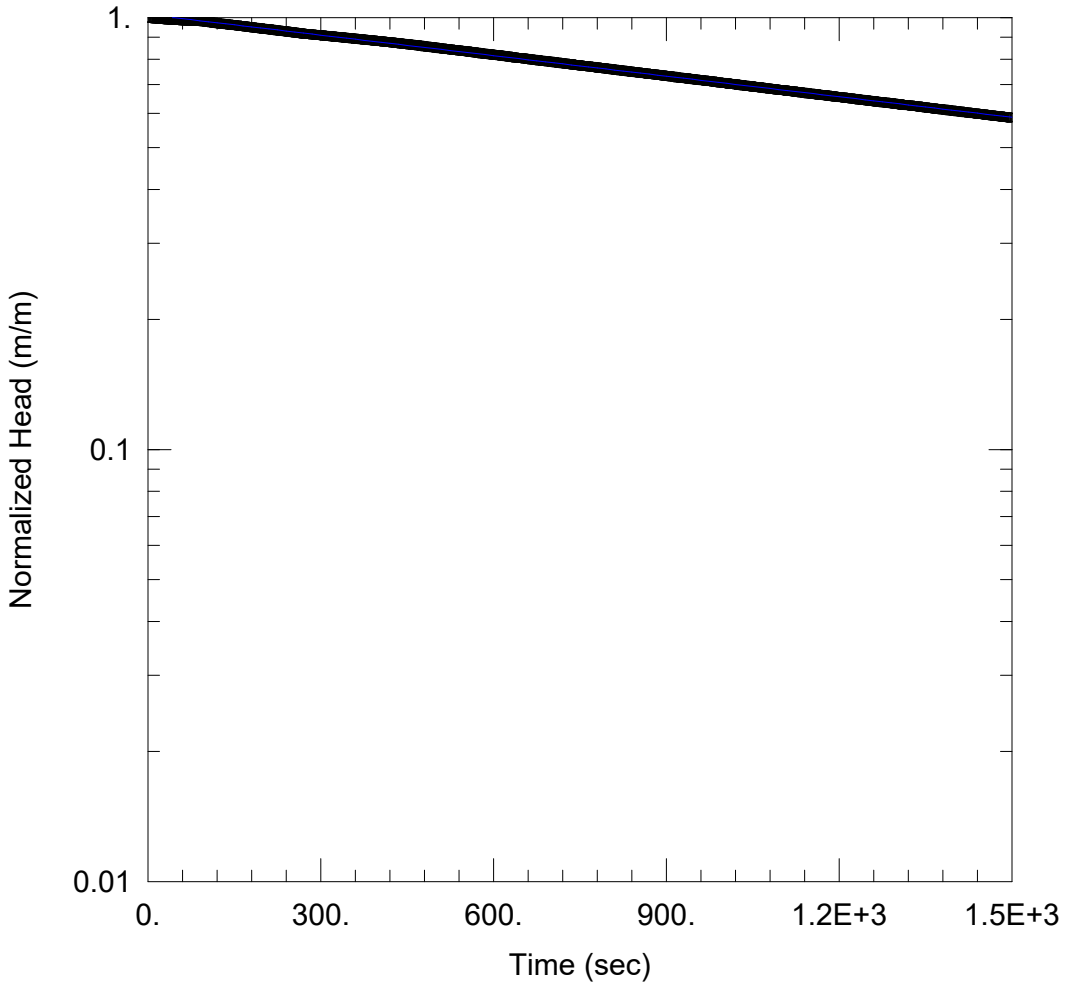
Saturated Thickness: 11.05 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW 1)

Initial Displacement: 0.972 m
Total Well Penetration Depth: 11.05 m
Casing Radius: 0.0254 m
Static Water Column Height: 11.05 m
Screen Length: 3. m
Well Radius: 0.1016 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 4.23E-8 m/sec
y0 = 0.84 m



SWRT - RISING HEAD - BH/MW 2

Data Set: C:\Users\simonc\Documents\BHMW2.aqt
Date: 08/20/19 Time: 10:51:25

PROJECT INFORMATION

Company: EXP Service Inc.
Client: Donway Co-operative
Project: BRM-00607375
Location: 230 The Donway W, Toronto, ON
Test Well: BH/MW 2
Test Date: August 13, 2019

AQUIFER DATA

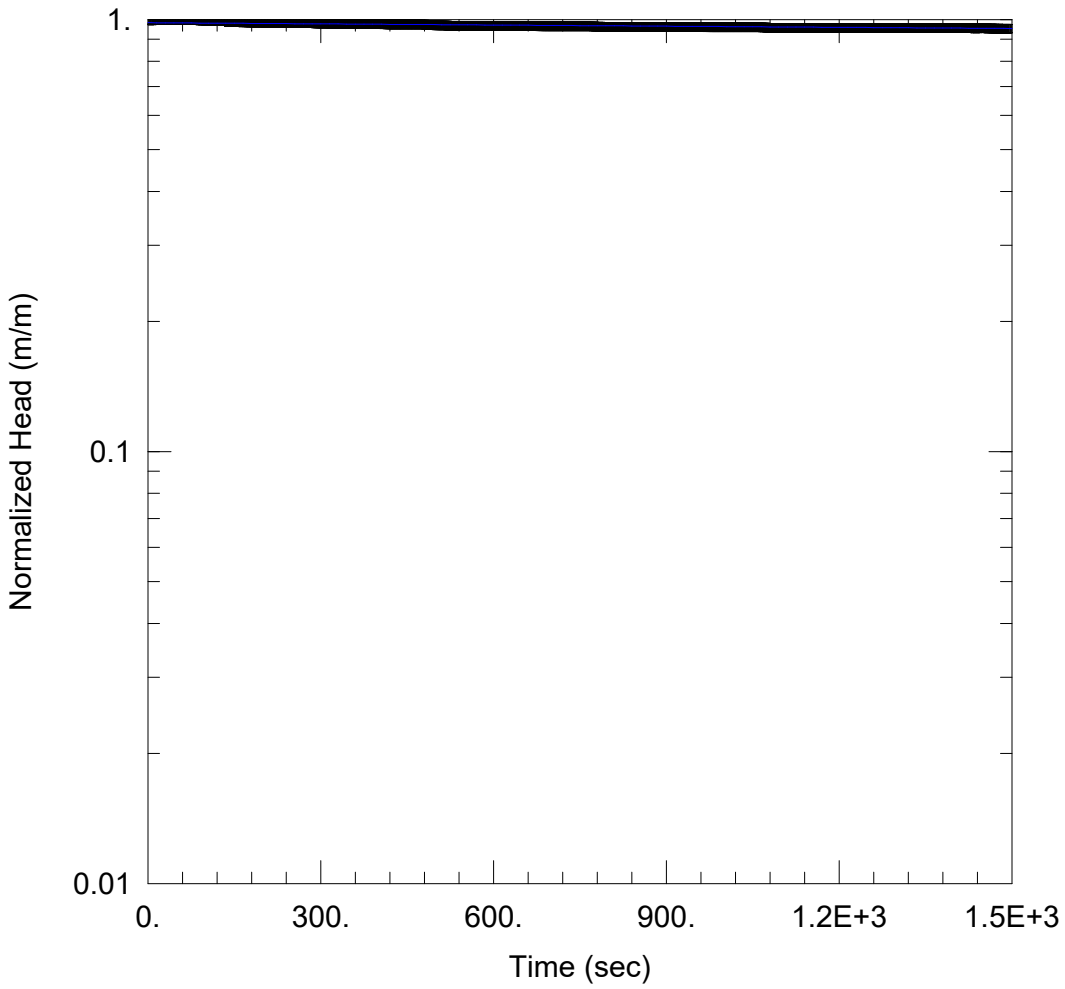
Saturated Thickness: 4.991 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW 2)

Initial Displacement: 1.966 m
Total Well Penetration Depth: 4.991 m
Casing Radius: 0.0254 m
Static Water Column Height: 4.991 m
Screen Length: 3. m
Well Radius: 0.1016 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 1.6E-7 m/sec
y0 = 1.997 m



SWRT - FALLING HEAD - BH 3

Data Set: C:\Users\simonc\Documents\BH3.aqt
Date: 08/27/19 Time: 20:25:54

PROJECT INFORMATION

Company: EXP Service Inc.
Client: Donway Co-operative
Project: BRM-00607375
Location: 230 The Donway W, Toronto, ON
Test Well: BH 3
Test Date: August 27, 2019

AQUIFER DATA

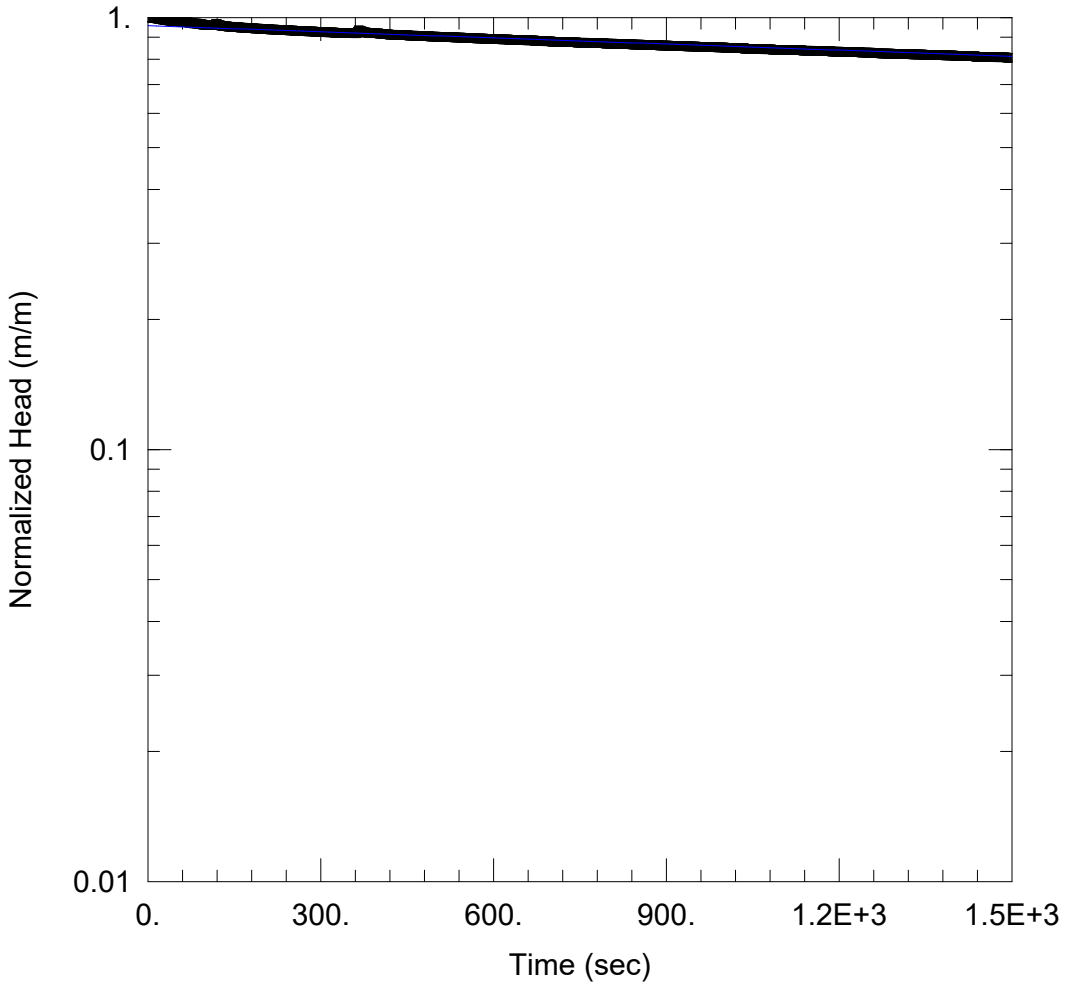
Saturated Thickness: 5.98 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH 3)

Initial Displacement: 1.848 m Static Water Column Height: 5.98 m
Total Well Penetration Depth: 5.98 m Screen Length: 3. m
Casing Radius: 0.0254 m Well Radius: 0.1016 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev
K = 9.01E-9 m/sec y0 = 1.817 m



SWRT - FALLING HEAD - BH/MW 4

Data Set: C:\Users\simonc\Documents\BHMW4.aqt
Date: 08/20/19 Time: 10:54:16

PROJECT INFORMATION

Company: EXP Service Inc.
Client: Donway Co-operative
Project: BRM-00607375
Location: 230 The Donway W, Toronto, ON
Test Well: BH/MW 4
Test Date: August 13, 2019

AQUIFER DATA

Saturated Thickness: 9.302 m Anisotropy Ratio (Kz/Kr): 1.

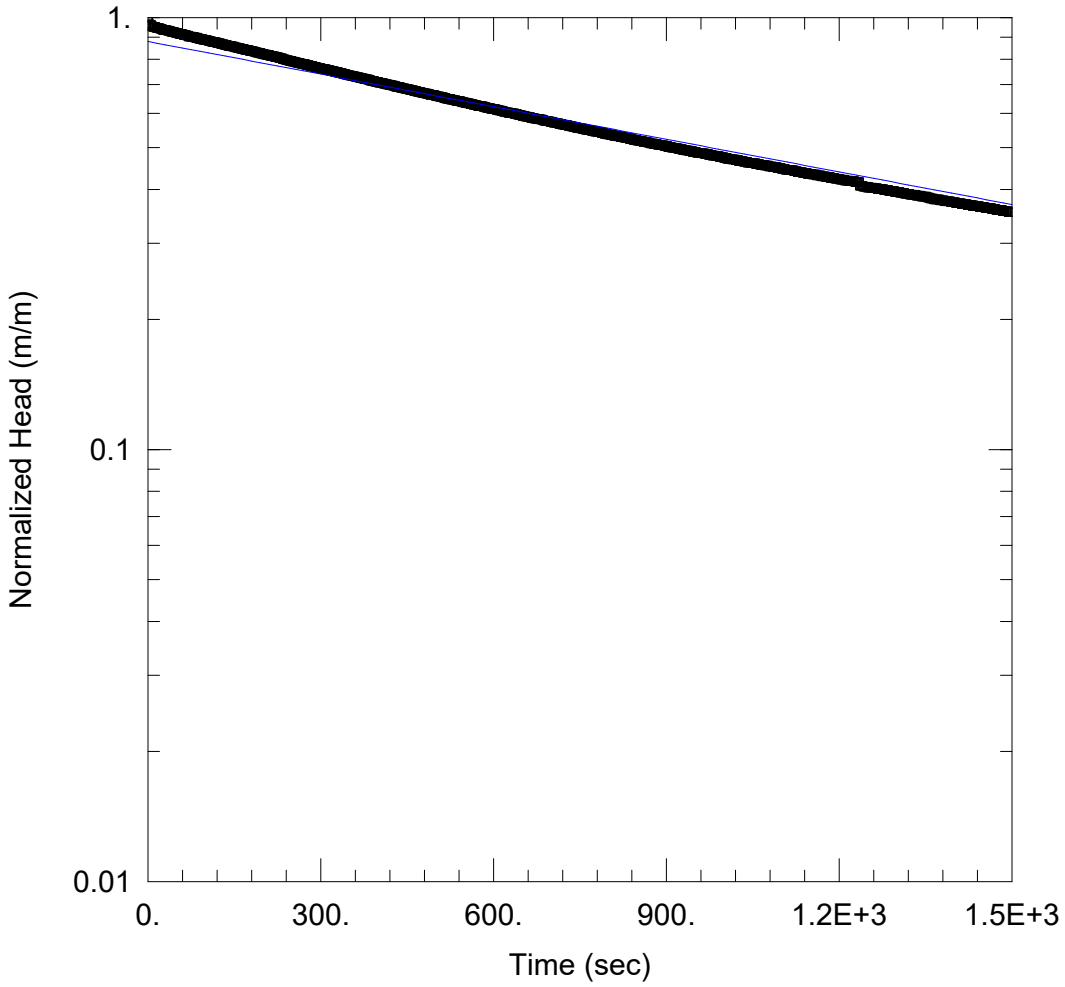
WELL DATA (BH/MW 4)

Initial Displacement: 1.947 m
Total Well Penetration Depth: 9.302 m
Casing Radius: 0.0254 m
Static Water Column Height: 9.302 m
Screen Length: 3. m
Well Radius: 0.1016 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 4.77E-8 m/sec y0 = 1.864 m



SWRT - FALLING HEAD - BH 5

Data Set: C:\Users\simonc\Documents\BH5_.aqt
Date: 08/27/19 Time: 20:25:24

PROJECT INFORMATION

Company: EXP Service Inc.
Client: Donway Co-operative
Project: BRM-00607375
Location: 230 The Donway W, Toronto, ON
Test Well: BH 5
Test Date: August 27, 2019

AQUIFER DATA

Saturated Thickness: 10.58 m Anisotropy Ratio (Kz/Kr): 1.

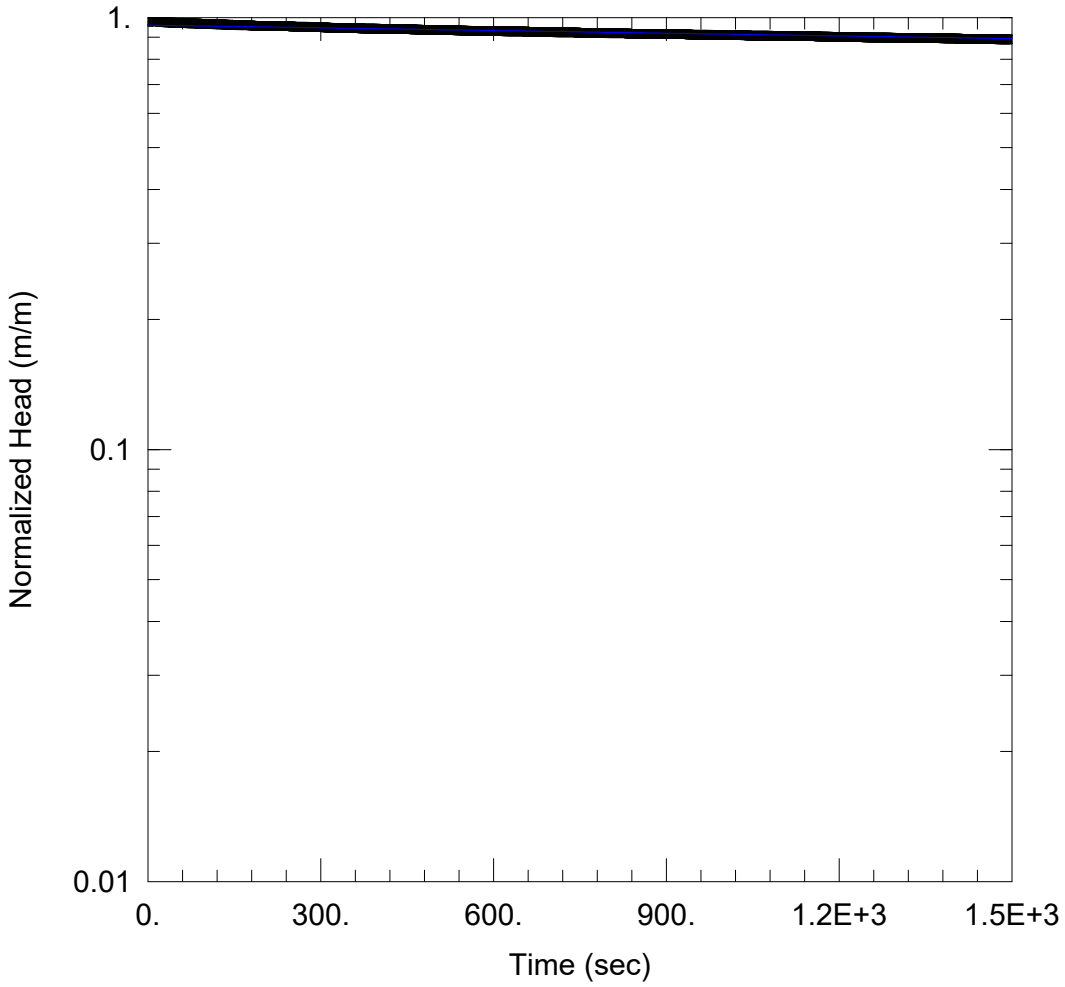
WELL DATA (BH 5)

Initial Displacement: 1.566 m
Total Well Penetration Depth: 10.58 m
Casing Radius: 0.0254 m
Static Water Column Height: 10.58 m
Screen Length: 3. m
Well Radius: 0.1016 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 2.54E-7 m/sec y0 = 1.378 m



SWRT - FALLING HEAD - BH/MW 6

Data Set: C:\Users\simonc\Documents\BHMW6.aqt
Date: 08/20/19 Time: 11:01:55

PROJECT INFORMATION

Company: EXP Service Inc.
Client: Donway Co-operative
Project: BRM-00607375
Location: 230 The Donway W, Toronto, ON
Test Well: BH/MW 6
Test Date: August 13, 2019

AQUIFER DATA

Saturated Thickness: 5.325 m Anisotropy Ratio (Kz/Kr): 1.

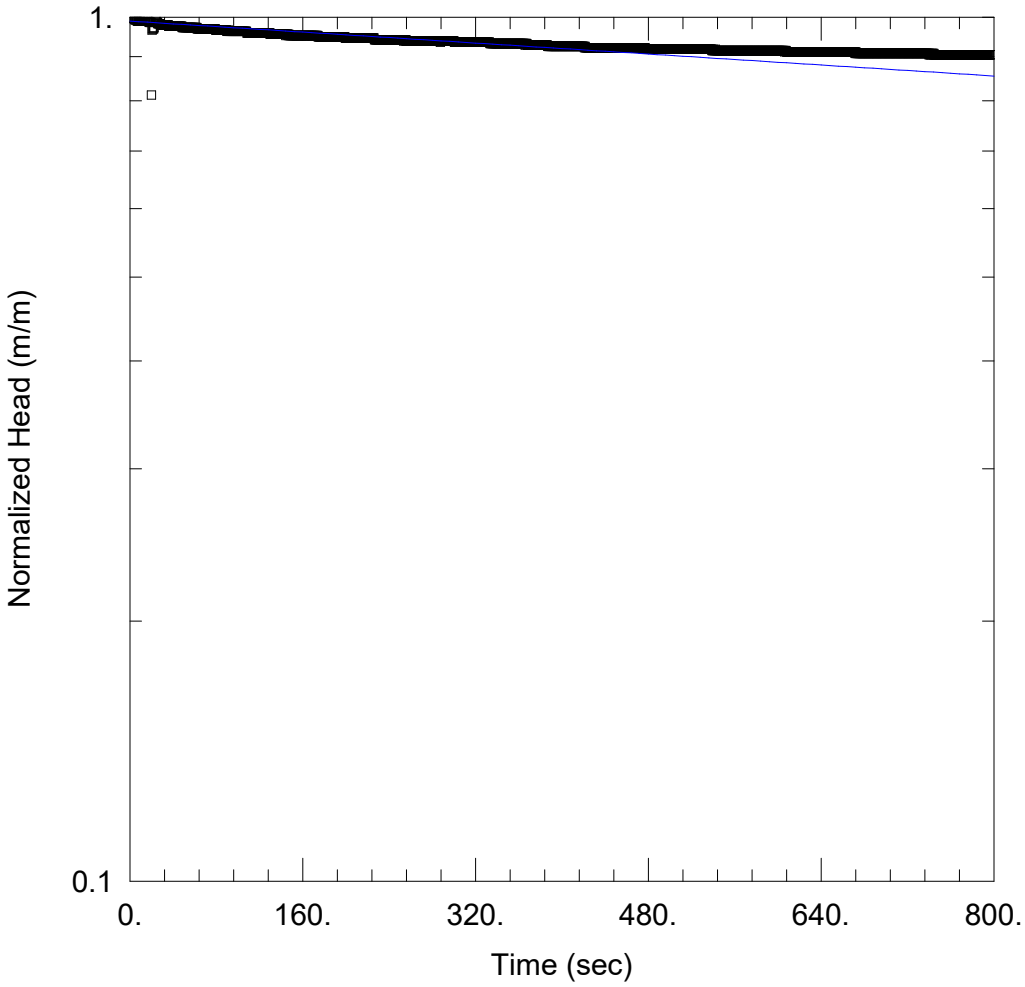
WELL DATA (BH/MW 6)

Initial Displacement: 1.641 m
Total Well Penetration Depth: 5.325 m
Casing Radius: 0.0254 m
Static Water Column Height: 5.325 m
Screen Length: 3. m
Well Radius: 0.1016 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 2.1E-8 m/sec y0 = 1.576 m



BH/MW 101_RISING HEAD SWRT

Data Set: \...\BH 101.aqt
Date: 10/13/21 Time: 15:30:23

PROJECT INFORMATION

Company: EXP
Client: Donway Co-Op Develepment Corp
Project: BRM-21003722-A0
Location: 230 The Donway West
Test Well: BH/MW101
Test Date: 6 Oct 2021

AQUIFER DATA

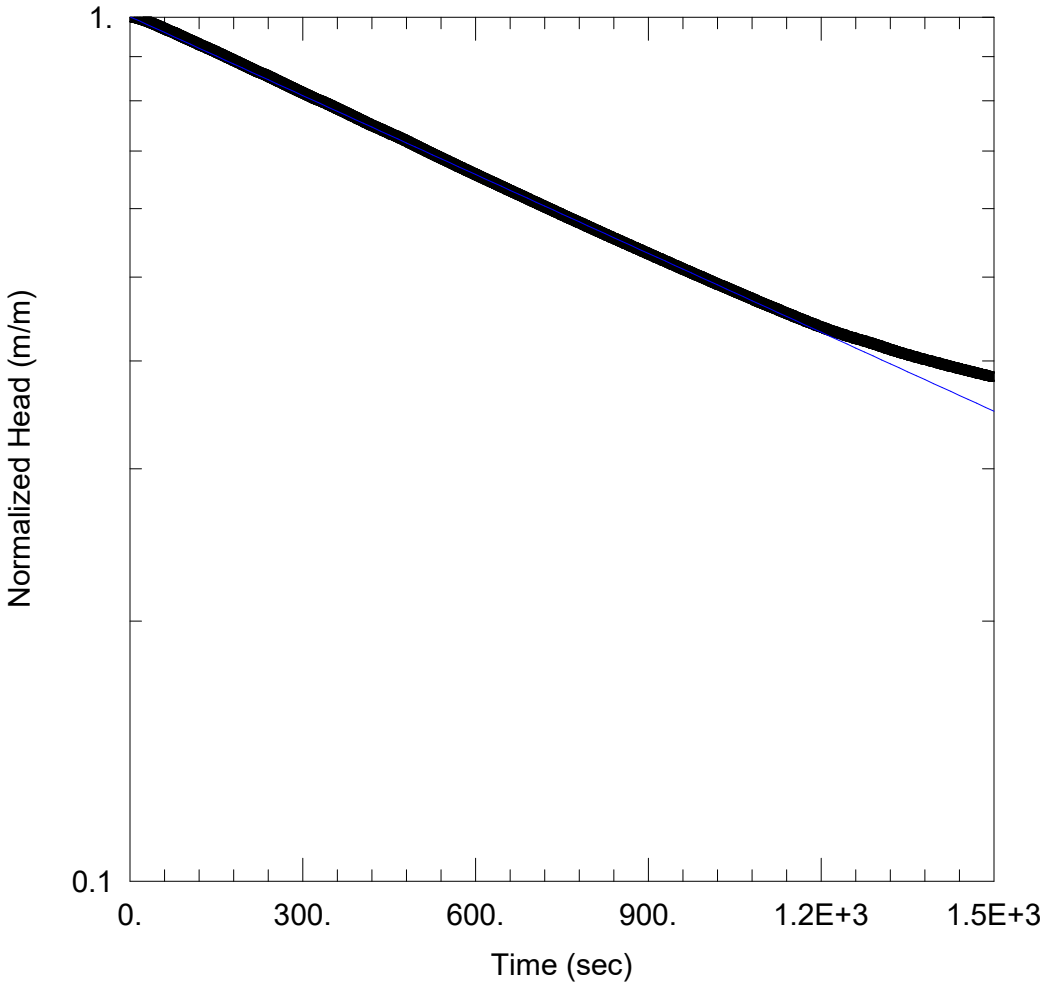
Saturated Thickness: 1.5 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW 101)

Initial Displacement: 0.879 m
Total Well Penetration Depth: 3. m
Casing Radius: 0.0254 m
Static Water Column Height: 1.5 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 2.083E-7 m/sec
y0 = 0.8697 m



BH/MW 106_FALLING HEAD SWRT

Data Set: \...\BH 106.aqt
Date: 10/13/21 Time: 15:36:21

PROJECT INFORMATION

Company: EXP
Client: Donway Co-Op Develepment Corp
Project: BRM-21003722-A0
Location: 230 The Donway West
Test Well: BH/MW106
Test Date: 28 Sep 2021

AQUIFER DATA

Saturated Thickness: 2.47 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW 106)

Initial Displacement: 2.444 m
Total Well Penetration Depth: 3. m
Casing Radius: 0.0254 m
Static Water Column Height: 2.47 m
Screen Length: 3. m
Well Radius: 0.0762 m

SOLUTION

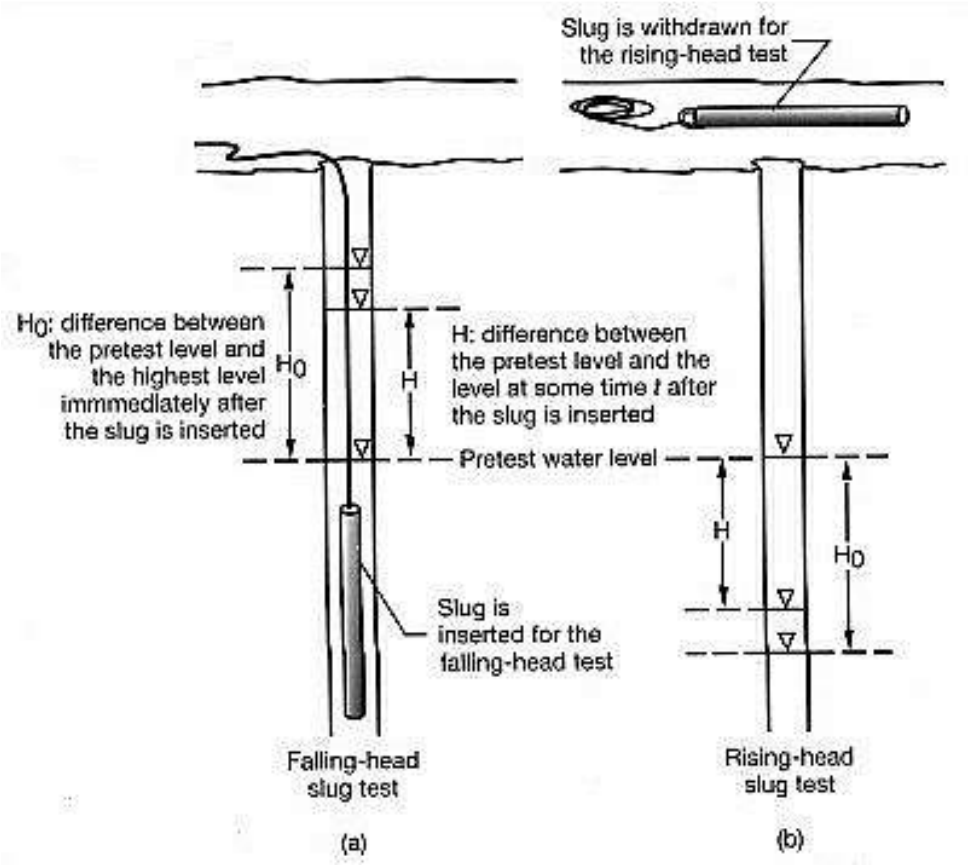
Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 4.85E-7 m/sec
y0 = 2.447 m

Single Well Response Test Procedure

A Single Well Response Test (SWRT), also known as a bail test or a slug test, is conducted in order to determine the saturated hydraulic conductivity (K) of an aquifer. The method of the SWRT is to characterize the change of groundwater level in a well or borehole over time.

In order to ensure consistency and repeatability, all **exp** employees are to follow the procedure outlined in this document when conducting SWRTs.

The figure below depicts a schematic of a slug and bail test and the respective water level changes.



Initials ___

Slug Test Procedure

Equipment Required

- Copy of a signed health and safety plan
- Copy of the work program
- PPE as required by Site-Specific HASP
- Copy of the monitoring well location plan/site plan
- Waterproof pen and bound field note book
- SWRT field data Entry form
- Disposable gloves
- Duct tape
- Deionized water
- Alconox (phosphate free detergent)
- Spray bottles
- Electronic water level meter and spare batteries
- Solid PVC or stainless steel slug of known volume or clean water
- String (nylon)
- Water pressure transducer (data logger) and baro-logger
- Watch or stop watch with second hand
- Plastic sheeting

Testing Procedure

1. Remove cap from well and collect static water level
2. Remove waterra tubing/bailer and place in garbage bag. Record static water level measurement again.
3. Lower the slug into the well and record the dynamic water level.
4. Record the drawdown (for the slug test) at set five (5) second intervals for the first five (5) minutes, then reduce to every one (1) minute.
5. Continue recording the drawdown until 95% recovery is reached. To calculate this value: Find the difference between the dynamic water level and the static water level, then multiply by 95% (.95). Add the resulting value to the dynamic water level.

   (Static Water Level – Dynamic Water Level).95 + Static Water Level = 95% Recovery Value
6. Once complete, replace the waterra tubing/bailer and re-secure the well cap.

Note: If the well is deep, more than one slug may be inserted by attaching the slugs to a series.

Slugs must be washed with methanol, then lab grade soap, and then rinsed with de-ionized water after each use.

Based on the recorded observations, the hydraulic conductivity (in m/s) of the aquifer will be determined. In order to determine the hydraulic conductivity; the well diameter, radius of the borehole and length of the screen will also be required.

Bail Test Procedure

Equipment Required

- 20 L (5 gal) Graduated pail
- Stop watch or watch with seconds
- Garbage bags
- Water level meter
- Field sheets/log book
- Latex Gloves
- Bailer and Rope

Procedure

1. Remove cap from well and collect static water level.
2. If using a **bailer**:
    a. Affix the rope to the bailer.
    b. Remove the waterra tubing and place in garbage bag
    c. Record static water level measurement again.
    d. Record how much water was removed by either counting the number of full bailers or emptying removed water into a container.
    e. Quickly lower the bailer into the well and remove.
    f. Continue this process until the water level will reduce no further.
    g. Record the dynamic water level.
3. If using **waterra** to bail the water:
    a. Pump the water into graduated bucket until the water level will reduce no further.
    b. Record how much water has been removed.
    c. Record the dynamic water level.
4. Record the recovery at set five (5) second intervals for the first (5) minutes, then reduce to every one (1) minute.
5. Continue recording the drawdown/recovery until 95% recovery is reached.
6. Once complete, replace any waterra tubing that may have been removed from the well and re-secure the well cap.

Appendix D – Laboratory Certificates of Analysis

Your P.O. #: ENV-BRM
Your Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your C.O.C. #: 686832-11-01

Attention: Francois Chartier

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/08/19
Report #: R5845545
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9M3673
Received: 2019/08/13, 16:22

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Sewer Use By-Law Semivolatile Organics	1	2019/08/15	2019/08/15	CAM SOP 00301	EPA 8270 m
Biochemical Oxygen Demand (BOD)	1	2019/08/14	2019/08/19	CAM SOP-00427	SM 23 5210B m
Chromium (VI) in Water	1	N/A	2019/08/15	CAM SOP-00436	EPA 7199 m
Total Cyanide	1	2019/08/15	2019/08/15	CAM SOP-00457	OMOE E3015 5 m
Fluoride	1	2019/08/13	2019/08/14	CAM SOP-00449	SM 23 4500-F C m
Mercury in Water by CVAA	1	2019/08/14	2019/08/14	CAM SOP-00453	EPA 7470A m
Total Metals Analysis by ICPMS	1	N/A	2019/08/16	CAM SOP-00447	EPA 6020B m
E.coli, (CFU/100mL)	1	N/A	2019/08/13	CAM SOP-00552	MOE LSB E3371
Total Nonylphenol in Liquids by HPLC	1	2019/08/14	2019/08/16	CAM SOP-00313	In-house Method
Nonylphenol Ethoxylates in Liquids: HPLC	1	2019/08/14	2019/08/16	CAM SOP-00313	In-house Method
Animal and Vegetable Oil and Grease	1	N/A	2019/08/17	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2019/08/17	2019/08/17	CAM SOP-00326	EPA1664B m,SM5520A m
Polychlorinated Biphenyl in Water	1	2019/08/14	2019/08/14	CAM SOP-00309	EPA 8082A m
pH	1	2019/08/14	2019/08/14	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2019/08/14	CAM SOP-00444	OMOE E3179 m
Total Kjeldahl Nitrogen in Water	1	2019/08/14	2019/08/15	CAM SOP-00938	OMOE E3516 m
Total PAHs (1)	1	N/A	2019/08/16	CAM SOP - 00301	EPA 8270 m
Mineral/Synthetic O & G (TPH Heavy Oil) (2)	1	2019/08/17	2019/08/17	CAM SOP-00326	EPA1664B m,SM5520F m
Total Suspended Solids	1	2019/08/14	2019/08/15	CAM SOP-00428	SM 23 2540D m
Volatile Organic Compounds in Water	1	N/A	2019/08/16	CAM SOP-00228	EPA 8260C m

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied.

Your P.O. #: ENV-BRM
Your Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your C.O.C. #: 686832-11-01

Attention: Francois Chartier

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/08/19
Report #: R5845545
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: B9M3673
Received: 2019/08/13, 16:22

BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Total PAHs include only those PAHs specified in the sewer use by-by-law.
(2) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

Encryption Key

AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas Laboratories
19 Aug 2019 16:56:01

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Christine Gripton, Senior Project Manager
Email: Christine.Gripton@bvlabs.com
Phone# (519)652-9444
==========
This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: B9M3673
Report Date: 2019/08/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

TORONTO SANITARY & STORM SEWER PACKAGE (WATER)

BV Labs ID				KMU811		
Sampling Date				2019/08/13 12:00		
COC Number				686832-11-01		
	UNITS	Criteria	Criteria-2	BH/MW2	RDL	QC Batch
Calculated Parameters						
Total Animal/Vegetable Oil and Grease	mg/L	150	-	ND	0.50	6276479
Inorganics						
Total BOD	mg/L	300	15	ND	2	6279060
Fluoride (F-)	mg/L	10	-	0.16	0.10	6277431
Total Kjeldahl Nitrogen (TKN)	mg/L	100	-	1.1	0.10	6279230
pH	pH	6.0:11.5	6.0:9.5	7.41		6277433
Phenols-4AAP	mg/L	1.0	0.008	ND	0.0010	6278746
Total Suspended Solids	mg/L	350	15	14	10	6279331
Total Cyanide (CN)	mg/L	2	0.02	ND	0.0050	6282143
Petroleum Hydrocarbons						
Total Oil & Grease	mg/L	-	-	ND	0.50	6285783
Total Oil & Grease Mineral/Synthetic	mg/L	15	-	ND	0.50	6285784
Miscellaneous Parameters						
Nonylphenol Ethoxylate (Total)	mg/L	0.2	0.01	ND	0.005	6279600
Nonylphenol (Total)	mg/L	0.02	0.001	ND	0.001	6279599
Metals						
Chromium (VI)	ug/L	2000	40	ND	0.50	6280118
Mercury (Hg)	mg/L	0.01	0.0004	ND	0.0001	6279288
Total Aluminum (Al)	ug/L	50000	-	140	5.0	6278919
Total Antimony (Sb)	ug/L	5000	-	0.60	0.50	6278919
Total Arsenic (As)	ug/L	1000	20	ND	1.0	6278919
Total Cadmium (Cd)	ug/L	700	8	ND	0.10	6278919
Total Chromium (Cr)	ug/L	4000	80	ND	5.0	6278919
Total Cobalt (Co)	ug/L	5000	-	1.4	0.50	6278919
Total Copper (Cu)	ug/L	2000	40	1.5	1.0	6278919
Total Iron (Fe)	ug/L	-	-	200	100	6278919

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.

Criteria-2: Toronto Storm Sewer Discharge Use By-Law
ND = Not detected

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: B9M3673
Report Date: 2019/08/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

TORONTO SANITARY & STORM SEWER PACKAGE (WATER)

BV Labs ID				KMU811		
Sampling Date				2019/08/13 12:00		
COC Number				686832-11-01		
	UNITS	Criteria	Criteria-2	BH/MW2	RDL	QC Batch
Total Lead (Pb)	ug/L	1000	120	ND	0.50	6278919
Total Manganese (Mn)	ug/L	5000	50	**140**	2.0	6278919
Total Molybdenum (Mo)	ug/L	5000	-	6.0	0.50	6278919
Total Nickel (Ni)	ug/L	2000	80	3.9	1.0	6278919
Total Phosphorus (P)	ug/L	10000	400	ND	100	6278919
Total Selenium (Se)	ug/L	1000	20	ND	2.0	6278919
Total Silver (Ag)	ug/L	5000	120	ND	0.10	6278919
Total Tin (Sn)	ug/L	5000	-	2.0	1.0	6278919
Total Titanium (Ti)	ug/L	5000	-	6.6	5.0	6278919
Total Zinc (Zn)	ug/L	2000	40	9.8	5.0	6278919
Semivolatile Organics						
Di-N-butyl phthalate	ug/L	80	15	ND	2	6281306
Bis(2-ethylhexyl)phthalate	ug/L	12	8.8	3	2	6281306
3,3'-Dichlorobenzidine	ug/L	2	0.8	ND	0.8	6281306
Pentachlorophenol	ug/L	5	2	ND	1	6281306
Phenanthrene	ug/L	-	-	ND	0.2	6281306
Anthracene	ug/L	-	-	ND	0.2	6281306
Fluoranthene	ug/L	-	-	ND	0.2	6281306
Pyrene	ug/L	-	-	ND	0.2	6281306
Benzo(a)anthracene	ug/L	-	-	ND	0.2	6281306
Chrysene	ug/L	-	-	ND	0.2	6281306
Benzo(b/j)fluoranthene	ug/L	-	-	ND	0.2	6281306
Benzo(k)fluoranthene	ug/L	-	-	ND	0.2	6281306
Benzo(a)pyrene	ug/L	-	-	ND	0.2	6281306
Indeno(1,2,3-cd)pyrene	ug/L	-	-	ND	0.2	6281306
Dibenz(a,h)anthracene	ug/L	-	-	ND	0.2	6281306
Benzo(g,h,i)perylene	ug/L	-	-	ND	0.2	6281306

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.

Criteria-2: Toronto Storm Sewer Discharge Use By-Law
ND = Not detected

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BV Labs Job #: B9M3673
Report Date: 2019/08/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

TORONTO SANITARY & STORM SEWER PACKAGE (WATER)

BV Labs ID				KMU811		
Sampling Date				2019/08/13 12:00		
COC Number				686832-11-01		
	UNITS	Criteria	Criteria-2	BH/MW2	RDL	QC Batch
Dibenzo(a,i)pyrene	ug/L	-	-	ND	0.2	6281306
Benzo(e)pyrene	ug/L	-	-	ND	0.2	6281306
Perylene	ug/L	-	-	ND	0.2	6281306
Dibenzo(a,j) acridine	ug/L	-	-	ND	0.4	6281306
7H-Dibenzo(c,g) Carbazole	ug/L	-	-	ND	0.4	6281306
1,6-Dinitropyrene	ug/L	-	-	ND	0.4	6281306
1,3-Dinitropyrene	ug/L	-	-	ND	0.4	6281306
1,8-Dinitropyrene	ug/L	-	-	ND	0.4	6281306
Calculated Parameters						
Total PAHs (18 PAHs)	ug/L	5	2	ND	1	6276901
Volatile Organics						
Benzene	ug/L	10	2	ND	0.40	6278824
Chloroform	ug/L	40	2	ND	0.40	6278824
1,2-Dichlorobenzene	ug/L	50	5.6	ND	1.0	6278824
1,4-Dichlorobenzene	ug/L	80	6.8	ND	1.0	6278824
cis-1,2-Dichloroethylene	ug/L	4000	5.6	ND	1.0	6278824
trans-1,3-Dichloropropene	ug/L	140	5.6	ND	0.80	6278824
Ethylbenzene	ug/L	160	2	ND	0.40	6278824
Methylene Chloride(Dichloromethane)	ug/L	2000	5.2	ND	4.0	6278824
1,1,2,2-Tetrachloroethane	ug/L	1400	17	ND	1.0	6278824
Tetrachloroethylene	ug/L	1000	4.4	ND	0.40	6278824
Toluene	ug/L	16	2	ND	0.40	6278824
Trichloroethylene	ug/L	400	7.6	ND	0.40	6278824
p+m-Xylene	ug/L	-	-	ND	0.40	6278824
o-Xylene	ug/L	-	-	ND	0.40	6278824
Total Xylenes	ug/L	1400	4.4	ND	0.40	6278824

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.

Criteria-2: Toronto Storm Sewer Discharge Use By-Law
ND = Not detected

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: B9M3673
Report Date: 2019/08/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

TORONTO SANITARY & STORM SEWER PACKAGE (WATER)

BV Labs ID				KMU811		
Sampling Date				2019/08/13 12:00		
COC Number				686832-11-01		
	UNITS	Criteria	Criteria-2	BH/MW2	RDL	QC Batch
PCBs						
Total PCB	ug/L	1	0.4	ND	0.05	6278968
Microbiological						
Escherichia coli	CFU/100mL	-	200	30	10	6278059
Surrogate Recovery (%)						
2,4,6-Tribromophenol	%	-	-	92		6281306
2-Fluorobiphenyl	%	-	-	76		6281306
D14-Terphenyl (FS)	%	-	-	98		6281306
D5-Nitrobenzene	%	-	-	75		6281306
D8-Acenaphthylene	%	-	-	78		6281306
Decachlorobiphenyl	%	-	-	79		6278968
4-Bromofluorobenzene	%	-	-	93		6278824
D4-1,2-Dichloroethane	%	-	-	115		6278824
D8-Toluene	%	-	-	93		6278824

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.
Criteria-2: Toronto Storm Sewer Discharge Use By-Law
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BV Labs Job #: B9M3673
Report Date: 2019/08/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

TEST SUMMARY

BV Labs ID: KMU811
Sample ID: BH/MW2
Matrix: Water

Collected: 2019/08/13
Shipped:
Received: 2019/08/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sewer Use By-Law Semivolatile Organics	GC/MS	6281306	2019/08/15	2019/08/15	Kathy Horvat
Biochemical Oxygen Demand (BOD)	DO	6279060	2019/08/14	2019/08/19	Nusrat Naz
Chromium (VI) in Water	IC	6280118	N/A	2019/08/15	Rupinder Sihota
Total Cyanide	SKAL/CN	6282143	2019/08/15	2019/08/15	Barbara Kalbasi Esfahani
Fluoride	ISE	6277431	2019/08/13	2019/08/14	Surinder Rai
Mercury in Water by CVAA	CV/AA	6279288	2019/08/14	2019/08/14	Ron Morrison
Total Metals Analysis by ICPMS	ICP/MS	6278919	N/A	2019/08/16	Arefa Dabhad
E.coli, (CFU/100mL)	PL	6278059	N/A	2019/08/13	Tharmini Sivalingam
Total Nonylphenol in Liquids by HPLC	LC/FLU	6279599	2019/08/14	2019/08/16	Dennis Boodram
Nonylphenol Ethoxylates in Liquids: HPLC	LC/FLU	6279600	2019/08/14	2019/08/16	Dennis Boodram
Animal and Vegetable Oil and Grease	BAL	6276479	N/A	2019/08/17	Automated Statchk
Total Oil and Grease	BAL	6285783	2019/08/17	2019/08/17	Gurseerat singh gill
Polychlorinated Biphenyl in Water	GC/ECD	6278968	2019/08/14	2019/08/14	Svitlana Shaula
pH	AT	6277433	2019/08/14	2019/08/14	Surinder Rai
Phenols (4AAP)	TECH/PHEN	6278746	N/A	2019/08/14	Bramdeo Motiram
Total Kjeldahl Nitrogen in Water	SKAL	6279230	2019/08/14	2019/08/15	Rajni Tyagi
Total PAHs	CALC	6276901	N/A	2019/08/16	Automated Statchk
Mineral/Synthetic O & G (TPH Heavy Oil)	BAL	6285784	2019/08/17	2019/08/17	Gurseerat singh gill
Total Suspended Solids	BAL	6279331	2019/08/14	2019/08/15	Xinyue (Sarah) Hou
Volatile Organic Compounds in Water	GC/MS	6278824	N/A	2019/08/16	Manpreet Sarao

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BV Labs Job #: B9M3673
Report Date: 2019/08/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	16.3°C

Sample KMU811 [BH/MW2] : VOC Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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BV Labs Job #: B9M3673
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QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
6278824	4-Bromofluorobenzene	2019/08/15	102	70 - 130	101	70 - 130	97	%				
6278824	D4-1,2-Dichloroethane	2019/08/15	109	70 - 130	103	70 - 130	105	%				
6278824	D8-Toluene	2019/08/15	102	70 - 130	102	70 - 130	94	%				
6278968	Decachlorobiphenyl	2019/08/14	89	60 - 130	81	60 - 130	73	%				
6281306	2,4,6-Tribromophenol	2019/08/15	95	10 - 130	90	10 - 130	78	%				
6281306	2-Fluorobiphenyl	2019/08/15	85	30 - 130	82	30 - 130	71	%				
6281306	D14-Terphenyl (FS)	2019/08/15	95	30 - 130	96	30 - 130	92	%				
6281306	D5-Nitrobenzene	2019/08/15	89	30 - 130	77	30 - 130	69	%				
6281306	D8-Acenaphthylene	2019/08/15	82	30 - 130	82	30 - 130	74	%				
6277431	Fluoride (F-)	2019/08/14	98	80 - 120	102	80 - 120	ND, RDL=0.10	mg/L	4.7	20		
6277433	pH	2019/08/14			102	98 - 103			0.58	N/A		
6278746	Phenols-4AAP	2019/08/14	103	80 - 120	102	80 - 120	ND, RDL=0.0010	mg/L	0	20		
6278824	1,1,2,2-Tetrachloroethane	2019/08/15	113	70 - 130	101	70 - 130	ND, RDL=0.50	ug/L	NC	30		
6278824	1,2-Dichlorobenzene	2019/08/15	96	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L	NC	30		
6278824	1,4-Dichlorobenzene	2019/08/15	100	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L	NC	30		
6278824	Benzene	2019/08/15	97	70 - 130	94	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278824	Chloroform	2019/08/15	96	70 - 130	90	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278824	cis-1,2-Dichloroethylene	2019/08/15	93	70 - 130	90	70 - 130	ND, RDL=0.50	ug/L	1.7	30		
6278824	Ethylbenzene	2019/08/15	92	70 - 130	91	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278824	Methylene Chloride(Dichloromethane)	2019/08/15	102	70 - 130	97	70 - 130	ND, RDL=2.0	ug/L	NC	30		
6278824	o-Xylene	2019/08/15	94	70 - 130	96	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278824	p+m-Xylene	2019/08/15	101	70 - 130	101	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278824	Tetrachloroethylene	2019/08/15	90	70 - 130	87	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278824	Toluene	2019/08/15	94	70 - 130	92	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278824	Total Xylenes	2019/08/15					ND, RDL=0.20	ug/L	NC	30		
6278824	trans-1,3-Dichloropropene	2019/08/15	108	70 - 130	100	70 - 130	ND, RDL=0.40	ug/L	NC	30		
6278824	Trichloroethylene	2019/08/15	98	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L	NC	30		
6278919	Total Aluminum (Al)	2019/08/16	NC (1)	80 - 120	100	80 - 120	ND, RDL=5.0	ug/L	8.1	20		
6278919	Total Antimony (Sb)	2019/08/16	NC (1)	80 - 120	102	80 - 120	ND, RDL=0.50	ug/L	1.7	20		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
6278919	Total Arsenic (As)	2019/08/16	NC (1)	80 - 120	102	80 - 120	ND, RDL=1.0	ug/L	6.6	20		
6278919	Total Cadmium (Cd)	2019/08/16	NC (1)	80 - 120	100	80 - 120	ND, RDL=0.10	ug/L	NC	20		
6278919	Total Chromium (Cr)	2019/08/16	NC (1)	80 - 120	96	80 - 120	ND, RDL=5.0	ug/L	NC	20		
6278919	Total Cobalt (Co)	2019/08/16	NC (1)	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L	NC	20		
6278919	Total Copper (Cu)	2019/08/16	NC (1)	80 - 120	104	80 - 120	ND, RDL=1.0	ug/L	NC	20		
6278919	Total Iron (Fe)	2019/08/16	NC (1)	80 - 120	99	80 - 120	ND, RDL=100	ug/L	3.6	20		
6278919	Total Lead (Pb)	2019/08/16	NC (1)	80 - 120	99	80 - 120	ND, RDL=0.50	ug/L	NC	20		
6278919	Total Manganese (Mn)	2019/08/16	NC (1)	80 - 120	97	80 - 120	ND, RDL=2.0	ug/L	4.3	20		
6278919	Total Molybdenum (Mo)	2019/08/16	NC (1)	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L	9.0	20		
6278919	Total Nickel (Ni)	2019/08/16	NC (1)	80 - 120	96	80 - 120	ND, RDL=1.0	ug/L	NC	20		
6278919	Total Phosphorus (P)	2019/08/16	NC (1)	80 - 120	105	80 - 120	ND, RDL=100	ug/L	0.26	20		
6278919	Total Selenium (Se)	2019/08/16	NC (1)	80 - 120	103	80 - 120	ND, RDL=2.0	ug/L	NC	20		
6278919	Total Silver (Ag)	2019/08/16	NC (1)	80 - 120	99	80 - 120	ND, RDL=0.10	ug/L	NC	20		
6278919	Total Tin (Sn)	2019/08/16	NC (1)	80 - 120	100	80 - 120	ND, RDL=1.0	ug/L	NC	20		
6278919	Total Titanium (Ti)	2019/08/16	NC (1)	80 - 120	95	80 - 120	ND, RDL=5.0	ug/L	NC	20		
6278919	Total Zinc (Zn)	2019/08/16	NC (1)	80 - 120	102	80 - 120	ND, RDL=5.0	ug/L	11	20		
6278968	Total PCB	2019/08/14	101	60 - 130	78	60 - 130	ND, RDL=0.05	ug/L	NC	40		
6279060	Total BOD	2019/08/19					ND,RDL=2	mg/L	NC	30	104	80 - 120
6279230	Total Kjeldahl Nitrogen (TKN)	2019/08/15	99	80 - 120	101	80 - 120	ND, RDL=0.10	mg/L	4.6	20	93	80 - 120
6279288	Mercury (Hg)	2019/08/14	98	75 - 125	101	80 - 120	ND, RDL=0.0001	mg/L	NC	20		
6279331	Total Suspended Solids	2019/08/15					ND, RDL=10	mg/L	NC	25	95	85 - 115
6279599	Nonylphenol (Total)	2019/08/16	116	50 - 130	105	50 - 130	ND, RDL=0.001	mg/L	NC	40		
6279600	Nonylphenol Ethoxylate (Total)	2019/08/16	113	50 - 130	99	50 - 130	ND, RDL=0.005	mg/L	NC	40		
6280118	Chromium (VI)	2019/08/15	99	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L	NC	20		
6281306	1,3-Dinitropyrene	2019/08/16	31	30 - 130	81	30 - 130	ND, RDL=0.4	ug/L	NC	40		
6281306	1,6-Dinitropyrene	2019/08/16	40	30 - 130	88	30 - 130	ND, RDL=0.4	ug/L	NC	40		
6281306	1,8-Dinitropyrene	2019/08/16	57	30 - 130	59	30 - 130	ND, RDL=0.4	ug/L	NC	40		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
6281306	3,3'-Dichlorobenzidine	2019/08/16	58	30 - 130	67	30 - 130	ND, RDL=0.8	ug/L	NC	40		
6281306	7H-Dibenzo(c,g) Carbazole	2019/08/16	98	30 - 130	101	30 - 130	ND, RDL=0.4	ug/L	NC	40		
6281306	Anthracene	2019/08/16	86	30 - 130	89	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Benzo(a)anthracene	2019/08/16	102	30 - 130	105	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Benzo(a)pyrene	2019/08/16	89	30 - 130	98	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Benzo(b/j)fluoranthene	2019/08/16	85	30 - 130	96	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Benzo(e)pyrene	2019/08/16	86	30 - 130	95	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Benzo(g,h,i)perylene	2019/08/16	106	30 - 130	111	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Benzo(k)fluoranthene	2019/08/16	96	30 - 130	98	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Bis(2-ethylhexyl)phthalate	2019/08/16	99	30 - 130	103	30 - 130	ND,RDL=2	ug/L	NC	40		
6281306	Chrysene	2019/08/16	89	30 - 130	95	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Dibenz(a,h)anthracene	2019/08/16	110	30 - 130	113	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Dibenzo(a,i)pyrene	2019/08/16	115	30 - 130	125	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Dibenzo(a,j) acridine	2019/08/16	94	30 - 130	102	30 - 130	ND, RDL=0.4	ug/L	NC	40		
6281306	Di-N-butyl phthalate	2019/08/16	91	30 - 130	98	30 - 130	ND,RDL=2	ug/L	NC	40		
6281306	Fluoranthene	2019/08/16	101	30 - 130	100	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Indeno(1,2,3-cd)pyrene	2019/08/16	106	30 - 130	111	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Pentachlorophenol	2019/08/16	89	30 - 130	78	30 - 130	ND,RDL=1	ug/L	NC	40		
6281306	Perylene	2019/08/16	96	30 - 130	96	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Phenanthrene	2019/08/16	90	30 - 130	91	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6281306	Pyrene	2019/08/16	102	30 - 130	102	30 - 130	ND, RDL=0.2	ug/L	NC	40		
6282143	Total Cyanide (CN)	2019/08/15	103	80 - 120	96	80 - 120	ND, RDL=0.0050	mg/L	NC	20		
6285783	Total Oil & Grease	2019/08/17			95	85 - 115	ND, RDL=0.50	mg/L	3.9	25		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
6285784	Total Oil & Grease Mineral/Synthetic	2019/08/17			99	85 - 115	ND, RDL=0.50	mg/L	4.1	25		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Matrix Spike not calculated. Original sample and matrix spike sample were analyzed at a dilution, due to high target analytes, or sample matrix interference.

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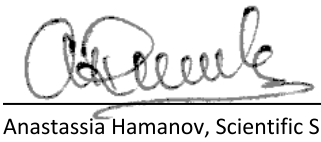
BV Labs Job #: B9M3673
Report Date: 2019/08/19

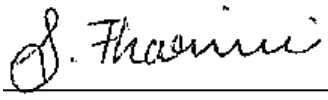
exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist



Tharmini Sivalingam, Supervisor, Food Microbiology Laboratory

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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MICRO

Maxxam Analytics International Corporation o/a Maxxam Analytics
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CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#9590 exp Services Inc	Company Name:	EXP SERVICES INC	Quotation #:	STREAM2	Maxxam Job #:	Bottle Order #:
Attention:	Central Services	Attention:	F.Chartier,	P.O. #:	ENV-BRM		686832
Address:	1595 Clark Blvd Brampton ON L6T 4V1	Address:	CHANTEL.SIMON@EXP.COM	Project:	BRM-00607375	COC #:	Project Manager:
Tel:	(905) 793-9800 Fax: (905) 793-0641	Tel:	(905) 793-9800 Ext: 2523 Fax:	Project Name:	230 THE DONWAY W	C#686832-11-01	Tanya Fidlin
Email:	Karen.Burke@exp.com; AP@exp.com	Email:	Francois.Chartier@exp.com,	Site #:			
				Sampled By:	CS		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___	☐ CCME ☒ Sanitary Sewer Bylaw ☐ Reg 558 ☒ Storm Sewer Bylaw ☐ MISA Municipality TORONTO ☐ PWQO ☐ Other	

Include Criteria on Certificate of Analysis (Y/N)? Y

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

13-Aug-19 16:22
Tanya Fidlin
B9M3673
MAF ENV-592

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	TORONTO SANITARY and STORM Bylaw Comprehensive	PWS Iron	# of Bottles	Comments
1		BH/MW 2	13/08/19	12:00 PM	GW	N	X	X	19	5 DAY FIRM TURN AROUND TIME PLEASE
2										
3										
4										
5										
6										
7										
8										
9										
10										

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Chantel Simon	19/08/13	16:20 PM		19/08/13	1622	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	18 14 17 ICE	Present Intact	20	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO MAXXAM'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.MAXXAM.CA/TERMS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT HTTP://MAXXAM.CA/WP-CONTENT/UPLOADS/ONTARIO-COC.PDF.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

White: Maxxa Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

BV Labs Job #: B9M3673
Report Date: 2019/08/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY W
Your P.O. #: ENV-BRM
Sampler Initials: CS

Exceedence Summary Table – Toronto Sanitary Sewer

Result Exceedences

Sample ID	BV Labs ID	Parameter	Criteria	Result	DL	Units
No Exceedences						

The exceedence summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

Exceedence Summary Table – Toronto Storm Sewer

Result Exceedences

Sample ID	BV Labs ID	Parameter	Criteria	Result	DL	Units
BH/MW2	KMU811-12	Total Manganese (Mn)	50	140	2.0	ug/L

The exceedence summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

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Your P.O. #: ENV-BRM
Your Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your C.O.C. #: 828273-05-01

Attention: Francois Chartier

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/10/19
Report #: R6858754
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T2443
Received: 2021/10/07, 19:16

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sewer Use By-Law Semivolatile Organics	1	2021/10/12	2021/10/13	CAM SOP 00301	EPA 8270 m
Biochemical Oxygen Demand (BOD)	1	2021/10/09	2021/10/14	CAM SOP-00427	SM 23 5210B m
Chromium (VI) in Water	1	N/A	2021/10/13	CAM SOP-00436	EPA 7199 m
Total Cyanide	1	2021/10/13	2021/10/13	CAM SOP-00457	OMOE E3015 5 m
Fluoride	1	2021/10/13	2021/10/14	CAM SOP-00449	SM 23 4500-F C m
Mercury in Water by CVAA	1	2021/10/13	2021/10/13	CAM SOP-00453	EPA 7470A m
Total Metals Analysis by ICPMS	1	N/A	2021/10/18	CAM SOP-00447	EPA 6020B m
E.coli, (CFU/100mL)	1	N/A	2021/10/07	CAM SOP-00552	MOE LSB E3371
Total Nonylphenol in Liquids by HPLC	1	2021/10/08	2021/10/09	CAM SOP-00313	In-house Method
Nonylphenol Ethoxylates in Liquids: HPLC	1	2021/10/08	2021/10/09	CAM SOP-00313	In-house Method
Animal and Vegetable Oil and Grease	1	N/A	2021/10/17	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2021/10/17	2021/10/17	CAM SOP-00326	EPA1664B m,SM5520B m
Polychlorinated Biphenyl in Water	1	2021/10/08	2021/10/09	CAM SOP-00309	EPA 8082A m
pH	1	2021/10/13	2021/10/14	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2021/10/08	CAM SOP-00444	OMOE E3179 m
Total Kjeldahl Nitrogen in Water	1	2021/10/13	2021/10/14	CAM SOP-00938	OMOE E3516 m
Total PAHs (1)	1	N/A	2021/10/14	CAM SOP - 00301	
Mineral/Synthetic O & G (TPH Heavy Oil) (2)	1	2021/10/17	2021/10/17	CAM SOP-00326	EPA1664B m,SM5520F m
Total Suspended Solids	1	2021/10/13	2021/10/14	CAM SOP-00428	SM 23 2540D m
Volatile Organic Compounds in Water	1	N/A	2021/10/13	CAM SOP-00228	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or

Your P.O. #: ENV-BRM
Your Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your C.O.C. #: 828273-05-01

Attention: Francois Chartier

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/10/19
Report #: R6858754
Version: 3 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1T2443
Received: 2021/10/07, 19:16

implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Total PAHs include only those PAHs specified in the sewer use by-by-law.
(2) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

Encryption Key

Bureau Veritas
19 Oct 2021 10:24:43

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Patricia Legette, Project Manager
Email: Patricia.Legette@bureauveritas.com
Phone# (905)817-5799
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C1T2443
Report Date: 2021/10/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your P.O. #: ENV-BRM
Sampler Initials: TM

TORONTO SANITARY&STORM SEWER (100-2016)

Bureau Veritas ID				QWN927		
Sampling Date				2021/10/07 11:00		
COC Number				828273-05-01		
	UNITS	Criteria	Criteria-2	BH106	RDL	QC Batch
Calculated Parameters						
Total Animal/Vegetable Oil and Grease	mg/L	150	-	ND	0.50	7624482
Inorganics						
Total BOD	mg/L	300	15	ND	2	7628961
Fluoride (F-)	mg/L	10	-	0.47	0.10	7635150
Total Kjeldahl Nitrogen (TKN)	mg/L	100	-	2.1	0.10	7633933
pH	pH	6.0:11.5	6.0:9.5	8.00		7635165
Phenols-4AAP	mg/L	1.0	0.008	ND	0.0010	7626724
Total Suspended Solids	mg/L	350	15	15	10	7632093
Total Cyanide (CN)	mg/L	2	0.02	ND	0.0050	7633473
Petroleum Hydrocarbons						
Total Oil & Grease	mg/L	-	-	ND	0.50	7641987
Total Oil & Grease Mineral/Synthetic	mg/L	15	-	ND	0.50	7641988
Miscellaneous Parameters						
Nonylphenol Ethoxylate (Total)	mg/L	0.2	0.01	ND	0.005	7626469
Nonylphenol (Total)	mg/L	0.02	0.001	ND	0.001	7626464
Metals						
Chromium (VI)	ug/L	2000	40	ND	0.50	7634115
Mercury (Hg)	mg/L	0.01	0.0004	ND	0.00010	7633746
Total Aluminum (Al)	ug/L	50000	-	1200	4.9	7635958
Total Antimony (Sb)	ug/L	5000	-	0.50	0.50	7635958
Total Arsenic (As)	ug/L	1000	20	3.0	1.0	7635958
Total Cadmium (Cd)	ug/L	700	8	ND	0.090	7635958
Total Chromium (Cr)	ug/L	4000	80	ND	5.0	7635958
Total Cobalt (Co)	ug/L	5000	-	ND	0.50	7635958
Total Copper (Cu)	ug/L	2000	40	2.7	0.90	7635958
Total Lead (Pb)	ug/L	1000	120	ND	0.50	7635958

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.

Criteria-2: Toronto Storm Sewer Discharge Use By-Law
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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TORONTO SANITARY&STORM SEWER (100-2016)

Bureau Veritas ID				QWN927		
Sampling Date				2021/10/07 11:00		
COC Number				828273-05-01		
	UNITS	Criteria	Criteria-2	BH106	RDL	QC Batch
Total Manganese (Mn)	ug/L	5000	50	**65**	2.0	7635958
Total Molybdenum (Mo)	ug/L	5000	-	23	0.50	7635958
Total Nickel (Ni)	ug/L	2000	80	1.7	1.0	7635958
Total Phosphorus (P)	ug/L	10000	400	110	100	7635958
Total Selenium (Se)	ug/L	1000	20	ND	2.0	7635958
Total Silver (Ag)	ug/L	5000	120	ND	0.090	7635958
Total Tin (Sn)	ug/L	5000	-	3.5	1.0	7635958
Total Titanium (Ti)	ug/L	5000	-	43	5.0	7635958
Total Zinc (Zn)	ug/L	2000	40	ND	5.0	7635958
Semivolatile Organics						
Di-N-butyl phthalate	ug/L	80	15	ND	2	7631469
Bis(2-ethylhexyl)phthalate	ug/L	12	8.8	ND	2	7631469
3,3'-Dichlorobenzidine	ug/L	2	0.8	ND	0.8	7631469
Pentachlorophenol	ug/L	5	2	ND	1	7631469
Phenanthrene	ug/L	-	-	ND	0.2	7631469
Anthracene	ug/L	-	-	ND	0.2	7631469
Fluoranthene	ug/L	-	-	ND	0.2	7631469
Pyrene	ug/L	-	-	ND	0.2	7631469
Benzo(a)anthracene	ug/L	-	-	ND	0.2	7631469
Chrysene	ug/L	-	-	ND	0.2	7631469
Benzo(b/j)fluoranthene	ug/L	-	-	ND	0.2	7631469
Benzo(k)fluoranthene	ug/L	-	-	ND	0.2	7631469
Benzo(a)pyrene	ug/L	-	-	ND	0.2	7631469
Indeno(1,2,3-cd)pyrene	ug/L	-	-	ND	0.2	7631469
Dibenzo(a,h)anthracene	ug/L	-	-	ND	0.2	7631469
Benzo(g,h,i)perylene	ug/L	-	-	ND	0.2	7631469
Dibenzo(a,i)pyrene	ug/L	-	-	ND	0.2	7631469

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.

Criteria-2: Toronto Storm Sewer Discharge Use By-Law
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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TORONTO SANITARY&STORM SEWER (100-2016)

Bureau Veritas ID				QWN927		
Sampling Date				2021/10/07 11:00		
COC Number				828273-05-01		
	UNITS	Criteria	Criteria-2	BH106	RDL	QC Batch
Benzo(e)pyrene	ug/L	-	-	ND	0.2	7631469
Perylene	ug/L	-	-	ND	0.2	7631469
Dibenzo(a,j) acridine	ug/L	-	-	ND	0.4	7631469
7H-Dibenzo(c,g) Carbazole	ug/L	-	-	ND	0.4	7631469
1,6-Dinitropyrene	ug/L	-	-	ND	0.4	7631469
1,3-Dinitropyrene	ug/L	-	-	ND	0.4	7631469
1,8-Dinitropyrene	ug/L	-	-	ND	0.4	7631469
Calculated Parameters						
Total PAHs (18 PAHs)	ug/L	5	2	ND	1	7626029
Volatile Organics						
Benzene	ug/L	10	2	ND	0.20	7626489
Chloroform	ug/L	40	2	1.8	0.20	7626489
1,2-Dichlorobenzene	ug/L	50	5.6	ND	0.40	7626489
1,4-Dichlorobenzene	ug/L	80	6.8	ND	0.40	7626489
cis-1,2-Dichloroethylene	ug/L	4000	5.6	ND	0.50	7626489
trans-1,3-Dichloropropene	ug/L	140	5.6	ND	0.40	7626489
Ethylbenzene	ug/L	160	2	ND	0.20	7626489
Methylene Chloride(Dichloromethane)	ug/L	2000	5.2	ND	2.0	7626489
1,1,2,2-Tetrachloroethane	ug/L	1400	17	ND	0.40	7626489
Tetrachloroethylene	ug/L	1000	4.4	ND	0.20	7626489
Toluene	ug/L	16	2	ND	0.20	7626489
Trichloroethylene	ug/L	400	7.6	ND	0.20	7626489
p+m-Xylene	ug/L	-	-	ND	0.20	7626489
o-Xylene	ug/L	-	-	ND	0.20	7626489
Total Xylenes	ug/L	1400	4.4	ND	0.20	7626489
PCBs						
Total PCB	ug/L	1	0.4	ND	0.05	7627873

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.

Criteria-2: Toronto Storm Sewer Discharge Use By-Law
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Bureau Veritas Job #: C1T2443
Report Date: 2021/10/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your P.O. #: ENV-BRM
Sampler Initials: TM

TORONTO SANITARY&STORM SEWER (100-2016)

Bureau Veritas ID				QWN927		
Sampling Date				2021/10/07 11:00		
COC Number				828273-05-01		
	UNITS	Criteria	Criteria-2	BH106	RDL	QC Batch
Microbiological						
Escherichia coli	CFU/100mL	-	200	<10	10	7626013
Surrogate Recovery (%)						
2,4,6-Tribromophenol	%	-	-	78		7631469
2-Fluorobiphenyl	%	-	-	46		7631469
D14-Terphenyl (FS)	%	-	-	77		7631469
D5-Nitrobenzene	%	-	-	66		7631469
D8-Acenaphthylene	%	-	-	57		7631469
Decachlorobiphenyl	%	-	-	98		7627873
4-Bromofluorobenzene	%	-	-	91		7626489
D4-1,2-Dichloroethane	%	-	-	110		7626489
D8-Toluene	%	-	-	90		7626489

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Toronto Sanitary and Combined Sewers Discharge Guidelines. Referenced to the Chapter 681.
Criteria-2: Toronto Storm Sewer Discharge Use By-Law

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Bureau Veritas Job #: C1T2443
Report Date: 2021/10/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your P.O. #: ENV-BRM
Sampler Initials: TM

TEST SUMMARY

Bureau Veritas ID: QWN927
Sample ID: BH106
Matrix: Water

Collected: 2021/10/07
Shipped:
Received: 2021/10/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sewer Use By-Law Semivolatile Organics	GC/MS	7631469	2021/10/12	2021/10/13	Adriana Zurita
Biochemical Oxygen Demand (BOD)	DO	7628961	2021/10/09	2021/10/14	Surleen Kaur Romana
Chromium (VI) in Water	IC	7634115	N/A	2021/10/13	Lang Le
Total Cyanide	SKAL/CN	7633473	2021/10/13	2021/10/13	Nimarta Singh
Fluoride	ISE	7635150	2021/10/13	2021/10/14	Surinder Rai
Mercury in Water by CVAA	CV/AA	7633746	2021/10/13	2021/10/13	Gagandeep Rai
Total Metals Analysis by ICPMS	ICP/MS	7635958	N/A	2021/10/18	Arefa Dabhad
E.coli, (CFU/100mL)	PL	7626013	N/A	2021/10/07	Soham Patel
Total Nonylphenol in Liquids by HPLC	LC/FLU	7626464	2021/10/08	2021/10/09	Dennis Boodram
Nonylphenol Ethoxylates in Liquids: HPLC	LC/FLU	7626469	2021/10/08	2021/10/09	Dennis Boodram
Animal and Vegetable Oil and Grease	BAL	7624482	N/A	2021/10/17	Automated Statchk
Total Oil and Grease	BAL	7641987	2021/10/17	2021/10/17	Mitul Patel
Polychlorinated Biphenyl in Water	GC/ECD	7627873	2021/10/08	2021/10/09	Joy Zhang
pH	AT	7635165	2021/10/13	2021/10/14	Surinder Rai
Phenols (4AAP)	TECH/PHEN	7626724	N/A	2021/10/08	Deonarine Ramnarine
Total Kjeldahl Nitrogen in Water	SKAL	7633933	2021/10/13	2021/10/14	Rajni Tyagi
Total PAHs	CALC	7626029	N/A	2021/10/14	Automated Statchk
Mineral/Synthetic O & G (TPH Heavy Oil)	BAL	7641988	2021/10/17	2021/10/17	Mitul Patel
Total Suspended Solids	BAL	7632093	2021/10/13	2021/10/14	Shaneil Hall
Volatile Organic Compounds in Water	GC/MS	7626489	N/A	2021/10/13	Chandni Khawas

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Bureau Veritas Job #: C1T2443
Report Date: 2021/10/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your P.O. #: ENV-BRM
Sampler Initials: TM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	10.7°C

Results relate only to the items tested.

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Bureau Veritas Job #: C1T2443
Report Date: 2021/10/19

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your P.O. #: ENV-BRM
Sampler Initials: TM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7626489	4-Bromofluorobenzene	2021/10/12	102	70 - 130	102	70 - 130	95	%				
7626489	D4-1,2-Dichloroethane	2021/10/12	101	70 - 130	98	70 - 130	102	%				
7626489	D8-Toluene	2021/10/12	104	70 - 130	103	70 - 130	92	%				
7627873	Decachlorobiphenyl	2021/10/09	97	60 - 130	76	60 - 130	85	%				
7631469	2,4,6-Tribromophenol	2021/10/13	95	10 - 130	94	10 - 130	90	%				
7631469	2-Fluorobiphenyl	2021/10/13	82	30 - 130	78	30 - 130	59	%				
7631469	D14-Terphenyl (FS)	2021/10/13	83	30 - 130	81	30 - 130	88	%				
7631469	D5-Nitrobenzene	2021/10/13	87	30 - 130	83	30 - 130	81	%				
7631469	D8-Acenaphthylene	2021/10/13	86	30 - 130	82	30 - 130	72	%				
7626464	Nonylphenol (Total)	2021/10/13	111	50 - 130	111	50 - 130	ND, RDL=0.001	mg/L	1.1	40		
7626469	Nonylphenol Ethoxylate (Total)	2021/10/13	96	50 - 130	96	50 - 130	ND, RDL=0.005	mg/L	NC	40		
7626489	1,1,2,2-Tetrachloroethane	2021/10/12	93	70 - 130	94	70 - 130	ND, RDL=0.40	ug/L	NC	30		
7626489	1,2-Dichlorobenzene	2021/10/12	90	70 - 130	93	70 - 130	ND, RDL=0.40	ug/L	NC	30		
7626489	1,4-Dichlorobenzene	2021/10/12	106	70 - 130	110	70 - 130	ND, RDL=0.40	ug/L	NC	30		
7626489	Benzene	2021/10/12	87	70 - 130	85	70 - 130	ND, RDL=0.20	ug/L	NC	30		
7626489	Chloroform	2021/10/12	92	70 - 130	91	70 - 130	ND, RDL=0.20	ug/L	NC	30		
7626489	cis-1,2-Dichloroethylene	2021/10/12	97	70 - 130	94	70 - 130	ND, RDL=0.50	ug/L	NC	30		
7626489	Ethylbenzene	2021/10/12	85	70 - 130	87	70 - 130	ND, RDL=0.20	ug/L	NC	30		
7626489	Methylene Chloride(Dichloromethane)	2021/10/12	107	70 - 130	103	70 - 130	ND, RDL=2.0	ug/L	NC	30		
7626489	o-Xylene	2021/10/12	83	70 - 130	90	70 - 130	ND, RDL=0.20	ug/L	NC	30		
7626489	p+m-Xylene	2021/10/12	89	70 - 130	92	70 - 130	ND, RDL=0.20	ug/L	NC	30		
7626489	Tetrachloroethylene	2021/10/12	85	70 - 130	85	70 - 130	ND, RDL=0.20	ug/L	NC	30		
7626489	Toluene	2021/10/12	90	70 - 130	90	70 - 130	ND, RDL=0.20	ug/L	3.0	30		
7626489	Total Xylenes	2021/10/12					ND, RDL=0.20	ug/L	NC	30		
7626489	trans-1,3-Dichloropropene	2021/10/12	109	70 - 130	100	70 - 130	ND, RDL=0.40	ug/L	NC	30		
7626489	Trichloroethylene	2021/10/12	95	70 - 130	95	70 - 130	ND, RDL=0.20	ug/L	NC	30		
7626724	Phenols-4AAP	2021/10/08	100	80 - 120	101	80 - 120	ND, RDL=0.0010	mg/L	4.5	20		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7627873	Total PCB	2021/10/09	90	60 - 130	94	60 - 130	ND, RDL=0.05	ug/L	NC	40		
7628961	Total BOD	2021/10/14					ND,RDL=2	mg/L	NC	30	91	80 - 120
7631469	1,3-Dinitropyrene	2021/10/13	80	30 - 130	102	30 - 130	ND, RDL=0.4	ug/L	NC	40		
7631469	1,6-Dinitropyrene	2021/10/13	76	30 - 130	120	30 - 130	ND, RDL=0.4	ug/L	NC	40		
7631469	1,8-Dinitropyrene	2021/10/13	111	30 - 130	130	30 - 130	ND, RDL=0.4	ug/L	NC	40		
7631469	3,3'-Dichlorobenzidine	2021/10/13	77	30 - 130	111	30 - 130	ND, RDL=0.8	ug/L	NC	40		
7631469	7H-Dibenzo(c,g) Carbazole	2021/10/13	103	30 - 130	124	30 - 130	ND, RDL=0.4	ug/L	NC	40		
7631469	Anthracene	2021/10/13	105	30 - 130	104	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Benzo(a)anthracene	2021/10/13	93	30 - 130	91	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Benzo(a)pyrene	2021/10/13	97	30 - 130	101	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Benzo(b/j)fluoranthene	2021/10/13	106	30 - 130	107	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Benzo(e)pyrene	2021/10/13	108	30 - 130	112	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Benzo(g,h,i)perylene	2021/10/13	108	30 - 130	121	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Benzo(k)fluoranthene	2021/10/13	101	30 - 130	110	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Bis(2-ethylhexyl)phthalate	2021/10/13	108	30 - 130	110	30 - 130	ND,RDL=2	ug/L	NC	40		
7631469	Chrysene	2021/10/13	107	30 - 130	114	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Dibenzo(a,h)anthracene	2021/10/13	102	30 - 130	113	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Dibenzo(a,i)pyrene	2021/10/13	100	30 - 130	113	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Dibenzo(a,j) acridine	2021/10/13	88	30 - 130	114	30 - 130	ND, RDL=0.4	ug/L	NC	40		
7631469	Di-N-butyl phthalate	2021/10/13	109	30 - 130	104	30 - 130	ND,RDL=2	ug/L	NC	40		
7631469	Fluoranthene	2021/10/13	102	30 - 130	103	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Indeno(1,2,3-cd)pyrene	2021/10/13	101	30 - 130	110	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Pentachlorophenol	2021/10/13	56	30 - 130	65	30 - 130	ND,RDL=1	ug/L	NC	40		
7631469	Perylene	2021/10/13	105	30 - 130	118	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Phenanthrene	2021/10/13	106	30 - 130	105	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7631469	Pyrene	2021/10/13	104	30 - 130	103	30 - 130	ND, RDL=0.2	ug/L	NC	40		
7632093	Total Suspended Solids	2021/10/14					ND, RDL=10	mg/L	2.4	25	95	85 - 115
7633473	Total Cyanide (CN)	2021/10/13	99	80 - 120	103	80 - 120	ND, RDL=0.0050	mg/L	NC	20		

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7633746	Mercury (Hg)	2021/10/13	88	75 - 125	91	80 - 120	ND, RDL=0.00010	mg/L	NC	20		
7633933	Total Kjeldahl Nitrogen (TKN)	2021/10/14	95	80 - 120	99	80 - 120	ND, RDL=0.10	mg/L	NC (1)	20	97	80 - 120
7634115	Chromium (VI)	2021/10/13	100	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	NC	20		
7635150	Fluoride (F-)	2021/10/14	99	80 - 120	99	80 - 120	ND, RDL=0.10	mg/L	4.2	20		
7635165	pH	2021/10/14			101	98 - 103			0.45	N/A		
7635958	Total Aluminum (Al)	2021/10/18	NC	80 - 120	102	80 - 120	ND, RDL=4.9	ug/L				
7635958	Total Antimony (Sb)	2021/10/18	104	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L				
7635958	Total Arsenic (As)	2021/10/18	96	80 - 120	93	80 - 120	ND, RDL=1.0	ug/L				
7635958	Total Cadmium (Cd)	2021/10/18	98	80 - 120	93	80 - 120	ND, RDL=0.090	ug/L				
7635958	Total Chromium (Cr)	2021/10/18	96	80 - 120	93	80 - 120	ND, RDL=5.0	ug/L				
7635958	Total Cobalt (Co)	2021/10/18	102	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L				
7635958	Total Copper (Cu)	2021/10/18	104	80 - 120	98	80 - 120	ND, RDL=0.90	ug/L				
7635958	Total Lead (Pb)	2021/10/18	97	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L				
7635958	Total Manganese (Mn)	2021/10/18	94	80 - 120	94	80 - 120	ND, RDL=2.0	ug/L	0.89	20		
7635958	Total Molybdenum (Mo)	2021/10/18	100	80 - 120	91	80 - 120	ND, RDL=0.50	ug/L				
7635958	Total Nickel (Ni)	2021/10/18	95	80 - 120	94	80 - 120	ND, RDL=1.0	ug/L				
7635958	Total Phosphorus (P)	2021/10/18	93	80 - 120	91	80 - 120	ND, RDL=100	ug/L				
7635958	Total Selenium (Se)	2021/10/18	89	80 - 120	99	80 - 120	ND, RDL=2.0	ug/L				
7635958	Total Silver (Ag)	2021/10/18	97	80 - 120	93	80 - 120	ND, RDL=0.090	ug/L				
7635958	Total Tin (Sn)	2021/10/18	102	80 - 120	93	80 - 120	ND, RDL=1.0	ug/L				
7635958	Total Titanium (Ti)	2021/10/18	99	80 - 120	90	80 - 120	ND, RDL=5.0	ug/L				
7635958	Total Zinc (Zn)	2021/10/18	96	80 - 120	95	80 - 120	ND, RDL=5.0	ug/L				
7641987	Total Oil & Grease	2021/10/17			98	85 - 115	ND, RDL=0.50	mg/L	1.3	25		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7641988	Total Oil & Grease Mineral/Synthetic	2021/10/17			95	85 - 115	ND, RDL=0.50	mg/L	1.6	25		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Due to a high concentration of NOx, the sample required dilution. The detection limit was adjusted accordingly.

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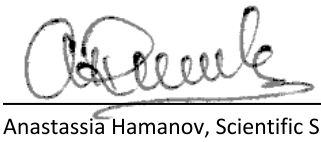
Bureau Veritas Job #: C1T2443
Report Date: 2021/10/19

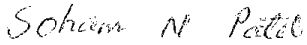
exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your P.O. #: ENV-BRM
Sampler Initials: TM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist



Soham Patel, Analyst 2

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

MICRO

Bureau Veritas Laboratories
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel (905) 817-5700 Toll-free 800-563-6266 Fax (905) 817-5777 www.bvlabs.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#30554 exp Services Inc	Company Name:	EXP Services Inc	Quotation #:	B91717	BV Labs Job #:	Bottle Order #: 828273
Attention:	Central Services	Attention:	Francois Chartier	P.O. #:	ENV-BRM		
Address:	1595 Clark Blvd Brampton ON L6T 4V1	Address:	Thabiso.Modise@exp.com Jeffrey.Leon@exp.com	Project:	BRM-00607375	COC #: C#828273-05-01	Project Manager: Patricia Legette
Tel:	(905) 793-9800 Fax: (905) 793-0641	Tel:	(905) 793-9800 Ext: 2523 Fax:	Project Name:	230 The Donway		
Email:	AP@exp.com; Karen.Burke@exp.com	Email:	Francois.Chartier@exp.com	Site #:			
				Sampled By:	Thabiso Modise		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BV LABS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☑ Sanitary Sewer Bylaw
- ☐ Reg 558 ☑ Storm Sewer Bylaw
- ☐ MISA Municipality TORONTO
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Field Filtered (please circle): Metals / Hg / Cr VI

Toronto Sanitary & Storm Sewer Package ✓

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☑
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	# of Bottles	Comments
1		BH 106	7/Oct/2021	11:00	GW	19	PLEASE MEET 5 DAY TAT
2							PLEASE INCLUDE COC IN CERTIFICATE OF ANALYSIS
3							
4							
5							
6							
7							
8							
9							
10							

07-Oct-21 19:16
Patricia Legette
C1T2443
ATM ENV-1500

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
THABISO MODISE	21/10/07		Cidhi.my VIDHI BHAKTA	2021/10/07	19:16	

Laboratory Use Only COC

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	10/12/10	Present	✓	
		Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVLABS.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C1T2443
Report Date: 2021/10/19

exp Services Inc
Client Project #: BRM-00607375
Site Location: 230 THE DONWAY
Your P.O. #: ENV-BRM
Sampler Initials: TM

Exceedance Summary Table – Toronto Sanitary Sewer

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

Exceedance Summary Table – Toronto Storm Sewer

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH106	QWN927-07	Total Manganese (Mn)	50	65	2.0	ug/L

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

09-Aug-19 16:46

Christine Gripton

B9M1129

KFL ENV-1233

Presence of Visible Particulate/Sediment

Maxxam Analytics
CAM FCD-01013/5

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

Bottle Types

			Inorganics					Organics										Hydrocarbons							Volatiles				Other
	Sample ID	All	CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/ Herb 1 of 2	Pest/ Herb 2 of 2	SVOC/ ABN 1 of 2	SVOC/ ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin /Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2	VOC Vial 3	VOC Vial 4	
1	MW 6	TS																										
2	MW 66	TS																										
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												

Comments: Except metals bottle, and mercury

Legend:	
P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print) KATE FLEMMING

Maxxam
A Bureau Veritas Group Company

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/4

CHAIN OF CUSTODY RECORD 132475 Page 1 of 1

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: EXP	Company Name:	Quotation #:	[X] Regular TAT (5-7 days) Most analyses
Contact Name: Samuel Lee	Contact Name:	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	Address:	Project #: B&M-00607375-A0	Rush TAT (Surcharges will be applied)
Phone: Fax:	Phone: Fax:	Site Location: 230 The Donway W.	[ ] 1 Day [ ] 2 Days [ ] 3-4 Days
Email: Samuel.Lee@exp.com	Email: Andrew.Niedzialek@exp.com	Site #:	Date Required:
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE MAXXAM DRINKING WATER CHAIN OF CUSTODY		Site Location Province:	Rush Confirmation #:
		Sampled By:	

Regulation 153	Other Regulations
[ ] Table 1 [X] Res/Park [ ] Med/ Fine	[ ] CCME [ ] Sanitary Sewer Bylaw
[X] Table 2 [ ] Ind/Comm [ ] Coarse	[ ] MISA [ ] Storm Sewer Bylaw
[ ] Table 3 [ ] Agri/ Other	[ ] PWQO Region
[ ] Table ____	[ ] Other (Specify)
FOR RSC (PLEASE CIRCLE) Y / N	[ ] REG 558 (MIN. 3 DAY TAT REQUIRED)

Include Criteria on Certificate of Analysis: Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) (Metals / Hg / F1-F4)	BTEX/ PHC F1	PHCs F2 - F4	VOCs	REG 153 METALS & INORGANICS	REG 153 ICPMS METALS + Hg	REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B)	HOLD- DO NOT ANALYZE
1	MW6	2019/08/09	3:00	GW	7	✓	✓	✓			✓		
2	MW6G	↓	3:00		7	✓	✓	✓			✓		
3	Trip Blank				3		✓	✓					
4													
5													
6													
7													
8													
9													
10													

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		10/9/19

COOLING MEDIA PRESENT: Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew Niedzialek	2019/08/09	4:45	[signature]	2019/08/09	1646

09-Aug-19 16:46
Christine Gripton
B9M1129
KFL ENV-1233

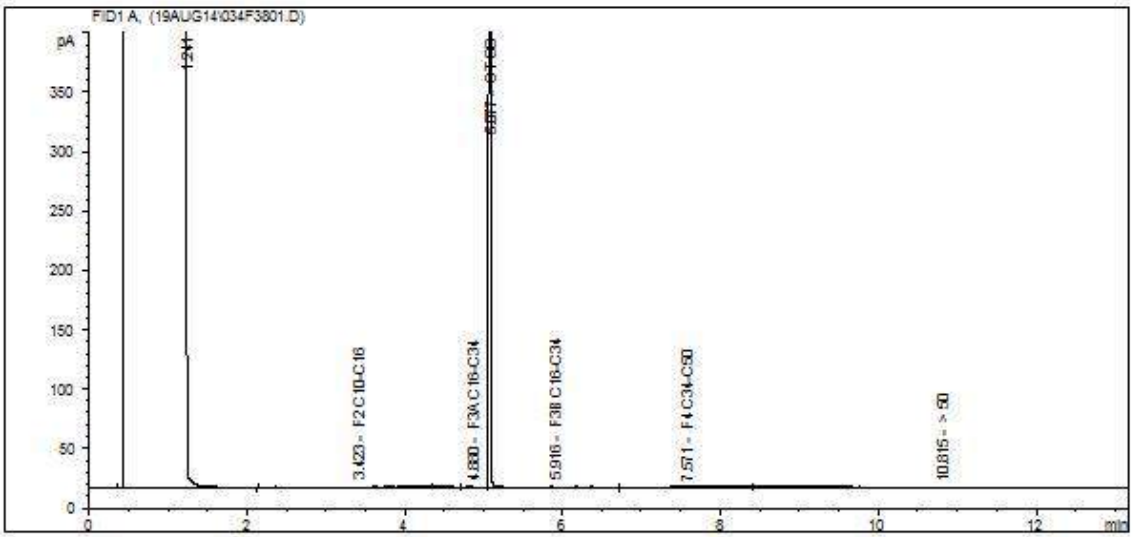
Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Maxxam's standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptance of our terms.
Sample container, preservation, hold time and packages information can be viewed at http://maxxam.ca/wp-content/uploads/Ontario-COC.pdf.

COC-1004 (01/19) White: Maxxam - Yellow: Client

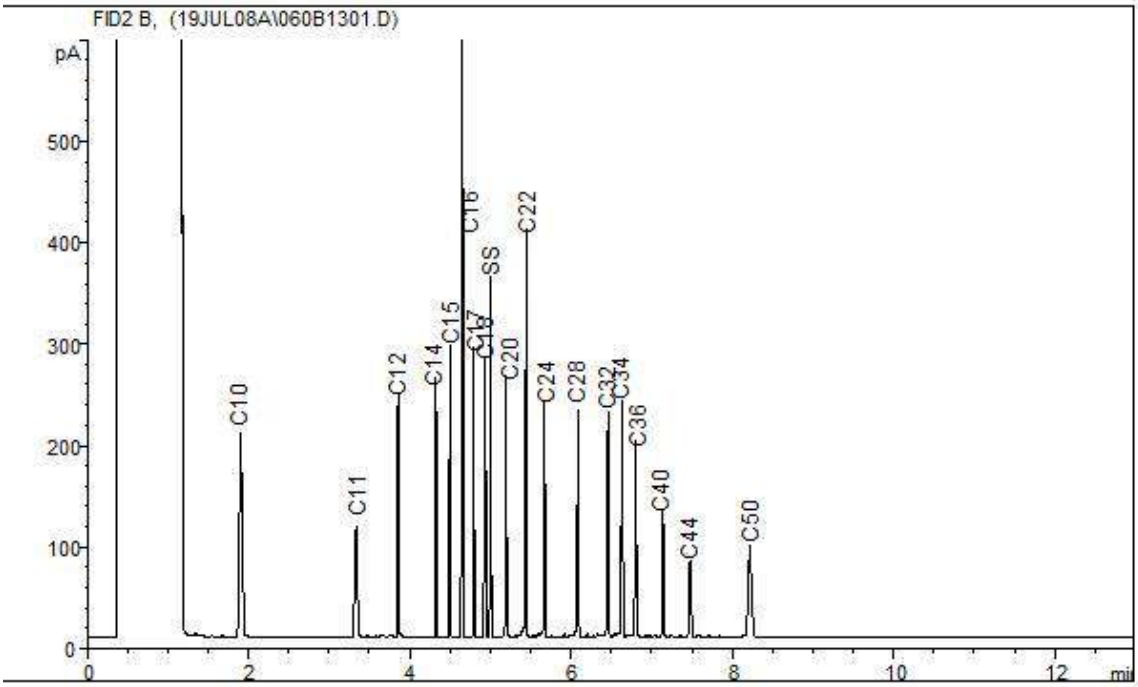
BV Labs Job #: B9M1129
Report Date: 2019/08/30
BV Labs Sample: KMF592

exp Services Inc
Client Project #: BRM-00607375-A0
Project name: 230 THE DONWAY W.
Client ID: MW6

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Reference Spectrum



TYPICAL PRODUCT CARBON NUMBER RANGES

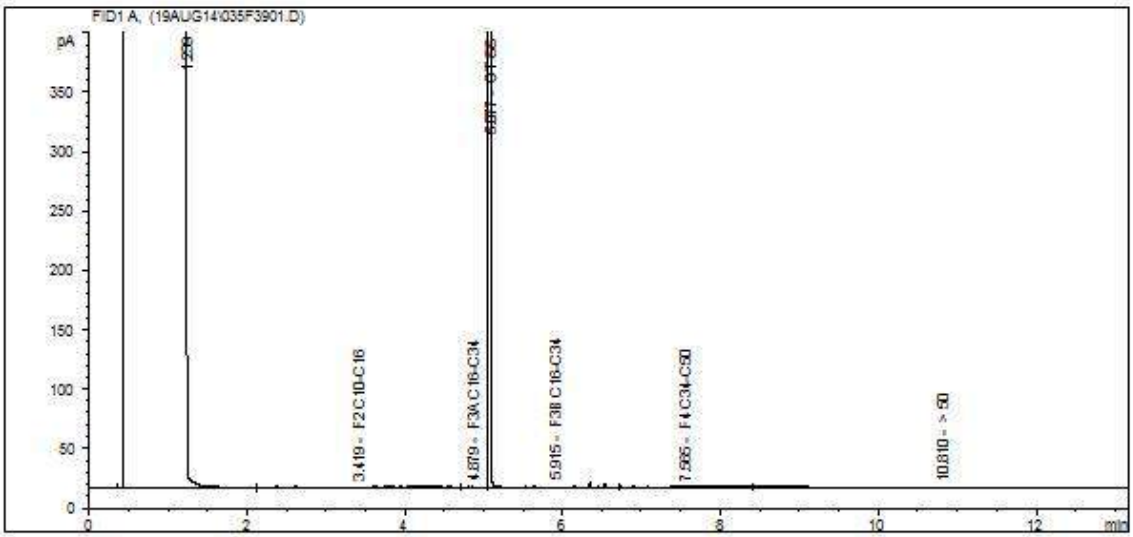
Gasoline: **C6 - C12**	Diesel: **C10 - C24**	Jet Fuels: **C6 - C16**
Varsol: **C8 - C12**	Fuel Oils: **C6 - C32**	Creosote: **C10 - C26**
Kerosene: **C8 - C16**	Motor Oils: **C16 - C50**	Asphalt: **C18 - C50+**

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

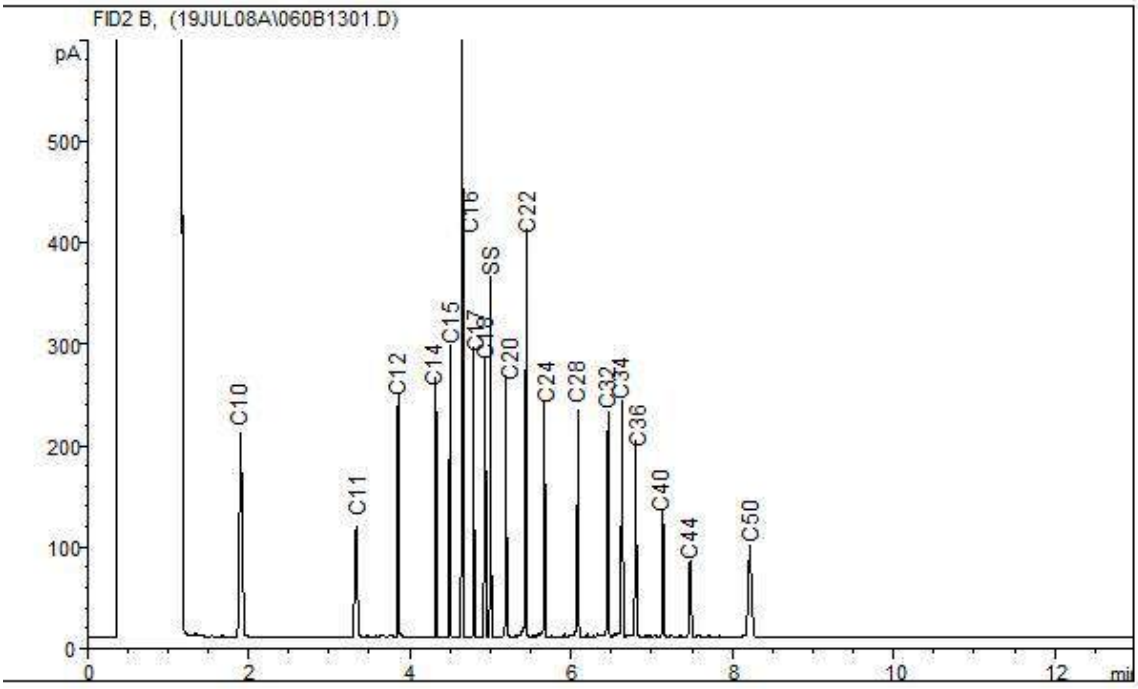
BV Labs Job #: B9M1129
Report Date: 2019/08/30
BV Labs Sample: KMF593

exp Services Inc
Client Project #: BRM-00607375-A0
Project name: 230 THE DONWAY W.
Client ID: MW66

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Reference Spectrum



TYPICAL PRODUCT CARBON NUMBER RANGES

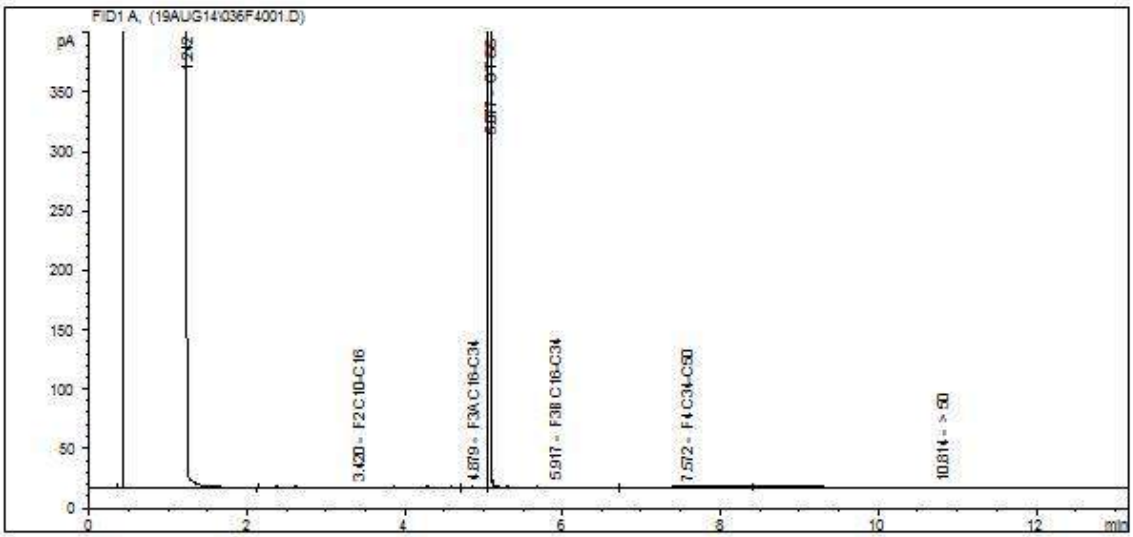
Gasoline: **C6 - C12**	Diesel: **C10 - C24**	Jet Fuels: **C6 - C16**
Varsol: **C8 - C12**	Fuel Oils: **C6 - C32**	Creosote: **C10 - C26**
Kerosene: **C8 - C16**	Motor Oils: **C16 - C50**	Asphalt: **C18 - C50+**

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

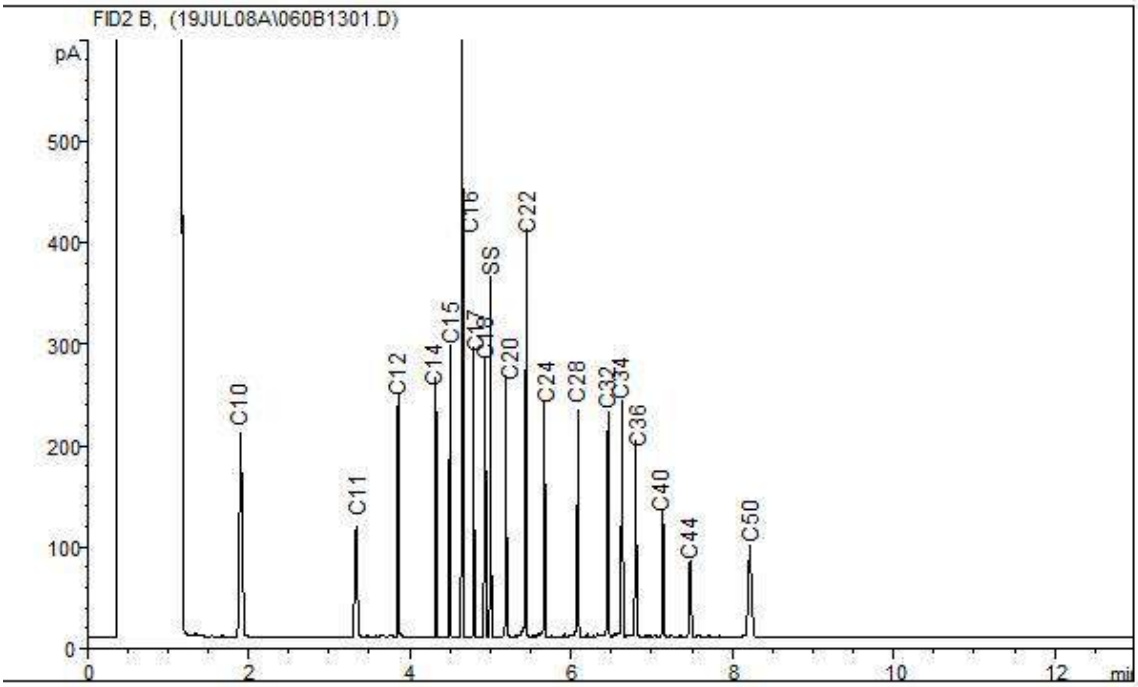
BV Labs Job #: B9M1129
Report Date: 2019/08/30
BV Labs Sample: KMF594

exp Services Inc
Client Project #: BRM-00607375-A0
Project name: 230 THE DONWAY W.
Client ID: TRIP BLANK

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Reference Spectrum



TYPICAL PRODUCT CARBON NUMBER RANGES

Gasoline: **C6 - C12**	Diesel: **C10 - C24**	Jet Fuels: **C6 - C16**
Varsol: **C8 - C12**	Fuel Oils: **C6 - C32**	Creosote: **C10 - C26**
Kerosene: **C8 - C16**	Motor Oils: **C16 - C50**	Asphalt: **C18 - C50+**

Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Your C.O.C. #: 132475

Attention: Samuel Lee

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/08/30
Report #: R5860820
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: B9M1129
Received: 2019/08/09, 16:46

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Chromium (VI) in Water	2	N/A	2019/08/14	CAM SOP-00436	EPA 7199 m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2019/08/13	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2019/08/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	3	2019/08/14	2019/08/15	CAM SOP-00316	CCME PHC-CWS m
Mercury	2	2019/08/12	2019/08/12	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	2	N/A	2019/08/15	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003”. Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Your Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Your C.O.C. #: 132475

Attention: Samuel Lee

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2019/08/30
Report #: R5860820
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: B9M1129
Received: 2019/08/09, 16:46

Encryption Key

Christine Gripton
Senior Project Manager
30 Aug 2019 12:04:50

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Christine Gripton, Senior Project Manager
Email: Christine.Gripton@bvlabs.com
Phone# (519)652-9444
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: B9M1129
Report Date: 2019/08/30

exp Services Inc
Client Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Sampler Initials: AN

O.REG 153 METALS PACKAGE (WATER)

BV Labs ID				KMF592			KMF592			KMF593		
Sampling Date				2019/08/09 15:00			2019/08/09 15:00			2019/08/09 15:00		
COC Number				132475			132475			132475		
	UNITS	**San**	**Stm**	**MW6**	**RDL**	**QC Batch**	**MW6 Lab-Dup**	**RDL**	**QC Batch**	**MW66**	**RDL**	**QC Batch**
Metals												
Chromium (VI)	ug/L	2000	40	<0.50	0.50	6274845				<0.50	0.50	6274845
Mercury (Hg)	ug/L	10	0.4	<0.1	0.1	6274323	<0.1	0.1	6274323	<0.1	0.1	6274323
Dissolved Antimony (Sb)	ug/L	5000	-	<0.50	0.50	6274547				<0.50	0.50	6274547
Dissolved Arsenic (As)	ug/L	1000	20	<1.0	1.0	6274547				<1.0	1.0	6274547
Dissolved Barium (Ba)	ug/L	-	-	290	2.0	6274547				290	2.0	6274547
Dissolved Beryllium (Be)	ug/L	-	-	<0.50	0.50	6274547				<0.50	0.50	6274547
Dissolved Boron (B)	ug/L	-	-	130	10	6274547				130	10	6274547
Dissolved Cadmium (Cd)	ug/L	700	8	<0.10	0.10	6274547				<0.10	0.10	6274547
Dissolved Chromium (Cr)	ug/L	4000	80	<5.0	5.0	6274547				<5.0	5.0	6274547
Dissolved Cobalt (Co)	ug/L	5000	-	<0.50	0.50	6274547				<0.50	0.50	6274547
Dissolved Copper (Cu)	ug/L	2000	40	3.1	1.0	6274547				1.2	1.0	6274547
Dissolved Lead (Pb)	ug/L	1000	120	<0.50	0.50	6274547				<0.50	0.50	6274547
Dissolved Molybdenum (Mo)	ug/L	5000	-	2.2	0.50	6274547				2.1	0.50	6274547
Dissolved Nickel (Ni)	ug/L	2000	80	<1.0	1.0	6274547				<1.0	1.0	6274547
Dissolved Selenium (Se)	ug/L	1000	20	<2.0	2.0	6274547				<2.0	2.0	6274547
Dissolved Silver (Ag)	ug/L	5000	120	<0.10	0.10	6274547				<0.10	0.10	6274547
Dissolved Thallium (Tl)	ug/L	-	-	<0.050	0.050	6274547				<0.050	0.050	6274547
Dissolved Uranium (U)	ug/L	-	-	0.72	0.10	6274547				0.65	0.10	6274547
Dissolved Vanadium (V)	ug/L	-	-	1.2	0.50	6274547				1.2	0.50	6274547
Dissolved Zinc (Zn)	ug/L	2000	40	5.3	5.0	6274547				<5.0	5.0	6274547

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
San,Stm: Toronto Sanitary and Storm Sewer Use By Law Guidelines, respectively. Referenced to Chapter 681

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: B9M1129
Report Date: 2019/08/30

exp Services Inc
Client Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Sampler Initials: AN

O.REG 153 PHCS, BTEX/F1-F4 (WATER)

BV Labs ID				KMF592	KMF593	KMF594		
Sampling Date				2019/08/09 15:00	2019/08/09 15:00			
COC Number				132475	132475	132475		
	UNITS	**San**	**Stm**	**MW6**	**MW66**	**TRIP BLANK**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons								
Benzene	ug/L	10	2	1.4	1.3	<0.20	0.20	6276929
Toluene	ug/L	16	2	<0.20	<0.20	<0.20	0.20	6276929
Ethylbenzene	ug/L	160	2	1.4	1.5	<0.20	0.20	6276929
o-Xylene	ug/L	1400	4.4	<0.20	<0.20	<0.20	0.20	6276929
p+m-Xylene	ug/L	1400	4.4	<0.40	<0.40	<0.40	0.40	6276929
Total Xylenes	ug/L	1400	4.4	<0.40	<0.40	<0.40	0.40	6276929
F1 (C6-C10)	ug/L	-	-	<25	<25	<25	25	6276929
F1 (C6-C10) - BTEX	ug/L	-	-	<25	<25	<25	25	6276929
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	-	-	<100	<100	<100	100	6279824
F3 (C16-C34 Hydrocarbons)	ug/L	-	-	<200	<200	<200	200	6279824
F4 (C34-C50 Hydrocarbons)	ug/L	-	-	<200	<200	<200	200	6279824
Reached Baseline at C50	ug/L	-	-	Yes	Yes	Yes		6279824
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	-	-	101	100	102		6276929
4-Bromofluorobenzene	%	-	-	97	99	98		6276929
D10-Ethylbenzene	%	-	-	99	100	99		6276929
D4-1,2-Dichloroethane	%	-	-	99	99	99		6276929
o-Terphenyl	%	-	-	111	112	112		6279824

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
San,Stm: Toronto Sanitary and Storm Sewer Use By Law Guidelines, respectively. Referenced to Chapter 681

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BV Labs Job #: B9M1129
Report Date: 2019/08/30

exp Services Inc
Client Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Sampler Initials: AN

TEST SUMMARY

BV Labs ID: KMF592
Sample ID: MW6
Matrix: Water

Collected: 2019/08/09
Shipped:
Received: 2019/08/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	6274845	N/A	2019/08/14	Lang Le
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	6276929	N/A	2019/08/13	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	6279824	2019/08/14	2019/08/15	Prabhjot Gulati
Mercury	CV/AA	6274323	2019/08/12	2019/08/12	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	6274547	N/A	2019/08/15	Matthew Ritenburg

BV Labs ID: KMF592 Dup
Sample ID: MW6
Matrix: Water

Collected: 2019/08/09
Shipped:
Received: 2019/08/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury	CV/AA	6274323	2019/08/12	2019/08/12	Ron Morrison

BV Labs ID: KMF593
Sample ID: MW66
Matrix: Water

Collected: 2019/08/09
Shipped:
Received: 2019/08/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	6274845	N/A	2019/08/14	Lang Le
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	6276929	N/A	2019/08/14	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	6279824	2019/08/14	2019/08/15	Prabhjot Gulati
Mercury	CV/AA	6274323	2019/08/12	2019/08/12	Ron Morrison
Dissolved Metals by ICPMS	ICP/MS	6274547	N/A	2019/08/15	Matthew Ritenburg

BV Labs ID: KMF594
Sample ID: TRIP BLANK
Matrix: Water

Collected:
Shipped:
Received: 2019/08/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	6276929	N/A	2019/08/14	Haibin Wu
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	6279824	2019/08/14	2019/08/15	Prabhjot Gulati

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BV Labs Job #: B9M1129
Report Date: 2019/08/30

exp Services Inc
Client Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Sampler Initials: AN

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.7°C

Revised report [2019/08/30]: Includes Toronto Sewer Use bylaw criteria.

Results relate only to the items tested.

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BV Labs Job #: B9M1129
Report Date: 2019/08/30

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Sampler Initials: AN

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6276929	1,4-Difluorobenzene	2019/08/13	98	70 - 130	100	70 - 130	101	%		
6276929	4-Bromofluorobenzene	2019/08/13	100	70 - 130	99	70 - 130	97	%		
6276929	D10-Ethylbenzene	2019/08/13	100	70 - 130	103	70 - 130	102	%		
6276929	D4-1,2-Dichloroethane	2019/08/13	100	70 - 130	101	70 - 130	101	%		
6279824	o-Terphenyl	2019/08/15	109	60 - 130	107	60 - 130	110	%		
6274323	Mercury (Hg)	2019/08/12	96	75 - 125	105	80 - 120	<0.1	ug/L	NC	20
6274547	Dissolved Antimony (Sb)	2019/08/15	106	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
6274547	Dissolved Arsenic (As)	2019/08/15	102	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
6274547	Dissolved Barium (Ba)	2019/08/15	104	80 - 120	103	80 - 120	<2.0	ug/L	0.49	20
6274547	Dissolved Beryllium (Be)	2019/08/15	103	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
6274547	Dissolved Boron (B)	2019/08/15	107	80 - 120	107	80 - 120	<10	ug/L	4.7	20
6274547	Dissolved Cadmium (Cd)	2019/08/15	103	80 - 120	99	80 - 120	<0.10	ug/L	NC	20
6274547	Dissolved Chromium (Cr)	2019/08/15	101	80 - 120	100	80 - 120	<5.0	ug/L	NC	20
6274547	Dissolved Cobalt (Co)	2019/08/15	99	80 - 120	98	80 - 120	<0.50	ug/L	NC	20
6274547	Dissolved Copper (Cu)	2019/08/15	104	80 - 120	103	80 - 120	<1.0	ug/L	NC	20
6274547	Dissolved Lead (Pb)	2019/08/15	95	80 - 120	95	80 - 120	<0.50	ug/L	NC	20
6274547	Dissolved Molybdenum (Mo)	2019/08/15	109	80 - 120	102	80 - 120	<0.50	ug/L	3.8	20
6274547	Dissolved Nickel (Ni)	2019/08/15	98	80 - 120	98	80 - 120	<1.0	ug/L	4.2	20
6274547	Dissolved Selenium (Se)	2019/08/15	101	80 - 120	100	80 - 120	<2.0	ug/L	NC	20
6274547	Dissolved Silver (Ag)	2019/08/15	97	80 - 120	98	80 - 120	<0.10	ug/L	NC	20
6274547	Dissolved Thallium (Tl)	2019/08/15	95	80 - 120	94	80 - 120	<0.050	ug/L	NC	20
6274547	Dissolved Uranium (U)	2019/08/15	91	80 - 120	90	80 - 120	<0.10	ug/L	8.2	20
6274547	Dissolved Vanadium (V)	2019/08/15	104	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
6274547	Dissolved Zinc (Zn)	2019/08/15	100	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
6274845	Chromium (VI)	2019/08/14	103	80 - 120	105	80 - 120	<0.50	ug/L	NC	20
6276929	Benzene	2019/08/13	95	70 - 130	102	70 - 130	<0.20	ug/L	NC	30
6276929	Ethylbenzene	2019/08/13	92	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
6276929	F1 (C6-C10) - BTEX	2019/08/13					<25	ug/L	NC	30
6276929	F1 (C6-C10)	2019/08/13	85	70 - 130	98	70 - 130	<25	ug/L	NC	30
6276929	o-Xylene	2019/08/13	89	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
6276929	p+m-Xylene	2019/08/13	92	70 - 130	97	70 - 130	<0.40	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
6276929	Toluene	2019/08/13	91	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
6276929	Total Xylenes	2019/08/13					<0.40	ug/L	NC	30
6279824	F2 (C10-C16 Hydrocarbons)	2019/08/15	97	50 - 130	93	60 - 130	<100	ug/L	NC	30
6279824	F3 (C16-C34 Hydrocarbons)	2019/08/15	101	50 - 130	99	60 - 130	<200	ug/L	NC	30
6279824	F4 (C34-C50 Hydrocarbons)	2019/08/15	112	50 - 130	108	60 - 130	<200	ug/L	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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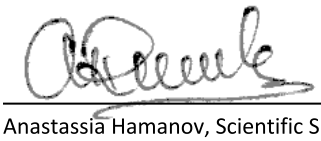
BV Labs Job #: B9M1129
Report Date: 2019/08/30

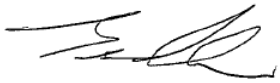
exp Services Inc
Client Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Sampler Initials: AN

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).



Anastassia Hamanov, Scientific Specialist



Brad Newman, Scientific Service Specialist

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BV Labs Job #: B9M1129
Report Date: 2019/08/30

exp Services Inc
Client Project #: BRM-00607375-A0
Site Location: 230 THE DONWAY W.
Sampler Initials: AN

Exceedence Summary Table – Toronto San/Stm Sewer

Result Exceedences

Sample ID	BV Labs ID	Parameter	Criteria	Result	DL	Units
No Exceedences						

The exceedence summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.

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EXP Services Inc.

Project Number: BRM- 00607375-A0
Date: September 23, 2019
Revision 1: May 28, 2021
Revision 2: October 20, 2021
Revision 3: January 13, 2022
Revision 4: October 31, 2023

Appendix E – Construction (Short-Term) and Post-Constrcution (Long-Term) Flow Rate Calculations

APPENDIX E: Short-Term and Long-Term Flow Rates

230 The Donway West, Toronto, ON
BRM-00607375-A0

Table E-1: Flow from Open Excavation and Under-Slab Drain System P3 P3

Parameters	Symbols	Unit	Short-Term	Long-Term
Geological Formation	-	-	Glacial Deposit	Glacial Deposit
Ground Elevation	-	mASL	142.85	142.85
Highest Groundwater Elevation	-	mASL	142.01	142.01
Lowest Slab Elevation	-	mASL	133.30	133.30
Lowest Footing Elevation	-	mASL	131.80	136.00
Base of the Water-Bearing Zone	-	mASL	128.00	128.00
Height of Static Water Table Above the Base of the Water-Bearing Zone	**H**	m	14.01	14.01
Dewatering Target Elevation	-	mASL	130.80	132.80
Height of Target Water Level Above the Base of Water-Bearing Zone	**h_w**	m	2.80	4.80
Dupuit Criteria	**Hw/H**	%	20%	34%
Hydraulic Conductivity	**K**	m/s	1.5E-07	1.5E-07
Length of Excavation	-	m	156	156
Width of Excavation	-	m	65	65
Equivalent Radius (equivalent perimeter)	**r_e**	m	70	70
Method to Calculate Radius of Influence	-	-	**Cooper-Jacob**	**Cooper-Jacob**
Time (30 days for Short-Term and 3 years for Long-Term)	**t**	s	2592000	126144000
Specific Yield	**Sy**		0.20	0.05
Cooper-Jacob's Radius of Influence from Sides of Excavation	**Rcj**	m	8	109
Radius of Influence	**Ro**	m	78	180
Dewatering Flow Rate (unconfined radial flow component)	**Q**	m^3/day	73	8
Factor of Safety	**fs**	-	2.00	1.50
Dewatering Flow Rate (multiplied by factor of safety)	**Q.fs**	m^3/day	145	11
Precipitation Event	-	mm/day	15	-
Volume from Precipitation	-	m^3/day	152	-
Dewatering Flow Rate **Without Safety Factor** (including stormwater collection)	-	m^3/day	225	-
Dewatering Flow Rate **With Safety Factor** (including stormwater collection)	-	m^3/day	298	-

Notes:
mASL - meters above sea level

Analytical Solution for Estimating Radial Flow from an Unconfined Aquifer to a Fully-Penetrating Excavation

$$Q_w = \frac{\pi K(H^2 - h^2)}{Ln\,[\frac{R_o}{r_e}]}$$

(Based on the Dupuit-Forcheimer Equation)

$$r_e = \frac{a+b}{\pi} \qquad R_o = R_{cj} + r_e \qquad R_{cj} = \sqrt{2.25KDt/S}$$

Where:

Q_w = Flow rate per unit length of excavation (m^3/s)

K = Hydraulic conductivity (m/s)

H = Height of static water table above base of water-bearing zone (m)

h_w = Height of target water level above the base of water-bearing zone (m)

Rcj=Cooper Jacob Radius of Influence (m)

R_o=Radius of influence (m)

re=Equivalent perimeter (m)

S=Storativity

Appendix F – Architectural Drawings

230 AND 240 THE DONWAY WEST

OFFICIAL PLAN AMENDMENT AND REZONING APPLICATION
OCTOBER 24TH, 2023

A100	CONTEXT PLAN & STATISTICS
A101	SITE PLAN
A201	P3 PARKING PLAN
A202	P2 PARKING PLAN
A203	WALKOUT UNITS & P1 PARKING PLAN
A301	GROUND FLOOR PLAN
A302	2ND FLOOR PLAN
A303	3RD FLOOR PLAN
A304	4TH FLOOR PLAN
A305	5TH FLOOR PLAN
A306	6TH FLOOR PLAN
A401	NORTH & WEST ELEVATION
A402	SOUTH & EAST ELEVATION
A502	BUILDING SECTION
A503	BUILDING SECTION

architecture unfolded

tel: (416) 601.5416 info@unfolded.co

368 dufferin street toronto, on. M6K 1Z8

CLIENT:

DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

468 QUEEN ST. E,
TORONTO, ON,
M5A 1T7

TEL.: 416 340 8100

ARCHITECT:

ARCHITECTURE UNFOLDED

368 DUFFERIN ST.
TORONTO, ONTARIO
M6K 1Z8

TEL: 416.601.5416

HERITAGE ARCHITECT:

ERA ARCHITECTS INC.

625 CHURCH ST.,
SUITE 600, TORONTO
ON, M5A 3S5

TEL.: 416 340 8100

PLANNING:

BOUSFIELDS INC

3 CHURCH ST.,
TORONTO, ON,
M5E 1M2

TEL.: 416 947 9744

LANDSCAPE ARCHITECT:

O2 DESIGN (FORMELY NAK DESIGN GROUP)

400 RICHMOND ST E.,
TORONTO, ON,
M5A 3S5

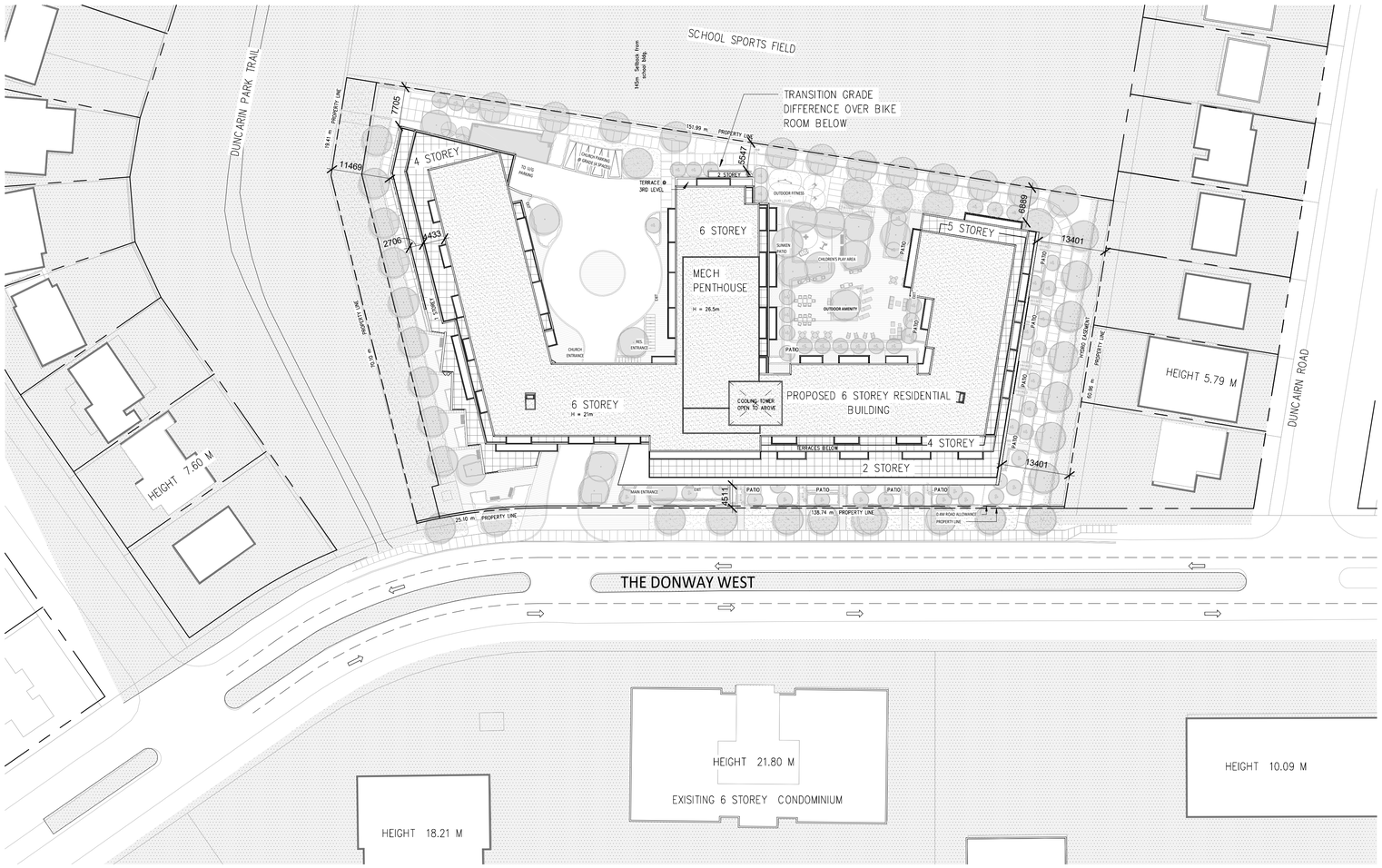
TEL.: 416 340 8100

SITE SERVICES:

EXP

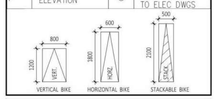
220 COMMERCE VALLEY
DRIVE WEST - SUITE 110
MARKHAM, ON, L3T 0A8

TEL.: 905 695 3217

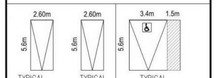


LEGEND

▽	BUILDING ENTRANCE	CB	CATCH BASIN
▲	EXIT	H.P.	HYDRO POLE
♿	HANDICAPPED PARKING	MH	MANHOLE
145.00	EXISTING ELEVATION	F.H.	FIRE HYDRANT
144.50	PROPOSED ELEVATION	B.B.	BOLLARD LIGHT REFER TO ELEC DWGS



PARKING LEGEND



SURVEY DATA

PLAN OF SURVEY AND TOPOGRAPHY OF BLOCK B, REGISTERED PLAN 4332, CITY OF TORONTO (FORMERLY CITY OF NORTH YORK), BEING ALL OF PIN 10117–0318

PREPARED BY : J D BARNES LTD., 140 RENFREW DRIVE, SUITE 100, MARKHAM, ON L3R 6B3 (905) 477–3882 JULY 15, 2019

PROJECT # 1816

STATISTICS — 230 AND 240 THE DONWAY WEST

1. ZONING					
2. SITE AREA		10,268.00 m2	110,523.73 ft2	2.54	ACRES
	PARK DEDICATION	513.42 m2	5,526.18 ft2		
	0.4M ROAD ALLOWANCE	47.00 m2	505.90 ft2		
	NET SITE AREA (INCLUDES 187 m2 HYDRO EASEMENT)	9,707.58 m2	104,491.42 ft2	2.40	ACRES
	TOTAL SITE AREA	10,268.00 m2	110,523.73 ft2	2.54	ACRES
3. ESTABLISHED GRADE		141.69 m	(AVERAGE GRADE AS PER BY-LAW)		

4. PROPOSED BUILDING:

GFA	22,390.8 m2		241,011.8 ft2
BUILDING AREA	3,850.25 m2		41,443.71 ft2
DENSITY	2.18	FSI (GFA / SA)	
UNITS	308		

PROPOSED UNIT TYPE	BACH.	1B	1B+D	2B	2B+D	3B	Podium towns (Included in 3B)	TOTAL
	11	57	92	65	51	32	-	308
TOTAL	**11**	**57**	**92**	**65**	**51**	**32**	**4**	**308**

PARKING	258		
AMENITY SPACE (INDOOR) 1.5m2/U	477.4 m2		5,139 ft2
AMENITY SPACE (LANDSCAPED) 1.5m2/U	SOFT+HARD SCAPED	462.0 m2	4,973 ft2

7. FLOOR AREA :

Deductions as per BY-LAW No. 569-2013(3)(ROM):
(A)parking, loading and bicycle parking below established grade;
(B)required loading spaces and required bicycle parking spaces at or above established grade;
(C)storage rooms, washrooms, electrical, utility, mechanical and ventilation rooms in the basement;
(D)shower and change facilities required by this By-law for required bicycle parking spaces;
(I)indoor amenity space required by this By-law;
(J)elevator shafts;
(G)garbage shafts;
(H)mechanical penthouse; and
(I)exit stairwells in the building.

	LEVEL	TOTAL FL. AREA (TFA)		DEDUCTIONS (AS PER BY-LAW)		GROSS FL. AREA (GFA)	
U/G PARKING	P3	1,093.0 m2	11,764.9 ft2	1,081.0 m2	11,635.8 ft2	12.0 m1	129.2 ft1
	P2	5,162.0 m2	55,563.3 ft2	5,129.0 m2	55,208.0 ft2	33.0 m2	355.2 ft2
	P1	4,778.0 m2	51,429.9 ft2	4,778.0 m2	51,429.9 ft2	0.00 m2	0.0 ft2
MECH. P.H.	MPH	434.0 m2	4,671.5 ft2	290.0 m2	3,121.5 ft2	144.0 m2	1,550.0 ft2
	SUB TOTAL	**11,467.0 m2**	123,429.6 **ft2**	**11,278.0 m2**	**121,395.3 ft2**	**189.0 m2**	**2,034.4 ft2**
U/G RES.	P1	2,089.0 m2	22,485.8 ft2	91.0 m2	979.5 ft2	**1,998.0 m2**	**21,506.3 ft2**

	LEVEL	TOTAL FL. AREA (TFA)		DEDUCTIONS (AS PER BY-LAW)		GROSS FL. AREA (GFA)	
PODIUM RES.	GF.	3,107.0 m2	33,443.4 ft2	992.0 m2	10,677.8 ft2	2,115.0 m2	22,765.6 ft2
	2ND	4,020.0 m2	43,270.9 ft2	187.0 m2	2,012.8 ft2	3,833.0 m2	41,258.0 ft2
	SUB TOTAL	**7,127.0 m2**	**76,714.3 ft2**	**1,179.0 m2**	**12,690.6 ft2**	**5,948.0 m2**	**64,023.7 ft2**

	LEVEL	TOTAL FL. AREA (TFA)		DEDUCTIONS (AS PER BY-LAW)		GROSS FL. AREA (GFA)	
PODIUM CHURCH	GF.	743.3 m2	8,000 ft2	9.00 m2	96.88 ft2	734.3 m2	7,903.4 ft2
	SUB TOTAL	**743.3 m2**	**8,000 ft2**	**9.00 m2**	**96.88 ft2**	**734.3 m2**	**7,903.4 ft2**

	LEVEL	TOTAL FL. AREA(TFA)		DEDUCTIONS (AS PER BY-LAW)		GROSS FL. AREA(GFA)	
TYP.	3RD	3,695.0 m2	39,772.6 ft2	80.0 m2	861.1 ft2	3,615.0 m2	38,911.5 ft2
	4TH	3,698.0 m2	39,804.9 ft2	80.0 m2	861.1 ft2	3,618.0 m2	38,943.8 ft2
	5TH	3,419.5 m2	36,807.2 ft2	80.0 m2	861.1 ft2	3,339.5 m2	35,946.0 ft2
	6TH	3,029.0 m2	32,603.9 ft2	80.0 m2	861.1 ft2	2,949.0 m2	31,742.7 ft2
	TOTAL	**13,841.5 m2**	**148,988.5 ft2**	**320.0 m2**	**3,444.4 ft2**	**13,521.5 m2**	**145,544.1 ft2**
RES. TOTAL		**23,057.5 m2**	**248,188.6 ft2**	**1,590.0 m2**	**17,114.6 ft2**	**21,656.5 m2**	**233,108.4 ft2**
GRAND TOTAL		**35,267.8 m2**	**379,618.5 ft2**	**12,877.0 m2**	**138,606.7 ft2**	**22,390.8 m2**	**241,011.8 ft2**

8. UNIT SUMMARY

FLOOR	BACH.	1B	1B+D	2B	2B+D	3B	INCLUDED IN 3B: Podium Towns	TOTAL
P1	2	2	2	7	4	8	0	25
GF.	0	2	10	7	2	6	4	27
2ND	1	9	21	12	5	6	0	54
3RD	0	12	21	6	12	4	0	55
4TH	0	12	21	9	8	5	0	55
5TH	4	11	9	11	10	2	0	47
6TH	4	9	8	13	10	1		45
TOTAL	**11**	**57**	**92**	**65**	**51**	**32**	**-**	**308**
	3.6%	**18.5%**	**29.9%**	**21.1%**	**16.6%**	**10.4%**	**-**	**100.0%**
CLIENT TARGET	**5.0%**	**20.0%**	**25.0%**	**25.0%**	**15.0%**	**10.0%**	**-**	**100.0%**

9. ACCESSIBLE UNITS

FLOOR	BACH.	1B	1B+D	2B	2B+D	3B	TOTAL
P1	0	0	0	0	2	0	2
GF.	0	1	2	1	1	1	6
2ND	0	1	4	1	1	1	8
3RD	0	1	3	3	2	1	10
4TH	0	1	2	3	1	1	8
5TH	0	1	2	1	1	1	6
6TH	0	1	2	1	1	1	6
TOTAL (15% for the building)	**0**	**6**	**15**	**10**	**9**	**6**	**46**

10. EFFICENCY (NSA/GFA)

11. HEIGHT (FROM AVERAGE GRADE (141.69M))
PERMITTED : TBA
MECH. P.H. (EXCL.) Max. 8.00 m FOR 40% OF ROOF AREA + Max.10.00 m FOR 25% OF ROOF AREA
PROPOSED : 6 STY. (21.31m)
MECH. P.H. (EXCL.) = 376 m2 (14% OF ROOF AREA) (5m)
ROOF AREA = 2683 m2

12. PARKING
2.6m x 5.6m SERVED BY 6m DRIVE AISLES

REQUIRED : (MAX) — BY-LAW 569-2013 (4)

BACH.	0.8 PER UNIT(	11	) =	9	
1B	0.9 PER UNIT(	149	) =	134	
2B	1 PER UNIT(	116	) =	116	
3B+	1.2 PER UNIT(	32	) =	38	
CHURCH	MAX. 6 PER 100 m2 OF WORSHIP AREA (743M2) =			44	
TOTAL				**341**	
VIS. (MIN)	0.05 PER UNIT *(	308	) + 2 =	17	

PROPOSED :

RES.	(61 ON P1 + 128 ON P2 + 29 ON P3)	=	218
VIS.	(20 ON P1)		20
CHURCH	(16 ON P1 + 4 ON SURFACE)		20
TOTAL	(includes 11 accessible parking spaces)		**258**

ELECTRICAL VEHICLE
SUPPLY EQUIPMENT (EVSE) FOR 20% OF PARKING SPACES AND MADE IN CONDUITS FOR REMAINING SPACES
REQUIRED (LEV 2 EVSE) 100% of RES & 25% of VIS = 228 — All remaining to have EV ROUGH-INS
PROPOSED : (LEV 2 EVSE) 100% of RES & 25% of VIS = 228 Provided — All remaining to have EV ROUGH-INS

Note: Vehicular parking calculations resulting in a fraction have been rounded DOWN to the nearest whole number in accordance with former City of North York By-law 7625.

13. ACCESSIBLE PARKING AS PER ZONING BY LAW (BY-LAW No. 569-2013(ROM))
REQUIRED : 11 Spaces
PROPOSED :

RES.	9
VIS.	1
CHURCH	1
TOTAL	**11**

Note: Vehicular parking calculations resulting in a fraction have been rounded DOWN to the nearest whole number in accordance with former City of North York By-law 7625.

14. LOCKERS
min. 1 locker per dwelling with min. locker area of 1.35 m2

REQUIRED :

RES.	1 PER UNIT (	308	) =	308
	(MIN. 1.35 m2 AREA PER LOCKER)			**308**

PROPOSED : (72%)

A/G	0
U/G	222
	222

15. BICYCLE
min. horizontal space : 0.6m x 1.8m W x 1.9m H (clearance)
min. vertical space : 0.5m L x 1.2m W x 1.9m H (clearance)
min. 1 m2 for maintenance and repair area

REQUIRED :

RETAIL				
SHORT TERM	(0.25/100m2 +3)			0
LONG TERM	(0.13/100m2)			0
RESIDENTIAL				
SHORT TERM	0.07 PER UNIT (	308	) =	22
LONG TERM	0.68 PER UNIT (	308	) =	210
	15% (32 spaces) of long term spaces with 120V OUTLET			**232**

PROPOSED :

RETAIL		
SHORT TERM		0
LONG TERM		0
RESIDENTIAL		
SHORT TERM	(Ground Floor)	22
LONG TERM	**(120 Ground Floor + 90 P1)**	210
	15% (32 spaces) of long term spaces with 120V OUTLET	**232**

Note: Bicycle parking calculations resulting in a fraction have been rounded UP to the next whole number in accordance with former City of North York By-law 7625.

Note: If the requirements for Short-Term bicycle parking spaces is more than 10, at least 50% of the required short-term bicycle parking spaces must be located in a bicycle parking area at grade in accordance with City of Toronto By-law 569-2013(ROM) Section 2.7.

16. INDOOR AMENITY
TOTAL
REQUIRED : RES. 2 m2 / UNIT (308) = (m2) **616**
PROPOSED : 1.55 m2 / U — **477.40** m2 — **5,138.69** ft2

BREAKDOWN

P1	76.00 m2	818.06 ft2
GROUND FL.	383.40 m2	4,126.88 ft2
2ND FL.	18.00 m2	193.75 ft2
	477.40 m2	5,138.69 ft2

PART OF GFA — AMENITY INCL. IN GFA: 477.40 m2 — 5,138.69 ft2

17. OUTDOOR AMENITY
TOTAL
REQUIRED : RES. 2 m2 / UNIT (308) = (m2) **616**
PROPOSED : 1.50 m2 / U — **462.00** m2 — **4,972.92** ft2

BREAKDOWN

OUTDOOR AMENITY	383.00 m2	4,122.57 ft2
KIDS SPACE	99.00 m2	1,065.63 ft2
OUTDOOR WORKOUT	67.00 m2	721.18 ft2
	m2	ft2
	549.00 m2	5,909.38 ft2

18. LANDSCAPED OPEN SPACE (MIN. 30% (OPEN SPACE OF SA))

REQUIRED :

SITE AREA	10,268.00	m2	
REQUIRED OPEN SPACE ON SITE	30.0%		
TOTAL	**3,080.40**	m2	

PROPOSED :

SITE AREA	10,268.00	m2
PROVIDED OPEN SPACE ON SITE	45.6%	
TOTAL	**4,680.2**	m2

SOFTSCAPE
HARDSCAPE
TOTAL

SOFTSCAPE	N/A	m2
HARDSCAPE	N/A	m2
TOTAL	N/A	m2

SOFTSCAPE	2,660.69	m2
HARDSCAPE	1,736.69	m2
TOTAL	4,398.0	m2

19. REFUSE
REQUIRED :

GARBAGE ROOM AREA	66	m2
BULK AREA	10	m2
BIN STAGING AREA	31	m2

PROVIDED :

GARBAGE ROOM AREA (P1 LEVEL)	76	m2
BULK AREA	54	m2
BIN STAGING AREA	58	m2

20. LOADING SPACES
REQUIRED : 1-TYPE G (13m L X 4m W X 6.1m H)
PROPOSED : 1-TYPE G (13m L X 4m W X 6.1m H)

notes:

12	ISSUED FOR REZONING	2023.10.24
11	ISSUED FOR REZONING	2022.03.09
10	DRAFT REZONING SUBMISSION	2022.01.18
9	DRAFT REZONING SUBMISSION	2021.05.21
8	SUBMISSION FOR CONSULTANTS COORDINATION	2021.04.20
7	SUBMISSION FOR CONSULTANTS COORDINATION	2021.01.21
6	SUBMISSION FOR CONSULTANTS COORDINATION	2020.12.23
5	ISSUED FOR CLIENT REVIEW	2020.11.27
4	PRE-APPLICATION CONSUTATION WITH COMMUNITY PLANNING	2019.11.08
3	ISSUED FOR CLIENT	2019.10.20
2	ISSUED FOR CLIENT REVIEW	2019.09.30
1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architecture unfolded
tel: (416) 601 5416 info@unfolded.ca
368 dufferin street, toronto, on. M6K 1Z8

architectural team :
Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

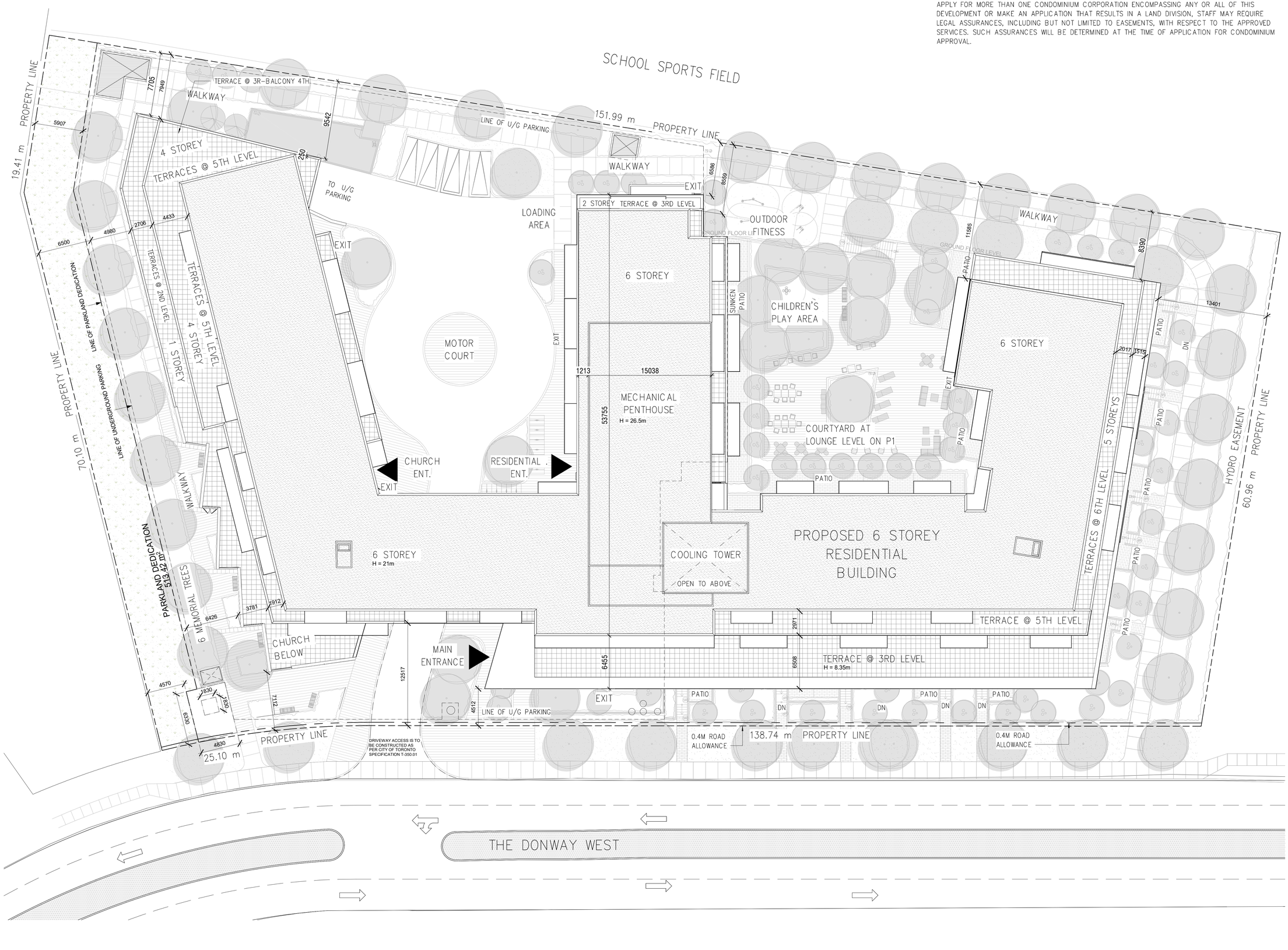
CONTEXT PLAN & STATISTICS

2023.10.24	date:
1 : 500	scale:
18-16	project:
Author	drawn by:

true north / project north

drawning number: A100

NOTE: BE ADVISED THAT SHOULD ANY PARTY, INCLUDING THE OWNER OR ANY SUBSEQUENT OWNER, APPLY FOR MORE THAN ONE CONDOMINIUM CORPORATION ENCOMPASSING ANY OR ALL OF THIS DEVELOPMENT OR MAKE AN APPLICATION THAT RESULTS IN A LAND DIVISION, STAFF MAY REQUIRE LEGAL ASSURANCES, INCLUDING BUT NOT LIMITED TO EASEMENTS, WITH RESPECT TO THE APPROVED SERVICES. SUCH ASSURANCES WILL BE DETERMINED AT THE TIME OF APPLICATION FOR CONDOMINIUM APPROVAL.



notes:

architecture unfolded

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368 dufferin street toronto, on M6K 1Z8

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revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

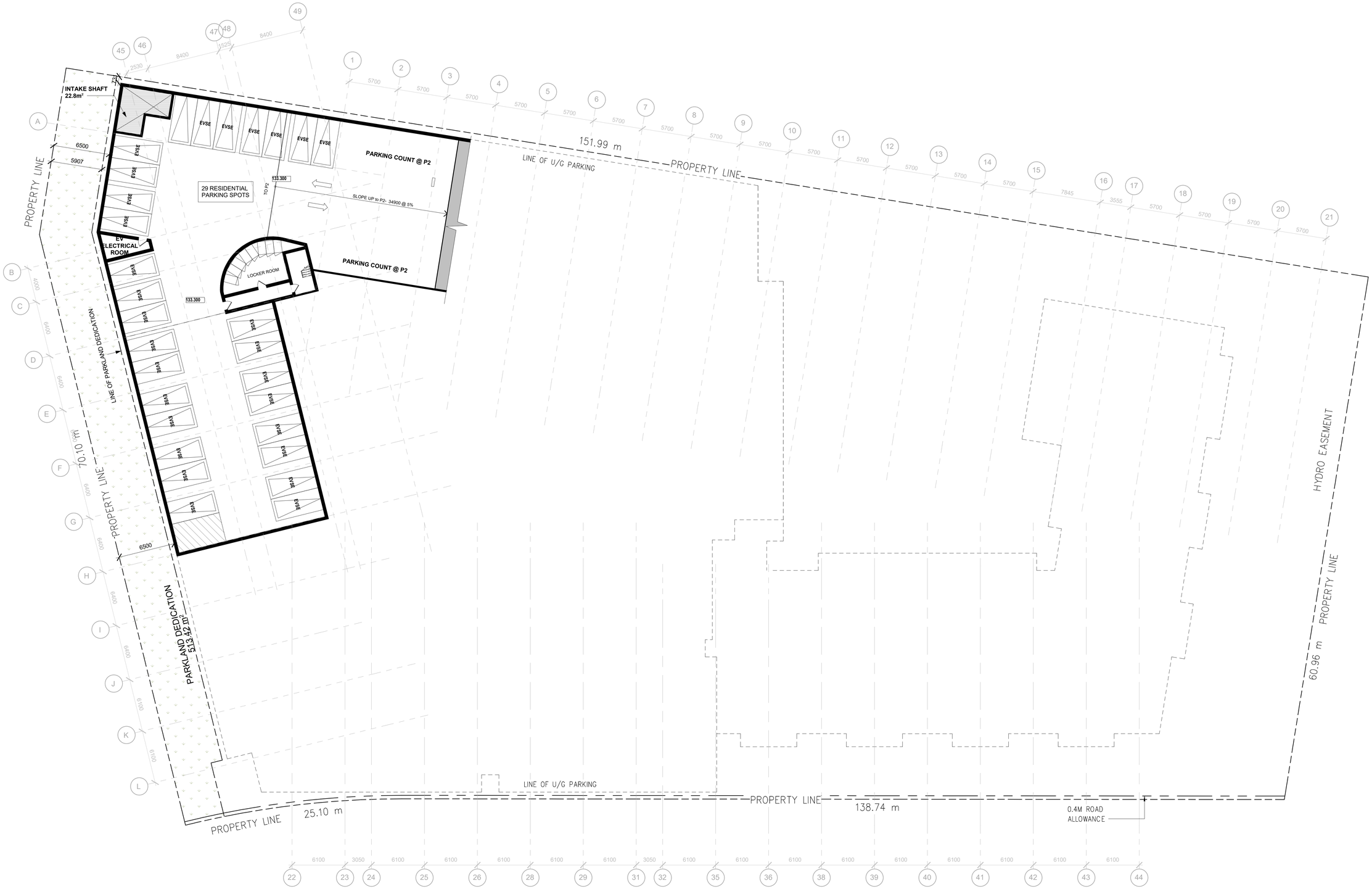
project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

SITE PLAN

2023.10.24 date:
1 : 200 scale:
18-16 project:
Author drawn by:

true north
project north

drawning number:
A101



P3 Total Parking
29

notes:

1. All residential parking spaces provided for dwelling units located in an apartment building, mixed use building, multiple dwelling unit building, excluding visitor parking spaces, will include an energized outlet capable of providing Level 2 charging or higher to the parking space. Specify which strategy is used: a dedicated electrical outlet, receptacle, or EVSE supplied by a separate branch circuit or using Electric Vehicle Energy Management Systems (EVEMS) load sharing technologies.
2. Level 2 Charging means a Level 2 electric vehicle charging level as defined by SAE International's J1772 standard, as amended (208V to 240V single-phase power, with maximum current of 80A).
3. 25% of all visitor residential spaces and non-residential parking spaces in a building must include an energized outlet capable of providing Level 2 charging or higher.
4. Energized Outlet means a connected point in an electrical wiring installation at which current is taken to supply utilization equipment for electric vehicle charging.

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owner:
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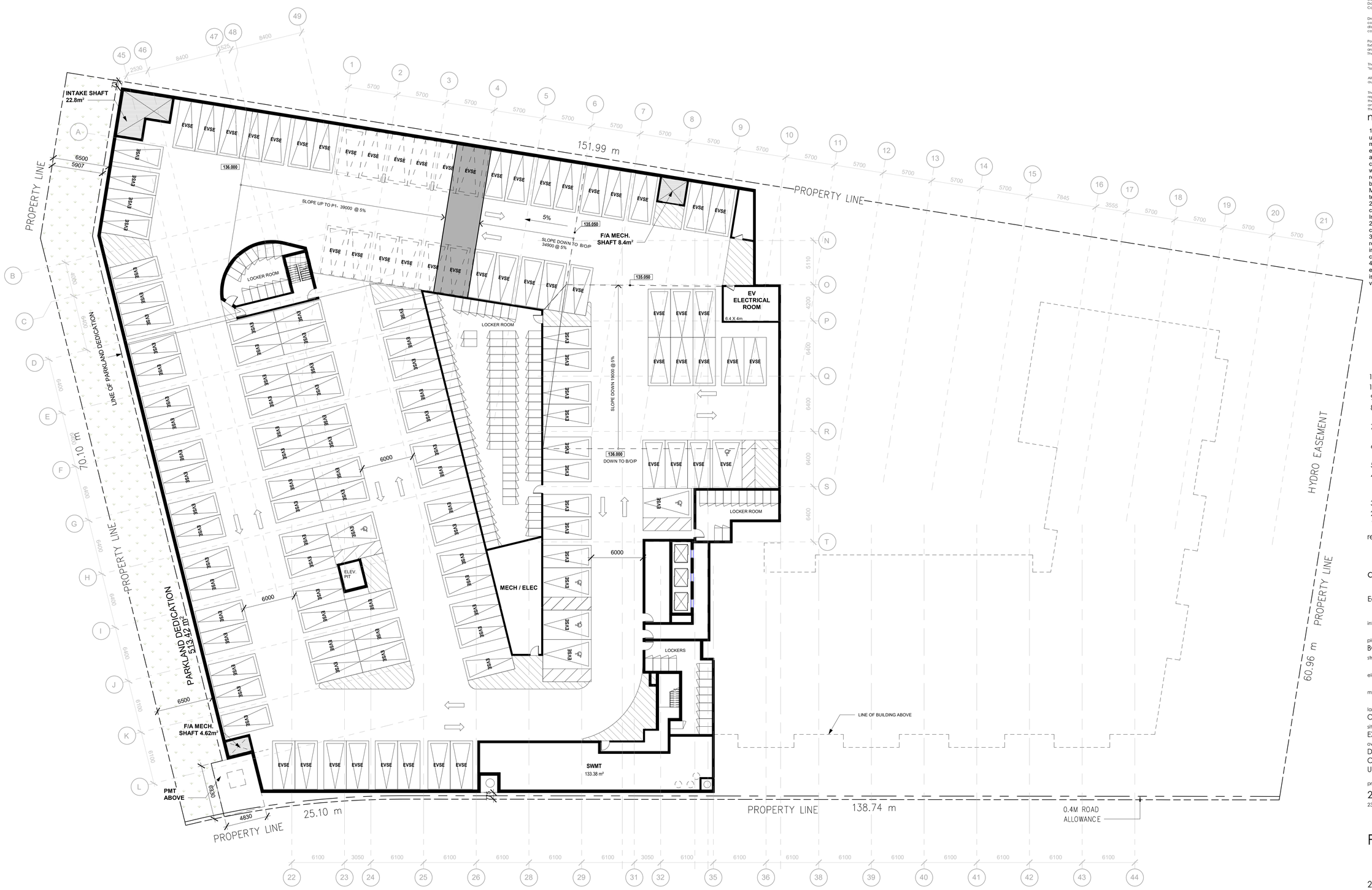
project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

P3 PARKING PLAN

2023.10.24	date:
1 : 200	scale:
18-16	project:
Author	drawn by:

true north | project north

drawning number:
A201



P2 Total Parking
128

notes:

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O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
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project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

P2 PARKING PLAN

2023.10.24	date:
1 : 200	scale:
18-16	project:
Author	drawn by:

true north / project north

drawning number:
A202

P1 Total Parking
97

P1 Total Bicycle parking
90

notes:

1. All residential parking spaces provided for dwelling units located in an apartment building, mixed use building, multiple dwelling unit building, excluding visitor parking spaces, will include an energized outlet capable of providing Level 2 charging or higher to the parking space. Specify which strategy is used: a dedicated electrical outlet, receptacle, or EVSE supplied by a separate branch circuit or using Electric Vehicle Energy Management Systems (EVEMS) load sharing technologies.
2. Level 2 Charging means a Level 2 electric vehicle charging level as defined by SAE International's J1772 standard, as amended (208V to 240V single-phase power, with maximum current of 80A).
3. 25% of all visitor residential spaces and non-residential parking spaces in a building must include an energized outlet capable of providing Level 2 charging or higher.
4. Energized Outlet means a connected point in an electrical wiring installation at which current is taken to supply utilization equipment for electric vehicle charging.

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tel: (416) 601 5416 info@unfolded.ca

368 dufferin street, toronto, on, M6K 1Z8

11	ISSUED FOR REZONING	2022.03.09
10	DRAFT REZONING SUBMISSION	2022.01.18
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2	ISSUED FOR CLIENT REVIEW	2019.09.30
1	FEASIBILITY SUBMISSION	2018.03.20
revisions:		dd-mm-yy

architectural team :

Eduardo Ortiz

ONTARIO ASSOCIATION OF ARCHITECTS LICENCE 8972

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

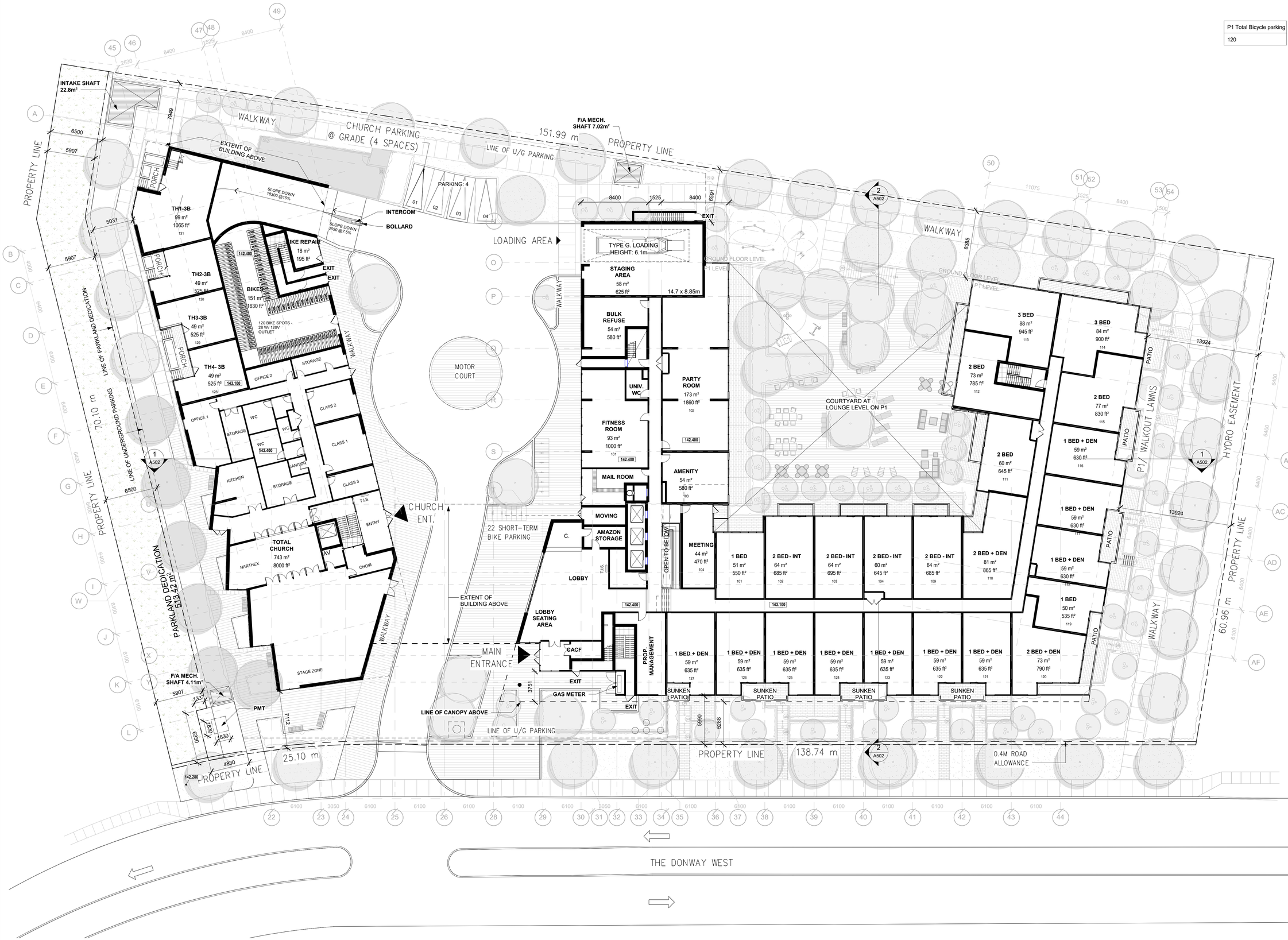
project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

WALKOUT UNITS & P1 PARKING PLAN

2023.10.24	date:
1 : 200	scale:
18-16	project:
Author	drawn by:

true north / project north

drawning number:
A203



P1 Total Bicycle parking
120

notes:

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368 dufferin street, toronto, on. M6K 1Z8

12	ISSUED FOR REZONING	2023.10.24
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1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

GROUND FLOOR PLAN

2023.10.24 date:
1 : 200 scale:
18-16 project:
Author drawn by:

true north / project north

drawning number:
A301

notes:

architecture unfolded

tel: (416) 601 5416 info@unfolded.ca

368 dufferin street, toronto, on. M6K 1Z8

12	ISSUED FOR REZONING	2023.10.24
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1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:

230 THE DONWAY WEST

230 The Donway W., North York, ON

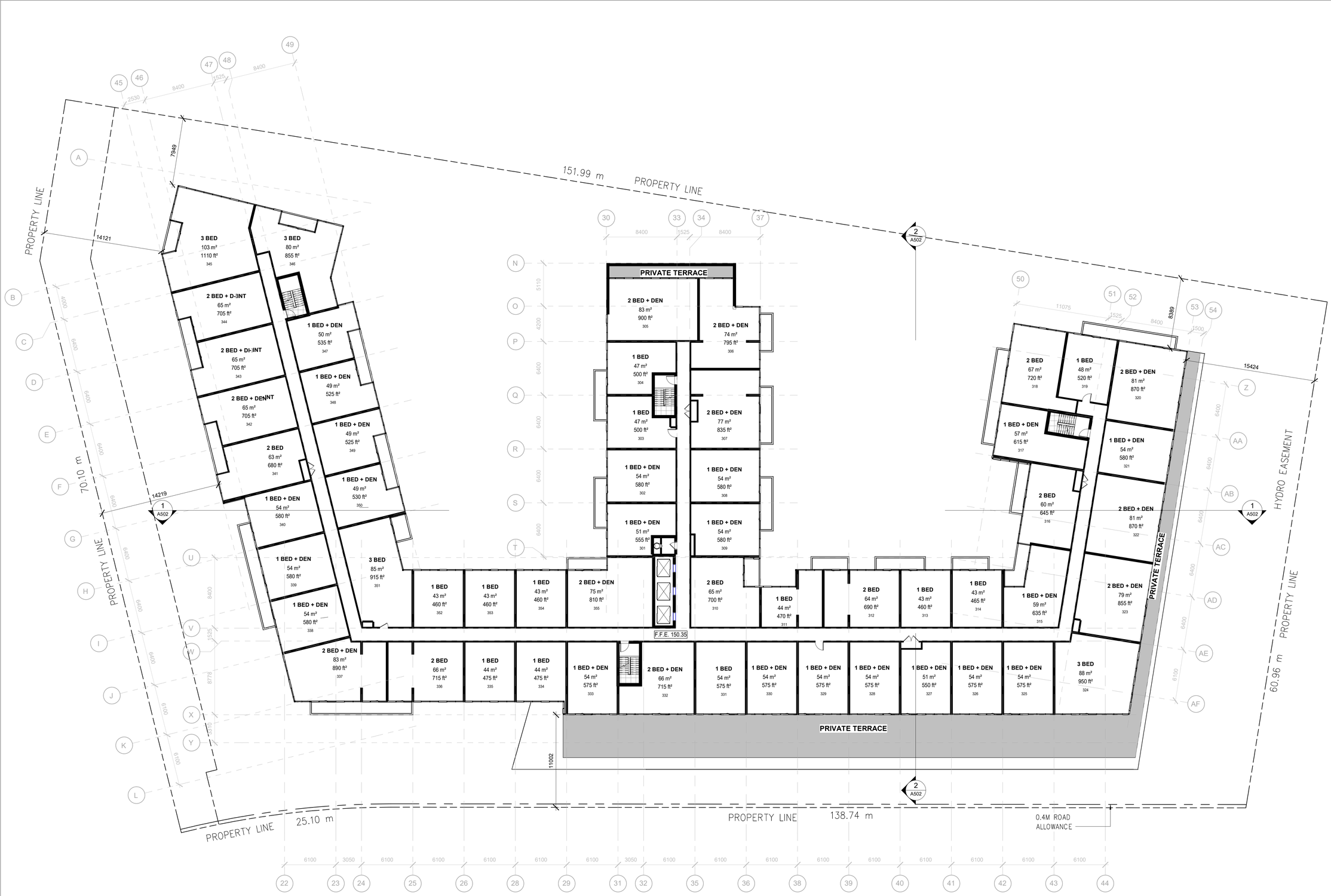
2ND FLOOR PLAN

2023.10.24	date:
1 : 200	scale:
18-16	project:
Author	drawn by:

true north / project north

drawning number:

A302



notes:

architecture unfolded

tel: (416) 601 5416 info@unfolded.ca

368 dufferin street, toronto, on. M6K 1Z8

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1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

3RD FLOOR PLAN

2023.10.24	date:
1 : 200	scale:
18-16	project:
Author	drawn by:

true north · project north

drawning number:
A303

notes:

architecture unfolded

tel: (416) 601 5416 info@unfolded.ca

368 dufferin street, toronto, on. M6K 1Z8

12	ISSUED FOR REZONING	2023.10.24
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revisions:		dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

4TH FLOOR PLAN

2023.10.24	date:
1 : 200	scale:
18-16	project:
Author	drawn by:

true north

project north

drawning number:
A304

notes:

architecture unfolded

tel: (416) 601 5416 info@unfolded.ca

368 dufferin street. toronto, on. M6K 1Z8

12	ISSUED FOR REZONING	2023.10.24
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1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

5TH FLOOR PLAN

2023.10.24 — date:
1 : 200 — scale:
18-16 — project:
Author — drawn by:

drawing number: A305

notes:

architecture unfolded

tel: (416) 601 5416 info@unfolded.ca

368 dufferin street, toronto, on. M6K 1Z8

12	ISSUED FOR REZONING	2023.10.24
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1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

6TH FLOOR PLAN

2023.10.24 date:
1 : 200 scale:
18-16 project:
Author drawn by:

true north / project north

drawning number:
A306

notes:

architecture unfolded

tel: (416) 601 5416 info@unfolded.ca

368 dufferin street. toronto, on. M6K 1Z8

12	ISSUED FOR REZONING	2023.10.24
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1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:

230 THE DONWAY WEST

230 The Donway W., North York, ON

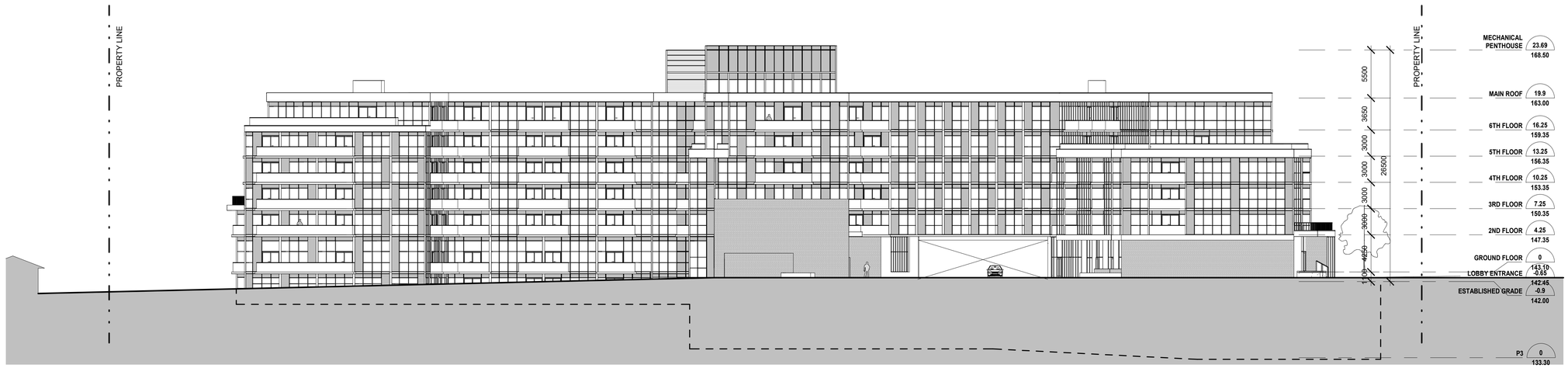
ROOF FLOOR PLAN

2023.10.24	date:
1 : 200	scale:
18-16	project:
Author	drawn by:

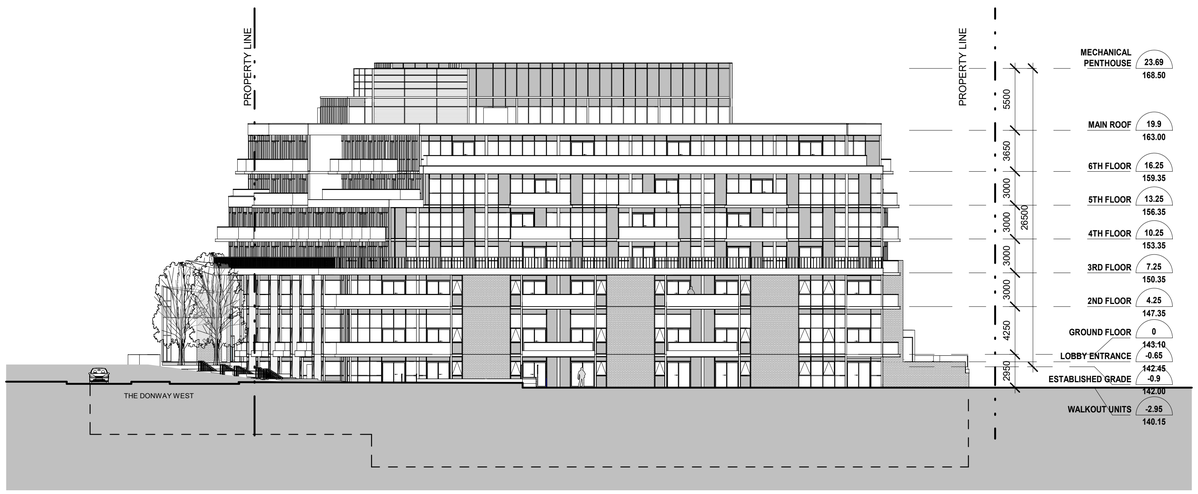
true north / project north

drawning number:

A308



3 / A401 WEST
1 : 250



1 / A401 NORTH
1 : 250

notes:

architecture unfolded
tel: (416) 601 5416 info@unfolded.ca
368 dufferin street, toronto, on. M6K 1Z8

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1	FEASIBILITY SUBMISSION	2018.03.20

revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC
structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)
site services:
EXP
owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

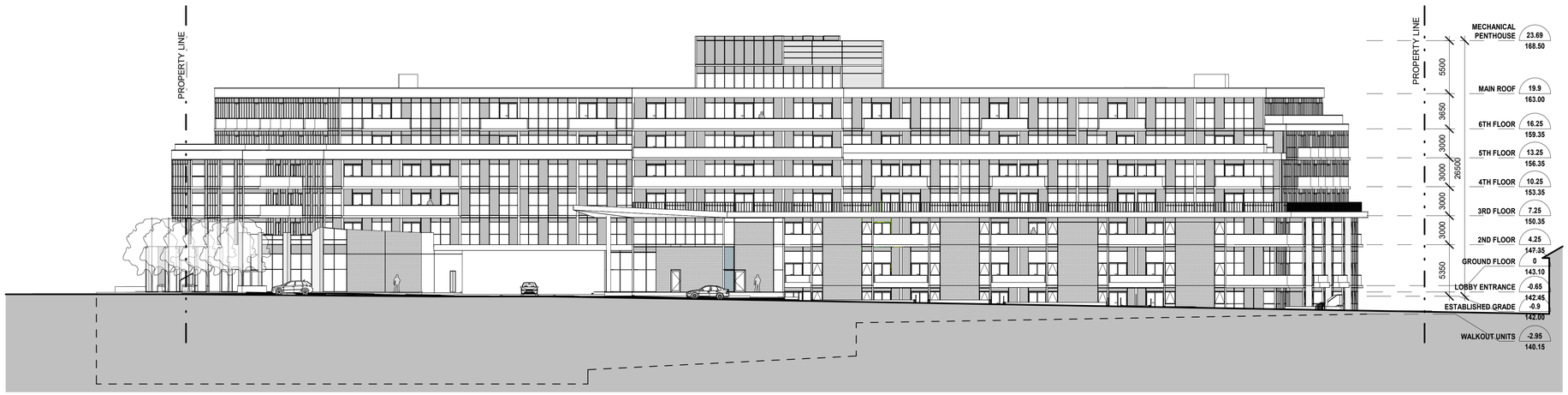
project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

NORTH & WEST ELEVATION

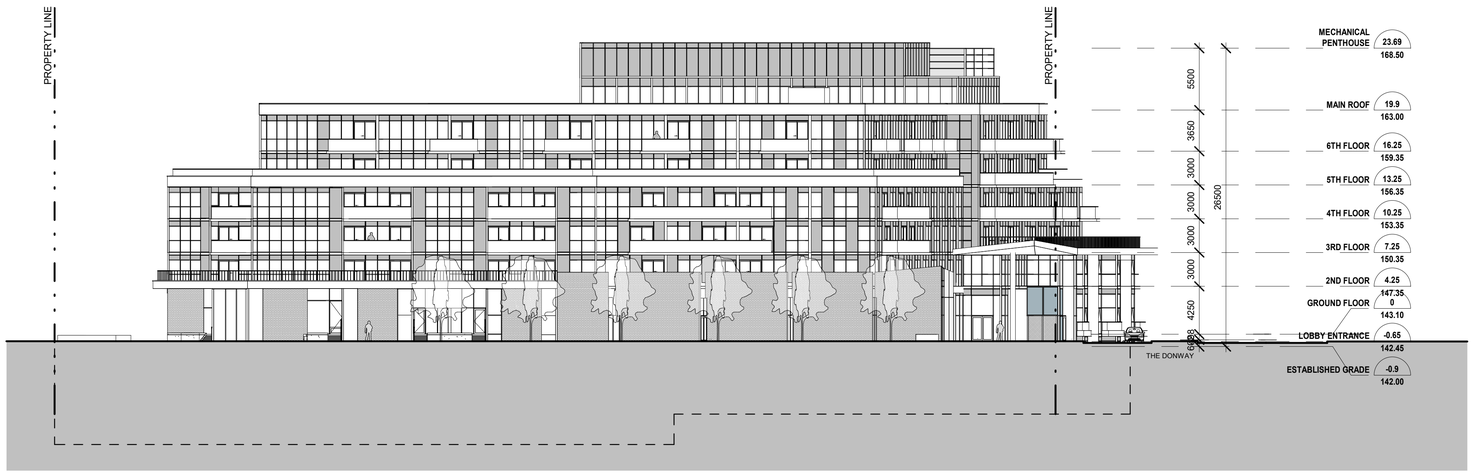
2023.10.24	date:
1 : 250	scale:
18-16	project:
Author	drawn by:

true north
project north

drawning number:
A401



2 / A402 EAST
1 : 250



1 / A402 SOUTH
1 : 250

notes:

architecture unfolded
tel: (416) 601 5416 info@unfolded.ca
368 dufferin street, toronto, on. M6K 1Z8

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revisions: dd-mm-yy

architectural team :
Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC
structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)
site services:
EXP
owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

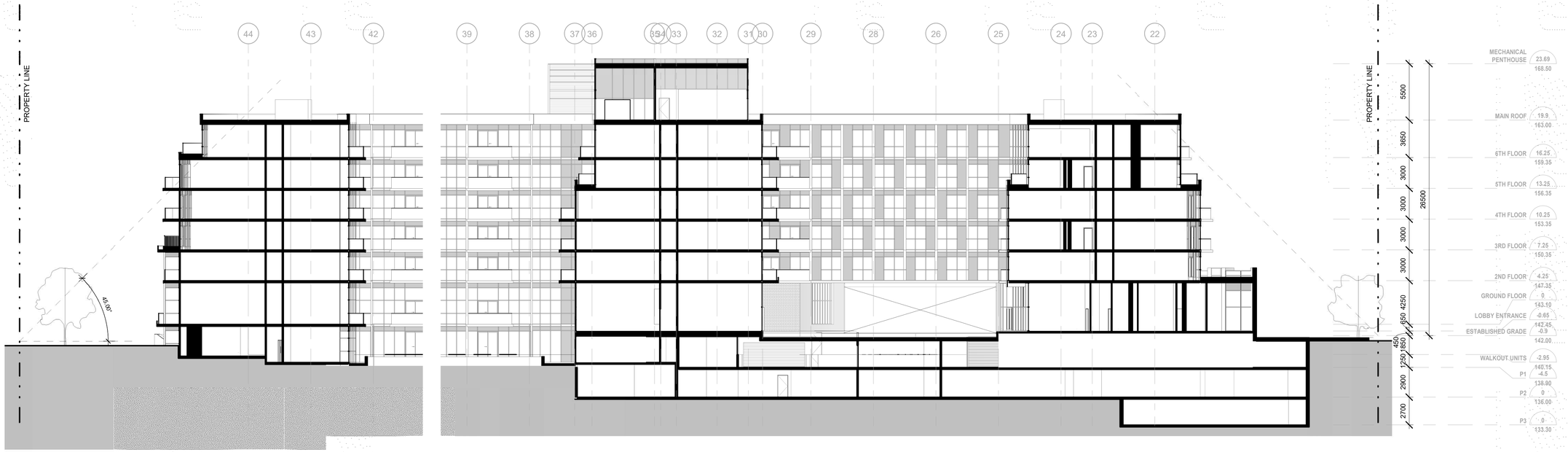
project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

SOUTH & EAST ELEVATION

2023.10.24 date:
1 : 250 scale:
18-16 project:
Author drawn by:

true north / project north

drawning number:
A402



1 / A502 SECTION 1
1 : 200

2 / A502 SECTION 2
1 : 200

notes:

architecture unfolded

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368 dufferin street, toronto, on. M6K 1Z8

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revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

BUILDING SECTION

2023.10.24 — date:
1 : 200 — scale:
18-16 — project:
Author — drawn by:

true north / project north

drawning number: A502

1 A503 SECTION 3
1 : 200

notes:

architecture unfolded

tel: (416) 601 5416 info@unfolded.ca

368 dufferin street, toronto, on. M6K 1Z8

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revisions: dd-mm-yy

architectural team :

Eduardo Ortiz

interior design:

planning:
BOUSFIELDS INC

structural:

electrical:

mechanical:

landscape:
O2 DESIGN (FORMELY NAK DESIGN GROUP)

site services:
EXP

owner:
DONWAY CO-OPERATIVE DEVELOPMENT CORPORATION AND THE DONWAY COVENANT UNITED CHURCH

project:
230 THE DONWAY WEST
230 The Donway W., North York, ON

BUILDING SECTION

2023.10.24 — date:
1 : 200 — scale:
18-16 — project:
Author — drawn by:

true north
project north

drawning number:
A503