UPDATED FINAL
HYDROGEOLOGICAL INVESTIGATION REPORT
FOR THE PROPOSED

DEVELOPMENT AT 95 JOYMAR DRIVE, MISSISSAUGA, ON.

Prepared for:

De Zen Realty Company Limited.

Prepared By:

SIRATI & PARTNERS CONSULTANTS LTD.

SIRATI & PARTNERS
Geotechnical Hydrogeological & Environmental Solutions

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1.0. INTRODUCTION AND BACKGROUND

Sirati & Partners Consultants Ltd. (SIRATI) was retained by De Zen Realty Company Limited. (the Client) to conduct a hydrogeological investigation for Development at 95 Joymar Drive , Mississauga, Ontario (the Site or the Property).

The Site is located at Northeast side of Joymar Drive between Tannery Street and Thomas Street in the Streetsville area of the City of Mississauga, Ontario. Mullet Creek passes along the east side of the Site. The approximate Site location is presented in Figure 1-1.

The Site currently consists of car repair shops properties identified as 95 Joymar Drive (66 Thomas Street), Mississauga, Ontario and the existing property will be redeveloped with residential buildings.

It is understood that the Client intends to build apartment building in five phases with several levels (Maximum 22 levels and 4 levels of parking), with total of 1026 units. A copy of design drawings is included in Appendix A.

It should be noted that based on the new drawings provided by the client, this report is an updated version of the report entitled "*Final Hydrogeological Investigation Report for The Proposed Development At 66 Thomes St, Mississauga, ON.*" Prepare by SIRATI, dated September 01, 2023.

1.1. Objective

The purpose of the hydrogeological investigation was to characterize the soil/bedrock and groundwater conditions, assess the requirements for groundwater control, and assess any impacts on the surrounding environment due to the proposed development and provide recommendations or mitigative measures.

1.2. Scope of Work

This hydrogeological investigation was carried out concurrently with the geotechnical investigation planned and executed at the Site by SIRATI, and consisted of the following completed scope of work:

- **Review of available background information**: a review of available geological and hydrogeological information for the Site and surrounding areas was conducted to understand the regional geological and hydrogeological settings.
- **Review of available investigation reports**: a review of available subsurface investigation reports completed for the Site was conducted to understand the local soil and groundwater conditions of the Site.
- **Site inspection and Water Well Inventory Survey**: an inspection of the Site was conducted to observe the existing site features. In addition, a well inventory survey was conducted by reviewing the Ministry of the Environment, Conservation and Parks (MECP) database for the properties within approximately 500 m radius of the site boundary or the estimated zone of influence for assessment of potential impact on the water supply well due to the development.
- **Completion of boreholes/monitoring wells:** Boreholes and monitoring wells were completed across the Site to obtain the information of soil, bedrock and groundwater at the Site.

- **Groundwater monitoring:** Groundwater levels were measured in the five (5) monitoring wells installed at the Site to obtain the groundwater level conditions in the Site area for the interpretation of groundwater flow directions.
- **Groundwater Sampling and Testing**: Two groundwater samples were collected from a selected monitoring wells for chemical analysis as per Peel Region Sewer Use Bylaw to assess the general water quality.
- **In-situ hydraulic conductivity tests:** In-situ hydraulic conductivity tests (single well response tests) in all existing monitoring wells to estimate the hydraulic conductivity of the underlying soils.
- **Evaluating short-term and long-term water taking impacts**: Evaluating the need for permit-to-take-water (PTTW) and registration in the Environmental Activity and Sector Registry (EASR).
- **Water balance (Preliminary):** a preliminary water balance assessment was completed using the Thornthwaite water balance method for the proposed development as part of the hydrogeological study. The water balance study was based on available climatic information associated with pre-development and proposed post-development conditions at the subject lands.
- **Data processing and report preparation:** the data obtained from this hydrogeological investigation were reviewed and processed, and a report was prepared summarizing the results and findings of the investigation.

2.0. DEVELOPMENT PLAN

Based on the site development drawings provided by the Client, the Site has a total area of 27,775.64 m², and is currently occupied by car repair shops properties, which will be demolished during the proposed development and replaced by residential buildings.

The design drawings are shown and provided in Appendix A and the summary of the proposed construction is presented in Table 2-1.

Table 2-1: Summary of Proposed Development

Apartment Building				
	Building number	Stories	Proposed Unites	Total of Units
1	Phase 1 (Tower A)	18	204	1026
2	Phase 2 (North Building Podium)	8	173	
3	Phase 2B (North Building Podium)	8	180	
4	Phase 3 (South Building)	12	203	
5	Phase 4 (Tower B)	22	261	

3.0. ENVIRONMENTAL FEATURES

To assess environmental features, the databases maintained by the Ministry of Natural Resources and Forestry (MNRF), the Ministry of Environment, Conservation and Parks (MECP), and the Credit Valley Conservation (CVC) were reviewed.

Based on the data reviewed, the primary watershed that the Site is in, is the Great Lakes-St. Lawrence River and the secondary watershed is Northern Lake Ontario and Niagara River. As shown on Figure 3-1, the Site is located within the tertiary watershed of Sixteen Mile Creek-Credit River and the Quaternary watershed is showed on Figure of 3-2 which is Mary Fix Creek-Credit River.

Mullet Creek which passes through the east side of the property is a tributary of Credit River which flows into the Credit River in 4.4 kilometres downstream from the Site. Ultimately, the Credit River drains into Lake Ontario.

It should be noted that Mullet Creek is located at the east side of the development area therefore some parts of the study site are considered by CVC as waterbodies. As a result, CVC regulated area is located within the Site and on Figure 3-3 the area of this regulation is presented.

Based on the MNRF database, the Site is not located in an area of natural heritage & scientific interest (ANSI) or in a wetland or woodland area. However, at the southeast side of the Site there is a wooded area, which is shown in Figure 3-4.

Based on review of the MECP's Source Protection Information Atlas, the Site is not located within a Wellhead Protection Area (WHPA) or surface water Intake Protection Zone (IPZ). However, the Site is located in a Highly Vulnerable Aquifers (HVA) area.

4.0. PHYSICAL SETTING

4.1. Topography and Drainage

Using the interactive topographic map generator (https://atlas.gc.ca), the topography in the vicinity of the Site is generally controlled by nearby Mullet Creek (tributary) watershed, and the Mullet Creek surface drainage towards the Credit River. As shown in Figure 3-4, the topographic elevation at the Site ranges between 152 m above mean sea level (mAMSL) and 157 mAMSL, with a general slope towards the southeast.

Based on the borehole elevation survey carried out by SIRATI, the highest elevation was measured to be 157.6 mAMSL at BH/MW23-102 while the lowest elevation was measured to be 153.8 mAMSL at BH/MW23-104.

4.2. Physiography

According to Chapman and Putnam (1984), and the Physiography Map of Southern Ontario (Map P. 2715, Scale 1: 600,000) prepared by the Ontario Department of Mines and Northern Affairs, the Site is in the Till Moraines.

Figure 4-1 shows the approximate location of the Site and the physiography regions.

4.3. Overburden

Based to the Map of Quaternary Geology of Ontario prepared by the Ontario Department of Northern Development and Mines and database maintained by the Ontario Geological Survey, the Site is predominantly silt to silty clay matrix, high in matrix carbonate content and clast poor, thin layer of drift.

Figure 4-2 shows the Quaternary Geology of the Site.

4.4. Bedrock Geology

According to the Map of Bedrock Geology of Ontario (Map 2544, Scale 1:1,000,000), prepared by the Ontario Department of Northern Development and Mines, the Site is underlain by the Upper Ordovician Queenston Formation composed of shales, limestone, dolostone and siltstone.

Figure 4-3 presents the approximate site location in Queenston Formation bedrock area.

5.0. REGIONAL HYDROGEOLOGY

Water well records on file with the Ministry of the MECP were used as a database for this hydrogeological assessment. A total of sixty (60) water well records were found within a radius of 500 m from the Site, which are summarized in Appendix B. The approximate locations of the recorded MECP water wells are shown in Figure 5-1.

Based on the MECP's well records, one (1) well (Well ID# 4902143, Drilled in 09/18/1963 and has salty water) was constructed for commercial use, and the other wells were for monitoring wells, observation wells, abandoned wells or were records with no detailed wells' use information. The 1963 commercial well only supplied 2 GPM of water and appears to be located where there is now a retirement home and is very unlikely to still be in use. The area is serviced with City water, and no drinking water wells would be expected.

Five (5) wells including well ID #4909697, 7325288, 7314274, 7302257 & 7302258, recorded as a monitoring/observation well were found to be located inside the Site. A summary of the on-site monitoring wells is presented in Table 5-1 and the loges are presented in Appendix B-1.

Table 5-1: Summary of Recorded MECP Water Supply Well and on-site Monitoring Well

Well ID	Well Tag#	Well Use	Location	Screen Depth	Soil/bedrock	Groundwater
4909697	A024778	Test Hole	Inside the Site area	Open hole: 2.7 ~ 4.3 mbgs	0 ~ 0.6 mbgs: fill 0.6 ~ 2.7 mbgs: Silt (Clay, Sand- Brown & Dense) 2.7 ~ 4.7 mbgs: Silt (Sand, Gravel-Grey & Dense) 4.7 ~ 4.9 mbgs: Shale (Grey & Hard)	No information
7325288	A248723	No information	Inside the Site area	No information	No information	No information
7314274	A243748	monitoring/observation well	Inside the Site area	Open hole: 2.1 ~ 3.7 mbgs	0 ~ 3.7 mbgs: Sandy Silt (Brown)	3.1
7302257	A199244	Test Hole/ Monitoring	Inside the Site area	Open hole: 2.4 ~ 4 mbgs	0 ~ 0.8 mbgs: Asphalt 0.8 ~ 2.7 mbgs: Clay (Silt, - Brown) 2.7 ~ 3 mbgs: Sand (Brown) 3 ~ 4 mbgs: Shale (Gray)	No information
7302258	A199245	Test Hole/ Monitoring	Inside the Site area	Screen: 3 ~ 4.6 mbgs	0 ~ 0.8 mbgs: Asphalt 0.8 ~ 3.7 mbgs: Clay (Brown) 3.7 ~ 4.6 mbgs: shale (Gray)	No information

Based on the presented details in the water well records, the overburden material encountered, was consists of Silt, Clay, Sand and Gravel. Bedrock (shale) was encountered at several of the well locations at the depth from the surface to about 4.6 metres below ground surface.

6.0. FIELD WORK METHODOLOGY

6.1. Borehole Drilling and Monitoring Well Installation

Borehole drillings and well installations were carried out at the Site, between May 18th and 23rd, 2023, as part of geotechnical investigation conducted by SIRATI. A total of five (5) boreholes (BH-101, BH-102, BH-103, BH-104 and BH-107) were advanced into bedrock to depth ranging from 4.6 mbgs to 9.6 mbgs (BH-107 was cored to a depth of 9.6 mbgs). Monitoring wells installed at all these boreholes. The monitoring wells consist of a PVC screen with 50 mm diameter and 3.0 m or 3.05 m long. The approximate borehole and monitoring well locations are shown in Figure 6-1. Details of the boreholes and monitoring wells are included in borehole logs in Appendix C.

The construction details for the monitoring wells are presented in Table 6-1.

Table 6-1 Monitoring Well Construction Details

Monitoring Well	Ground Elevation (mAMSL)	Borehole Depth (mbgs)	MW Depth (mbgs)	Screen Interval (mbgs)	Remark	Screened Bedrock
BH/MW23-101	155.90	6.20	6.10	3.05 ~ 6.10	Auger refusal at 4.6 mbgs	Shale Bedrock - Highly weathered (W4), Grey
BH/MW23-102	157.70	6.20	6.10	3.05 ~ 6.10	Auger refusal at 6.1 mbgs	Shale Bedrock - Highly weathered (W4), Grey
BH/MW23-103	153.90	9.50	9.10	6.10 ~ 9.10	Auger refusal at 4.8 mbgs	Shale Bedrock- Highly to Moderately weathered (W4), Grey
BH/MW23-104	153.80	5.03	5.03	1.98 ~ 5.03	Auger refusal at 4.6 mbgs	Shale Bedrock- Highly weathered (W4), Grey
BH/MW23-107	156.40	9.60	9.10	6.10 ~ 9.10	Auger refusal at 4.6 mbgs	Shale Bedrock- Highly to Moderately weathered (W4), Grey

Notes: mAMSL – metres above mean sea level; mbgs – metres below ground surface

6.2. Groundwater Monitoring and Elevation Survey

After the well installations, groundwater levels were measured on May 30, June 16th and July 07th, 2023, in the installed monitoring wells. In addition, the location and elevation survey were conducted using a GPS unit on the boreholes and the monitoring wells completed at the Site.

6.3. Hydraulic Conductivity Test (Single Well Response Test/Slug Test)

In-situ hydraulic conductivity tests, also called as single well response test or slug test, were conducted on all monitoring wells. During the test, a datalogger was placed in the tested monitoring well after the initial water level was measured. Then, a certain amount of water was removed from the test well (for a rising head test) to create a water level drawdown in the well. The recovery of water level was recorded by the datalogger, and the data was then used for estimating the hydraulic conductivity of the screened soil or bedrock. It should be noted that monitoring well BH/MW23-102 had a weak recharge rate and after 21 hours had only 60.9 cm water level rising so the conductivity test is calculated according to this data.

6.4. Groundwater Sampling and Chemical Testing

Groundwater samples were collected on June 02, 2023, from Monitoring Wells BH/MW23-104 and BH/MW23-107 for chemical testing to assess the general water quality for the purpose of disposal of excess water potentially generated from the Site.

The groundwater samples were submitted to AGAT Laboratories (AGAT) for analysis as per the Peel Region-law Region Sewer Use Bylaw. In addition, for each of the collected water samples, one (1) filtered water sample was analyzed for metals elements. However, for analyzing BTEX, F1-F4 PHCs based on O.Reg. 153, water samples were taken from both above-mentioned monitoring wells.

7.0. SUMMARIZED SITE CONDITIONS

7.1. Soil Stratigraphy

The soils retrieved during the borehole drilling were observed. The soils encountered at the borehole locations generally consisted of fill materials beneath topsoil, underlain by native soils and then shale bedrock. The fill materials were found to consist mainly of clayey silt, some sand, trace gravel and trace construction debris. The native soils mainly consisted of very dense soils mainly composed of sandy silt till, some clay, trace of some gravel and cobbles.

The main soil types encountered at the Site are as follows:

- Asphalt: found at all locations with a thickness ranging between 50 mm and 150 mm except two monitoring wells BH/MW23-101 and BH/MW23-107.
- Granular Fill: found at all locations with a thickness ranging between 150 mm at monitoring wells BH/MW23-104 to 460 mm at the monitoring wells BH/MW23-101.
- Fill materials: encountered in all the borehole locations except BH/MW23-102, mainly consisting of very moist clayey silt, some sand, trace gravel, trace construction debris and extending to a maximum depth of 3.1 mbgs.
- Clayey silt till except BH/MW23-103 in the other monitoring wells found at depths from 1.5 mbgs to 4.6 mbgs.
- Sandy silt till except BH/MW23-104, a layer of sandy silt till was encountered from the depth ranging from 2.3 mbgs to 4.8 mbgs.

- Shale Bedrock (Georgian Bay Formation): encountered in all boreholes at depths ranging from 4.6 mbgs to 9.6 mbgs.

The details of the soil descriptions are presented in the Borehole Logs in Appendix C. Geological cross-sections profile are presented in Figure 7-1 and 7-2.

7.2. Groundwater Conditions

Groundwater conditions were monitored three times during the hydrogeological investigation.

7.2.1.1. Groundwater Levels and Elevations

Groundwater levels were measured on May 30th, June 16th and July 07th, 2023, in the monitoring wells installed at the Site. The measured and recorded groundwater levels are presented in Table 7-1.

Table 7-1 Measured Groundwater Levels in Monitoring Wells

Monitoring Well	Ground Elevation (mAMSL)	Screen Interval (mbgs)	Date: May 30, 2023		Date: June 16, 2023		Date: July 07, 2023	
			Depth to Groundwater (mbgs)	Groundwater Elevation (mAMSL)	Depth to Groundwater (mbgs)	Groundwater Elevation (mAMSL)	Depth to Groundwater (mbgs)	Groundwater Elevation (mAMSL)
BH/MW23-101	155.90	3.05 - 6.10	3.01	152.90	2.92	152.98	2.98	152.92
BH/MW23-102	157.70	3.05 - 6.10	3.54	154.16	3.42	154.28	3.37	154.33
BH/MW23-103	153.90	6.10 - 9.10	1.98	151.93	1.89	152.01	1.85	152.05
BH/MW23-104	153.80	1.98 - 5.03	1.93	151.88	1.84	151.96	1.84	151.96
BH/MW23-107	156.40	6.10 - 9.10	3.64	152.76	3.57	152.83	3.53	152.87

Notes: mAMSL – metres above mean sea level; mbgs – metres below ground surface.

As presented above, the groundwater levels measured in the monitoring wells across the Site ranged from 3.64 mbgs at BH/MW23-107 on May 30,2023 to 1.84 mbgs at BH/MW23-104 on June 16 and July 07, 2023, while elevations ranged from 151.88 mAMSL at BH/MW23-104 on May 30, 2023 to 154.33 mAMSL at BH/MW23-102 on July 07, 2023.

7.2.1.2. Groundwater Flow Direction

Based on the water level elevations dated July 07 ,2023 groundwater elevation contours were constructed. Accordingly, the groundwater flow direction was inferred to be towards the southeast, as shown in Figure 7-3.

7.3. Estimated Hydraulic Conductivity

The hydraulic conductivity (K-value) of the screened bedrock was estimated based on the results obtained from the single well response tests (slug tests).

Single well response tests (slug tests) were conducted in the monitoring wells (BH/MW23-101, BH/MW23-102, BH/MW23-103, BH/MW23-104 and BH/MW23-107) on June 02 and June 16, 2023. A rising head test was performed in the tests. Based on the data obtained from the tests, the hydraulic conductivity for the screened bedrock was estimated utilizing the Aqtesolv pumping test software with the Hvorslev method. Records of the slug tests and the data processing are provided in Appendix D. The results of the estimated hydraulic conductivity are summarized in Table 7-2.

Table 7-2: Results of Estimated Hydraulic Conductivity as per Slug Tests

Monitoring Well	Screen Depth (mbgs)	Tested Soil Type	Hydraulic Conductivity (m/s)
BH/MW23-101	3.05 - 6.10	Shale Bedrock	6.6×10^{-7}
BH/MW23-102	3.05 - 6.10	Shale Bedrock	1.0×10^{-7}
BH/MW23-103	6.10 - 9.10	Shale Bedrock	8.7×10^{-6}
BH/MW23-104	1.98 - 5.03	Silt Fill/Silt Till/Shale Bedrock	1.9×10^{-6}
BH/MW23-107	6.10 - 9.10	Shale Bedrock	6.5×10^{-7}
Geometric Mean			9.3×10^{-7}

As presented above, the estimated hydraulic conductivity ranged from 6.5×10^{-7} m/s to 1.9×10^{-6} m/s, with a geometric mean of 9.3×10^{-7} m/s.

7.4. Groundwater Quality

Two groundwater samples were taken from BH/MW23-104 and BH/MW23-107 on June 2, 2023, and were submitted to AGAT for analysis and comparison to the Peel Region Sewer Use By-Law (53-2010). For comparison purpose, one (1) water sample for each set was filtered on the field and sent to the laboratory and analyzed for metals. The analytical results for the analyzed groundwater samples are presented in Appendix E.

The analytical results were compared with the Limits for Peel Region Sewer Use By-law, and exceedances were found for several parameters. The details of the exceedances are presented in Table 7-3.

Table 7-3: Exceedances of Peel Region Sewer Use By-Law 53-2010 (units in mg/L)

SAMPLE ID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDE VALUE	RESULT
5036893	BH/MW23-104	ON Peel SM	Peel Region Sanitary - Organics	Benzene	mg/L	0.002	0.420
				Ethylbenzene	mg/L	0.002	0.183
				Toluene	mg/L	0.002	0.403
				Xylenes (Total)	mg/L	0.0044	0.508
			Peel Sanitary Sewer Use By-Law - Inorganics	CBOD (5)	mg/L	15	32
				Phenols	mg/L	0.008	0.870
				Total Arsenic	mg/L	0.02	0.171
				Total Chromium	mg/L	0.08	0.450
				Total Copper	mg/L	0.05	0.459
				Total Kjeldahl Nitrogen	mg/L	1	9.82
				Total Manganese	mg/L	0.05	23.0
				Total Nickel	mg/L	0.08	0.546
				Total Phosphorus	mg/L	0.4	2.15
				Total Selenium	mg/L	0.02	0.045
				Total Suspended Solids	mg/L	15	9840
				Total Zinc	mg/L	0.04	2.10
		ON Peel SN	Peel Region Sanitary - Organics	Benzene	mg/L	0.01	0.420
				Ethylbenzene	mg/L	0.16	0.183
				Toluene	mg/L	0.27	0.403
			Peel Sanitary Sewer Use By-Law - Inorganics	Total Aluminum	mg/L	50	285
				Total Manganese	mg/L	5	23.0
				Total Suspended Solids	mg/L	350	9840
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Phenols	mg/L	0.008	0.045
				Total Arsenic	mg/L	0.02	0.337
				Total Chromium	mg/L	0.08	1.05
				Total Copper	mg/L	0.05	1.83
				Total Kjeldahl Nitrogen	mg/L	1	2.04
				Total Lead	mg/L	0.120	0.271
				Total Manganese	mg/L	0.05	26.3
				Total Nickel	mg/L	0.08	1.26
				Total Phosphorus	mg/L	0.4	0.48
				Total Selenium	mg/L	0.02	0.106
				Total Suspended Solids	mg/L	15	28200
				Total Zinc	mg/L	0.04	2.91
		ON Peel SN		Total Aluminum	mg/L	50	474
				Total Manganese	mg/L	5	26.3
				Total Suspended Solids	mg/L	350	28200

8.0. CONSTRUCTION DEWATERING

Construction dewatering is intended to lower the groundwater levels in the excavation area in order to ensure a dry working condition.

The requirements for construction dewatering generally depend on the Site's soil and groundwater conditions including soil type, soil/bedrock permeability or hydraulic conductivity, local groundwater levels, and the design of the proposed development such as the foundation and/or basement elevation, as well as the size of proposed structure, etc.

8.1. Proposed Development, Anticipated Excavation and Dewatering

As indicated before, the subject Site is to be developed with 5 building blocks in five phases (phase 1, 2A, 2B, 3 & 4) comprising condo and podium with a maximum of 22 story high-rise mix-use building with four (P1 to P4) underground parking levels. The finished floor elevation for P4 is 8.7 metres below P1. It should be noted that, as per received drawings from the client, the elevation of the parking levels are, 153.40, 150.50, 147.60 and 144.70 mAMSL for P1, P2, P3, and P4 levels, respectively.

Based on the drawings, the ground elevation is 157.00 mAMSL and the established ground floor elevation will be at 157.00 mAMSL, the finished floor elevation for P4 Level will be 144.70 mAMSL. The excavation for footing construction will be 1 m below the finished floor of P4 Level then the excavation may extend to the elevation of 143.70 mAMSL for concrete slab P4 Level.

Based on the groundwater level records, the measured groundwater levels ranged from 151.88 mAMSL to 154.33 mAMSL, which is above the anticipated excavation. Therefore, groundwater control shall be considered during the construction. In addition, long-term subdrainage discharge will be considered assuming the sub-drainage systems are placed at the same level as the finished floor of the lowest P4 Level.

8.2. Construction Dewatering Rate Estimation (Short-term)

Based on the drawings, observed Site condition, and expected excavation, the excavation for P4 Level will cut through the overburden soils and into shale bedrock. As per drawings, the area of P4 level (6837.98 m^2) is relatively smaller than P1, P2, and P3 areas. For the purpose of water balance analysis and dewatering requirements it is assumed that the P4 area is similar to the P1, P2 and P3 levels.

To estimate the construction dewatering volume, the following equation for an unconfined aquifer at a steady-state condition was used.

$$Q = K*(H^2-h_w^2) / [0.733 * \log (R/r_e)]$$

Where: Q = dewatering rate (m/s)

K = average hydraulic conductivity for silt (m/s)

H = aquifer thickness or initial water level to reference datum (m)

h_w = target water level to a reference datum (1 m)

r_e = effective radius = (excavation area/π)$^{1/2}$ (m)

R_o = zone of influence = 3000 x (H-h_w) x $K^{1/2}$ (m, from the edge of excavation)

R = zone of influence = r_e + R_o (m, from the centre of excavation)

Estimation of the construction dewatering rate is be based on the following assumptions or parameters.

- The highest groundwater elevation at 154.33 mAMSL
- The target dewatering elevation at 143.70 mAMSL for P4 Level excavation (assuming 1 m below the P4 Level)
- The dewatering area is 13,083.14 m^2
- The hydraulic conductivity (9.3 x 10^{-7} m/s).

Based on above, the dewatering rate for excavation and construction of the building foundation (including ground floor and underground levels) was estimated to be approximately 216,186 L/day with a safety factor of 2 applied, for the purpose of temporary dewatering designing and permit application/registration. The estimated zone of influence was 114 m from the centre of excavation, or about 31 m from the edge of excavation.

It should be noted that the application of a safety factor is considered for a more conservative assessment to cover or address some uncertainties in order to provide the reference for dewatering designing and/or for permit application. It is known that the equation used in dewatering rate estimation is applied for a steady state condition. In general, at the beginning of pumping, the pumping rate may be greater than that at the steady state condition, because the water stored in the soils and bedrock shall be removed as well. Moreover, the overburden soils are usually more permeable than the bedrock, although the saturated thickness would be limited.

To account for the stormwater runoff on a rainy day during the construction at the Site, a 20 mm daily rainfall has been considered for the purpose of dewatering design. It is known that the gross excavation area is 13,083.14 m^2. The total runoff volume is given by the following formula:

Total Runoff Volume (V) per day = Excavation Area x Rainfall Intensity

= 13,083.14 m^2 x 0.02 m/day

= 261.66 m^3 /day or 261,663 L/day.

Hence, the maximum short-term dewatering volume during the construction of the P1, P2, P3 and P4 levels including the stormwater to be accumulated inside the excavation is 477,849 L/day (or 216,186 L/day for groundwater; plus 261,663 L/day for stormwater runoff). The details of the calculations are provided in Appendix F.

8.3. Sub-drainage Dewatering (Long-term)

Given that the proposed excavation (and finished construction) is expected to encounter the groundwater table, some form of weeping tile and/or foundation drainage system could be considered in the detailed design.

Based on the drawing details provided, considering the P4 finished floor elevation of 144.70 mAMSL and the highest groundwater elevation of 154.33 mAMSL, the total drawdown is calculated to be 9.63 m.

The groundwater flux from the underground drainage system could be calculated using the Darcy equation (from Groundwater, 1979 by R. Freeze and A. Cherry):

Q = k * i * A, where:

Q is the volume of water (m^3/s)

K is the hydraulic conductivity (9.3×10^{-7} m/s)

i is the hydraulic gradient (m/m), and

A is the total lateral seepage area (m^2).

The hydraulic gradient would be estimated based on the projected drawdown while the radius or zone of influence (ROI or ZOI) is calculated using the Sichardt formula ($Ro = 3000 * S_w * K^{1/2}$). Values obtained from the hydrogeological investigation were used for the hydraulic conductivity, hydraulic gradient and ZOI calculations.

Based on the dimensions provided in the architectural drawings and the available field data, dewatering of the proposed permanent drainage system was estimated to be 260,650 L/day (with a safety factor of 1.5 applied). The maximum zone of influence was calculated to be 28 m from the edge of the building.

(Detailed calculations provided in Appendix F).

It should be noted that should details of weeping tile or sub-drain system be made available, the long-term dewatering estimation should be re-evaluated accordingly. The civil engineers should at their discretion consider a safety factor when conducting the design.

8.4. Regulatory Permits or Registration

Any construction dewatering or water taking in Ontario are governed by Ontario Regulation 387/04 – Water Taking and Transfer, an Ontario regulation made under the Ontario Water Resource Act (OWRA), and/or Ontario Regulation 63/16 – Registration under Part II.2 of the Act – Water Taking, made under Environmental Protection Act and/or Section 34 of the Ontario Water Resources Act (OWRA).

According to Section 34 of the OWRA, any water taking over 50,000 litres per day may not take place without a valid permit, which shall be applied and obtained in accordance with the MECP's permit-to-take-water (PTTW) Manual, dated April 2005.

According to O. Reg. 63/16, a PTTW will not be required for temporary construction dewatering (for six months or less) in an amount greater than 50,000 L/day but less than 400,000 L/day. However, a registration or posting shall be processed through Environmental Activity and Sector Registry (EASR).

Based on the dewatering rate estimation, the temporary construction dewatering will be 477,849 L/day with 216,186 L/day of groundwater. Therefore, a PTTW will be required for the short-term dewatering.

The estimated long-term drainage discharge is 260,650 L/day, which exceeds the limit of 50,000 L/day. Therefore, a PTTW will be required for the long-term drainage.

9.0. WATER BALANCE (PRELIMINARY)

A preliminary water balance for the Site was calculated for both pre-development and post-development conditions in order to assess the change in overall rate of infiltration.

9.1. Site Condition

The Site is currently occupied by an existing commercial building with associated parking and paved areas all around. Mullet Creek passes along the east side of the Site.

The Site is located at MECP district of Halton-Peel and in the region of Central region also it is located in Source Protection Area of Credit Valley with highly vulnerable aquifer with score 6. There is not any Wellhead Protection Area Q1 & Q2.

Based on the design drawings which are mentioned in table 2-1, the proposed development consists of 5 buildings and walk-outs with four (4) levels of underground parking.

For the purpose of water balance assessment, the development area can be categorized into three (3) types of areas: paved area, building/roof area and landscape area, which are shown on Figures 9-1 and 9-2. A summary of the surface areas of the development site is presented in Table 9-1.

Table 9-1: Pre-and Post-Development Site Conditions

Areas	Type of Land Coverage	Pre-Development Area (m^2)	Post- Development Area (m^2)
Impervious Area	Paved Area	17,230.24	4,139.18
	Building/Roof Area	7,670.14	7,366.25
Pervious Area	Landscape Area	2,875.26	16,270.21
Total (m^2)		**27,775.64**	**27,775.64**

9.2. Site Level Water Balance

Based on the Thornthwaite and Mather methodology (1957), the water balance is an accounting of water in the hydrologic cycle. Precipitation (P) falls as rain and snow. It can run off towards lakes and streams (R), infiltrate to the groundwater table (I), or evaporate from ground or evapotranspiration by vegetation (ET). When long-term average values of P, R, I, and ET are used, there is minimal or no net change to groundwater storage (ΔS).

The annual water budget can be expressed as:

$$P = ET + R + I + \Delta S$$

Where:

P = Precipitation (mm/year)
ET = Evapotranspiration (mm/year)
R = Run-off (mm/year)
I = Infiltration (mm/year)
ΔS = Change in groundwater storage (taken as zero) (mm/year)

9.3. Climatic Data

The climatic data including monthly average temperature and precipitation were obtained from Environment Canada, for Toronto Island A weather station (Climate Identifier: 6158665, 43˚38'N, 79˚24'W) located at about 24.8 km distance from the Site.

Data was available between the years 1958 to 1994, i.e., 36 years. Temporal variations of mean annual temperature and precipitation are shown on Figures 9-3 and 9-4.

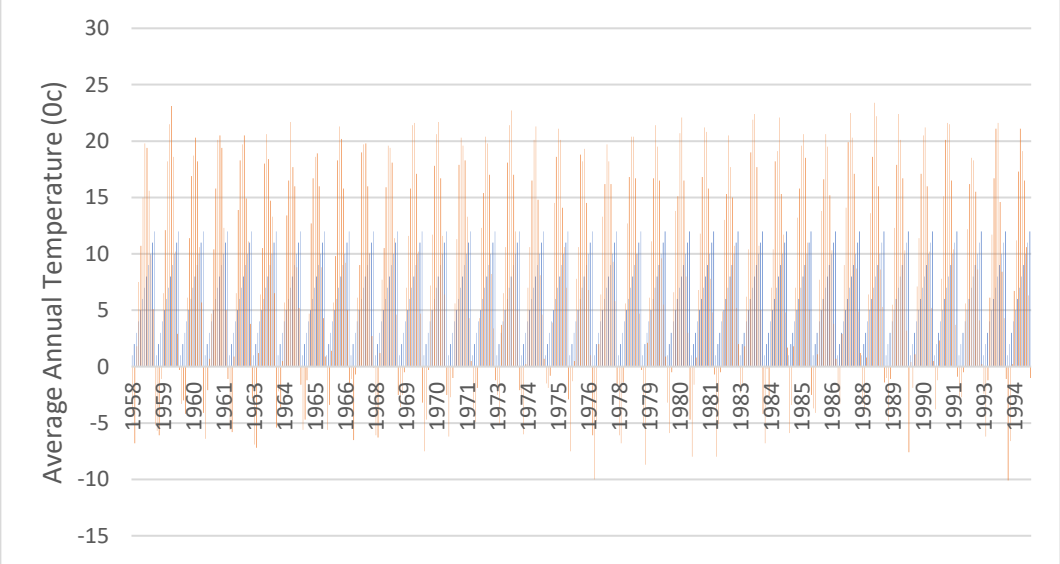


Figure 9-3: Mean Annual Temperature at the Site

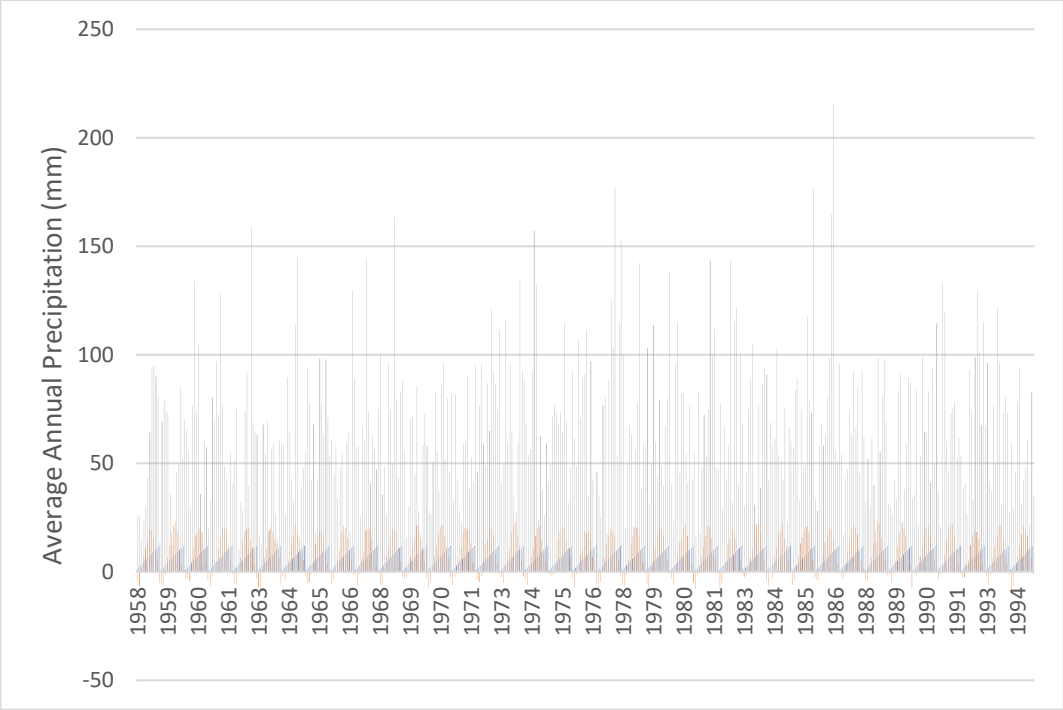


Figure 9-4: Mean Annual Precipitation at the Site

Average monthly variations of both temperature and precipitation were calculated for the period from 1958 to 1994 (36 years) and is presented below in Figure 9-5. The highest average temperature was recorded in the month of July, while the highest precipitation was in the month of August.

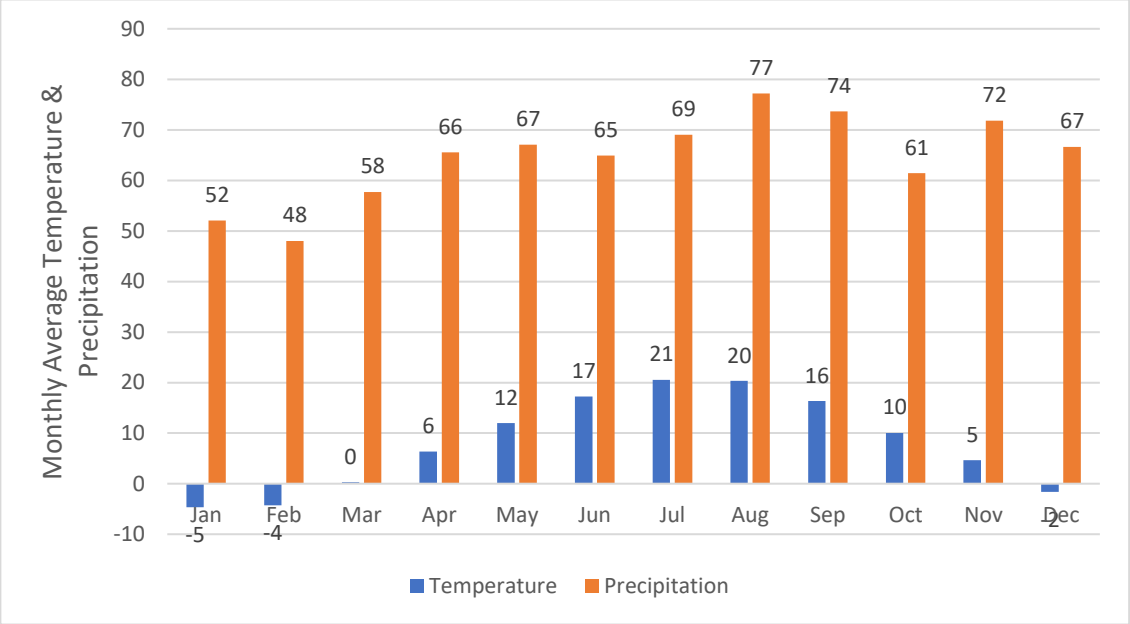


Figure 9-5: Mean Monthly Average Temperature and Precipitation at the Site

Based on the data for the precipitation and temperature, actual evapotranspiration was estimated to be about 572 mm/annum using the USGS Thornthwaite Monthly Water Balance (Appendix G), and the average annual precipitation was recorded to be 844 mm/annum.

9.4. Infiltration and Run-off

As indicated above, the actual evapotranspiration was estimated to be 572 mm/annum. Given the average annual precipitation of 844 mm/annum, there is a water surplus of 272 (=844-572) mm/annum occurring at the Site, which can either infiltrate into subsurface or go as run-off.

The rate of infiltration at a site is expected to vary, based on a number of factors to be considered in any infiltration model. To partition the available water surplus into infiltration and surface run-off, the Ministry of Environment, Conservation and Parks (MECP) infiltration factor was used. The MECP Storm Water Management Planning and Design Manual (2003) methodology for calculating total infiltration based on topography, soil type and land cover was used, and a corresponding run-off component was calculated for the soil moisture storage conditions.

9.5. Water Balance/Budgets

The calculation of infiltration and runoff in the stages of pre-development and post-development is provided in Appendix G and are presented in Tables 9-2 to 9-4 below.

Table 9-2: Annual Pre-Development Water Balance

Land Use		Area (m^2)	Precipitation (m^3)	Evapotranspiration (m^3)	Infiltration (m^3)	Run-off (m^3)
Impervious Areas	Paved Area	17,230.24	14,542	1,454	0	13,088
	Building/Roof Area	7,670.14	6,474	647	0	5,826
Pervious Areas	Landscape Area	2,875	2,427	1,645	547	235
		27,776	**23,443**	**3,746**	**547**	**19,149**
Assuming no infiltration occurring in paved and roof areas, 10% of precipitation to be evaporated from paved and roof areas.						

Table 9-3: Annual Post-Development Water Balance

Land Use		Area (m^2)	Precipitation (m^3)	Evapotranspiration (m^3)	Infiltration (m^3)	Run-off (m^3)
Impervious Areas	Paved Area	4,139	3,493	349	0	3,144
	Building/Roof Area	7,366	6,217	622	0	5,595
Pervious Areas	Landscape Area	16,270	13,732	9,307	3,098	1,328
		27,776	**23,443**	**10,278**	**3,098**	**10,067**
Assuming no infiltration occurring in paved and roof areas, 10% of precipitation to be evaporated from paved and general roof areas.						

Table 9-4: Comparison of Pre- and Post Development Water Balance Components

	Precipitation (m^3)	Evapotranspiration (m^3)	Infiltration (m^3)	Run-off (m^3)
Pre-Development	**23,443**	**3,746**	**547**	**19,149**
Post-Development	**23,443**	**10,278**	**3,098**	**10,067**
Change in Volume		**6,531**	**2550**	**-9,082**
Change in (%)			**466**	**-47**

9.6. Summary of Water Balance Calculation

Based on the above calculations:

1) There is a net decrease in run-off at the Site of about 9,082 m^3/annum (or 47% decrease), from 19,149 m^3/annum to 10,067 m^3/annum. This decrease is a result of the landscaping of the Site with more pervious areas such as grass land areas and reduction in paved area.
2) There is a net excess of about 2,550 m^3 /annum (466% increase) in the post-development infiltration from 547 m^3 to 3,098 m^3 on a yearly basis.

10.0. ASSESSMENT OF POTENTIAL IMPACTS

An assessment was made on the potential impacts due to short-term construction dewatering or long-term drainage on the natural features and/or use of water wells.

10.1. Natural Features

As discussed, natural features such as wetlands and woodlands are not present on or adjacent to the Site. Therefore, any impact on these natural features on or near the Site would not be anticipated. Mullet Creek is located at the east side of the development area.

10.2. Private Water Wells Near the Site

The MECP water well database indicated that there is a 2 GPM commercial water supply well identified within 500 m of the Site that was installed over 60 years ago and is very unlikely to still be in use. Given that the Site and its vicinity are in an urban area of the City of Mississauga, where city water is provided, the impact due to the proposed development on the private water wells would not be anticipated. Moreover, due to the proposed development, infiltration will be increased because of the increased pervious area at the Site.

10.3. Source Water Protection Area

The Site does not lie either in a groundwater wellhead protection area (WHPA), surface water intake protection zones, Significant Groundwater Recharge Area (SGRA). There Site is classified as being in a Highly Vulnerable Aquifer (HVA) area, however site-specific data doesn't show any aquifer units; in addition, there are no nearby groundwater users. There should be no impacts on the water sources (surface water or groundwater) due to the proposed development.

10.4. Ground Settlement

Based on the dewatering requirement assessment, the maximum zone of influence was estimated to be 31 m from the edge of excavation due to short term construction dewatering and 28 m from the edge of the building for the long-term dewatering. There are existing buildings located within the estimated ZOIs, which include the properties at the west of the Site and a residential building located to the southeast of the Site.

As a result, the potential dewatering activities may likely cause a concern of ground settlement on the neighboring properties.

11.0. CONCLUSIONS AND RECOMMENDATIONS

This report was prepared by SIRATI in support of a proposed re-development at the Site located at 95 Joymar Drive, in the City of Mississauga, Ontario. Based on the hydrogeological investigation conducted on the Site, the following conclusions and recommendations are presented:

- The Site and its vicinity drains within the Lake Ontario East Tributaries (Sixteen Mile Creek), Subwatershed in Mary Fix Creek-Credit River Watershed under the jurisdiction of the Credit River Conservation (CVC). Mullet Creek passes along the east side of the Site and in direct air distance of 4.68 km southeast of the Site drains into Credit River and finally Credit river drains to Lake Ontario.
- The Site is located in the Till Moraines physiographic region and near the boundary of Till Plains (Drumlinized) and cover by thin layer of drift deposits and underlain by shale of the Upper Ordovician Queenston Formation composed of shale with interbed siltstone, sandstone, limestone and dolostone.
- The soil stratigraphy revealed at the Site generally consisted of fill materials under the topsoil, underlain by native soil of sand, locally with silt, and then by shale bedrock. The bedrock was encountered at the depths ranging from 4.6 mbgs to 4.8 mbgs.
- Groundwater levels measured in the monitoring wells ranged from 1.93 mbgs to 3.64 mbgs, while elevations ranged from 151.88 mAMSL to 154.33 mAMSL.
- The hydraulic conductivity estimated for the screened shale bedrock ranged from 1.0×10^{-7} m/s to from 8.7×10^{-6} m/s, with a geometric mean of 9.3×10^{-7} m/s.
- Based on the soil and groundwater conditions and the proposed development design and drawings, the short-term dewatering rate is anticipated to be approximately 477,849 L/day with a safety factor of 2 considered, which includes the runoff accumulated due to 20 mm daily precipitation. A PTTW will be required for the anticipated temporary construction dewatering.
- The long-term sub-drain discharge is anticipated to be approximately 260,650 L/day (with a safety factor of 1.5 considered). A PTTW will be required for the proposed long-term sub-drainage discharge.
- The maximum zone of influence due to the construction dewatering was estimated to be approximately 31 m from the edge of the excavation or building.
- The result of water quality data shows that there are various exceedances in the water quality base on the Peel Region Sanitary Sewer Use By-Law. Therefore, the groundwater generated from the construction dewatering at the Site can be considered to be discharged to the local sanitary

sewer system after filtration or treatment. Should the water generated be discharged to the storm water sewer system, additional treatment shall be applied.

- A permit or agreement to use the sewer system shall be obtained from the local government or agency prior to water discharge.
- Based on the water balance assessment, an infiltration excess is anticipated in an amount of 2,550 m^3/year, while the runoff will decrease by 9,082 m^3/year.
- The design and installation of a construction dewatering system is usually the responsibility of the construction contractor. The contractor should verify the information presented in this report. This may be done by examining the hydrogeological conditions in a large test pit or a full-range pumping test by the dewatering subcontractor.
- It is recommended to conduct surveying and monitoring prior to and during construction dewatering to monitor any settlement effects on existing buildings and structures on the neighboring properties.
- During the period of active dewatering, water levels should be monitored within the excavation footprints and around the perimeter of the excavation to confirm the zone of influence from dewatering system. In addition, the discharge quality should be monitored.
- A Dewatering Management Plan should be devised and approved by SIRATI prior to commencement of dewatering at the Site.
- The records of all water taking must be maintained, including the dates and duration of water takings, and the total measured volume of water pumped per day for each day that water is taken. These records must be kept up to date and available at or near the Site of the water taking so that they can be produced for inspection if requested by Provincial or Municipal Officers.

12.0. SELECTED BIBLIOGRAPHY

Construction Dewatering and Groundwater Control: New Methods and Applications, Third Edition. J. P. Powers, A. B. Corwin, Paul C. Schmall and W. E. Kaeck, 2007 John Wiley & Sons, Inc. ISBN: 978-0-471-47943-7.

Dewatering and Groundwater Control, Technical Manual No. 5-818-5, Air Force Manual No. 88-5, Chapter 6, Navy Manual No. P-418, Departments of the Army, The Navy, and The Air Force, November 1983.

Executive Summary (Phase 1): Cooksville Creek Watershed Study and Impact Monitoring-Characterization Report. Aquafor Beech Ltd. March 2011.

Freeze, R. A. and Cherry, J. A., 1979, Groundwater, Prentice-Hall, Englewood Cliffs, New Jersey

Pat M. Cashman and Martin Preene, 2013, Groundwater Lowering In Construction: A Practical Guide To Dewatering. 2nd Edition

Ontario Geologic Survey, Preliminary Map P 2204, Quaternary Geology of Toronto and Surrounding Area, Sharp D.R., 1980

Ministry of Natural Resources, Ontario Geologic Survey, 1984, The Physiography of Southern Ontario, Third Edition, L. J. Chapman and D. F. Putnam.

Bedrock Geology; Ontario Ministry of Northern Development, Mines and Forestry; http://www.mndmf.gov.on.ca/mines/ogs_earth_e.asp; 2010.

Physiography of Southern Ontario; Ontario Ministry of Northern Development, Mines and Forestry; http://www.mndmf.gov.on.ca/mines/ogs_earth_e.asp , 2010.

Surficial Geology of Southern Ontario; Ontario Ministry of Northern Development, Mines and Forestry; http://www.mndmf.gov.on.ca/mines/ogs_earth_e.asp; 2010.

MECP on-line databases

TRCA on-line database

13.0. LIMITATIONS AND USE OF THE REPORT

This report was produced by SIRATI for the sole use of the Client for the Site and may not be relied upon by any other person or entity without the written authorization of SIRATI. The conclusions presented in this report are professional opinions based on the historical and current records search, visual observations and limited information provided by persons knowledgeable about past and current activities on this site. As such, SIRATI cannot be held responsible for environmental conditions at the Property that was not apparent from the available information. No investigation method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level.

Professional judgement was exercised in gathering and analyzing data and formulation of recommendations using current industry guidelines and standards. Similar to all professional persons rendering advice, SIRATI cannot act as absolute insurer of the conclusion we have reached. No additional warranty or representation, expressed or implied, is included or intended in this report other than stated herein the report.

The assessment should not be considered a comprehensive audit that eliminates all risks of encountering environmental problems. The information presented herein this report is primarily based on information collected during the hydrogeological study based on the condition of the Property at the time of site inspection/drilling followed by a review of historical data, as appended to this report.

In assessing the environmental setting of the Property, SIRATI has solely relied upon information supplied by others in good faith and has therefore assumed that the information supplied is factual and accurate. We accept no responsibility for any inaccurate information, misrepresentation or for any deficiency of the information supplied by any third party.

The scope of services performed in the execution of this investigation may not be appropriate to satisfy third parties. SIRATI accepts no responsibility for damages if any, suffered by any third party as a result of decisions made or action taken based on this report. Any use, copying or distribution of the report in whole or in part is not permitted without the express written permission of SIRATI and use of findings, conclusions and recommendations represented in this report, is at the sole risk of third parties.

In the event that during future work new information regarding the environmental condition of the Property is encountered, or in the event that the outstanding responses from the regulatory agencies indicate outstanding issues on file with respect to the Property, SIRATI should be notified in order that we may re-evaluate the findings of this assessment and provide amendments, as required.

14.0. SIGNATURES

Should you have any questions regarding the information presented or limitation set in this report, please do not hesitate to contact our office.

Yours truly,

Sirati and Partners Consultants Ltd.

Nicholas Fitzpatrick, M.A.Sc., P.Eng.
Senior Hydrogeologist

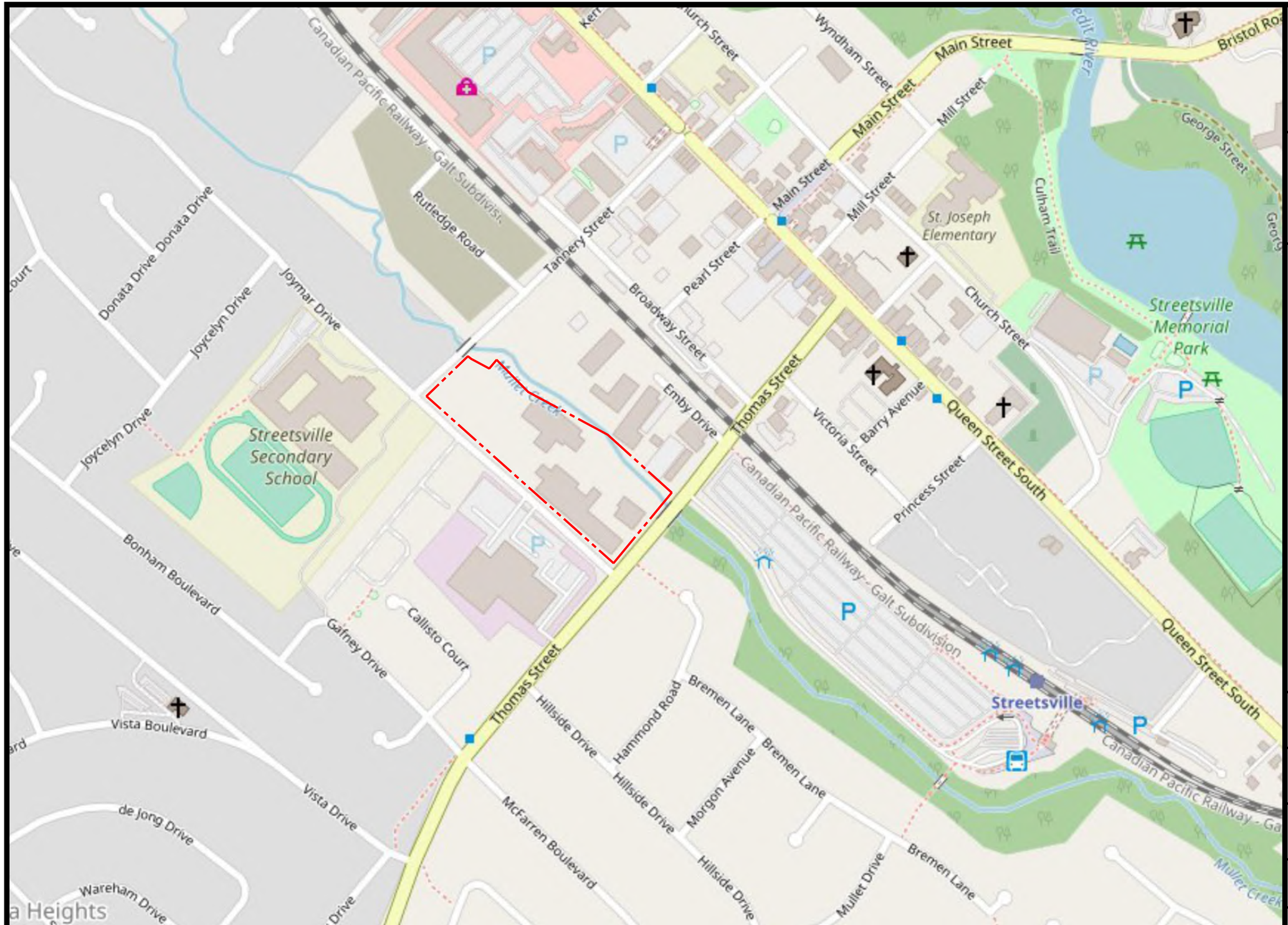
Behzad Mehrgini, Ph.D.
Project Manager

Archie Sirati, Ph.D., P.Eng.
Principal

FIGURES

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions



Source: Map Data © City of Mississauga 1995-2018

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SIRATI & PARTNERS

160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

Approximate Property Boundary

Project Title:

Hydrogeological Investigations

Site Location:

64, 66 Thomas Street, 95 Joymar Drive,
65 Tannery Street, Mississauga, ON.

Figure Title:

Site Location Plan

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	1-1

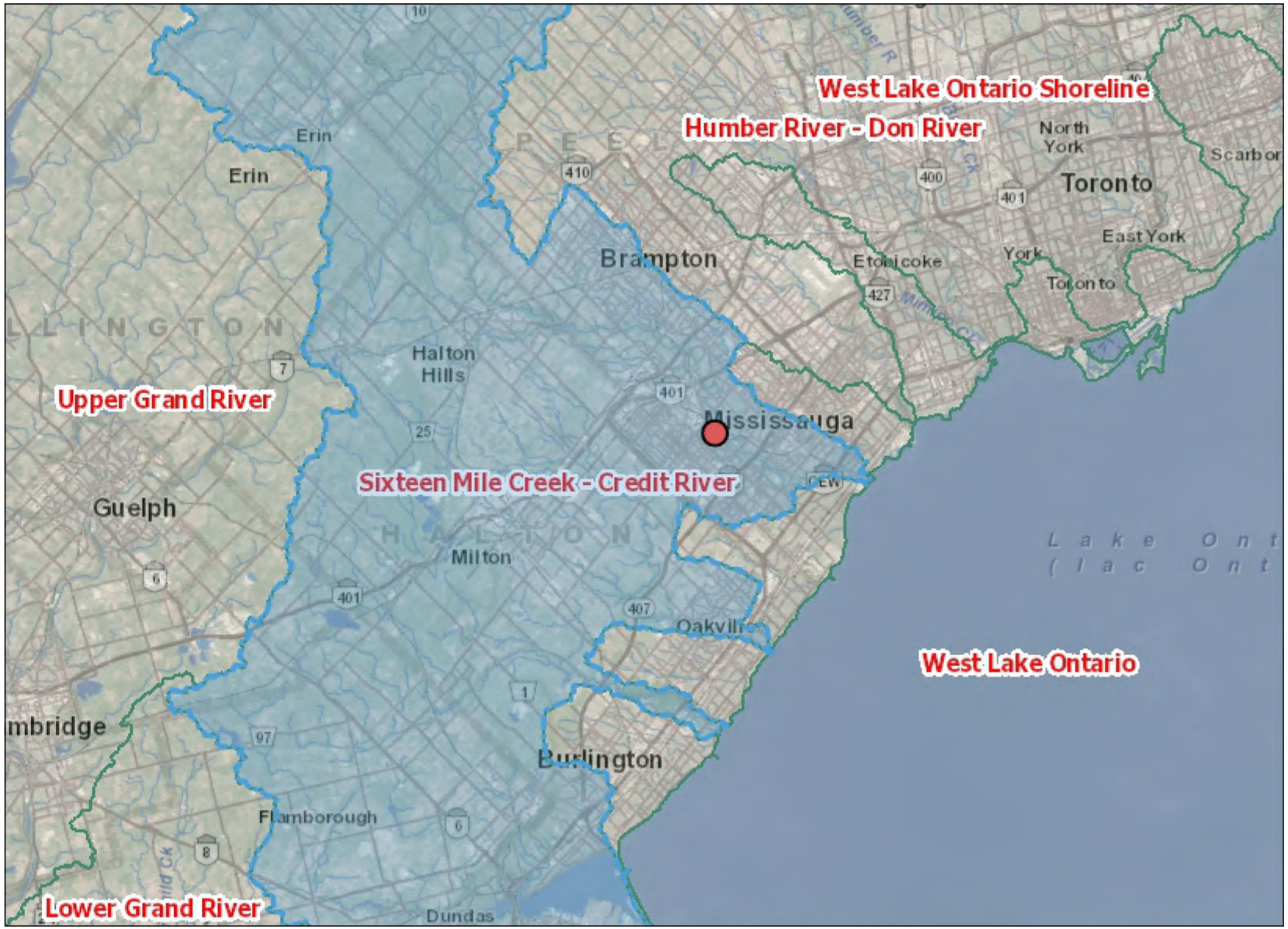
Ontario

MINISTRY OF NATURAL RESOURCES AND FORESTRY

Ontario Watershed Information Tool

Tertiary Watershed Area- 66 Thomas ST., Mississauga, ON.

Notes:



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- Tertiary Watershed
- Quaternary Watershed
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- Hudson - James Bay Basin
- Nelson River Basin
- Diversions
- Waterbody Outlet
- Conservation Authority Dam
- Provincial Dam
- Federal Dam
- OPG Dam
- Other Dam
- Virtual Flow Segment

Land Cover Compilation

- Other
- Cloud/Shadow
- Clear Open Water
- Turbid Water
- Shoreline
- Mudflats
- Marsh
- Swamp
- Fen
- Bog
- Heath
- Sparse Treed
- Treed Upland
- Deciduous Treed
- Mixed Treed
- Coniferous Treed
- Plantations - Treed Cultivated
- Hedge Rows
- Disturbance
- Open Cliff and Talus
- Alvar
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- Tallgrass Savannah
- Tallgrass Woodland
- Sand/Gravel/Mine Tailings/Extraction
- Bedrock
- Community/Infrastructure
- Agriculture and Undifferentiated Rural Land Use

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Projection: Web Mercator

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North:

Legend:

Approximate Property Location

Project Title:

Hydrogeological Investigations

Site Location:

64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:

Sub-Watershed Map

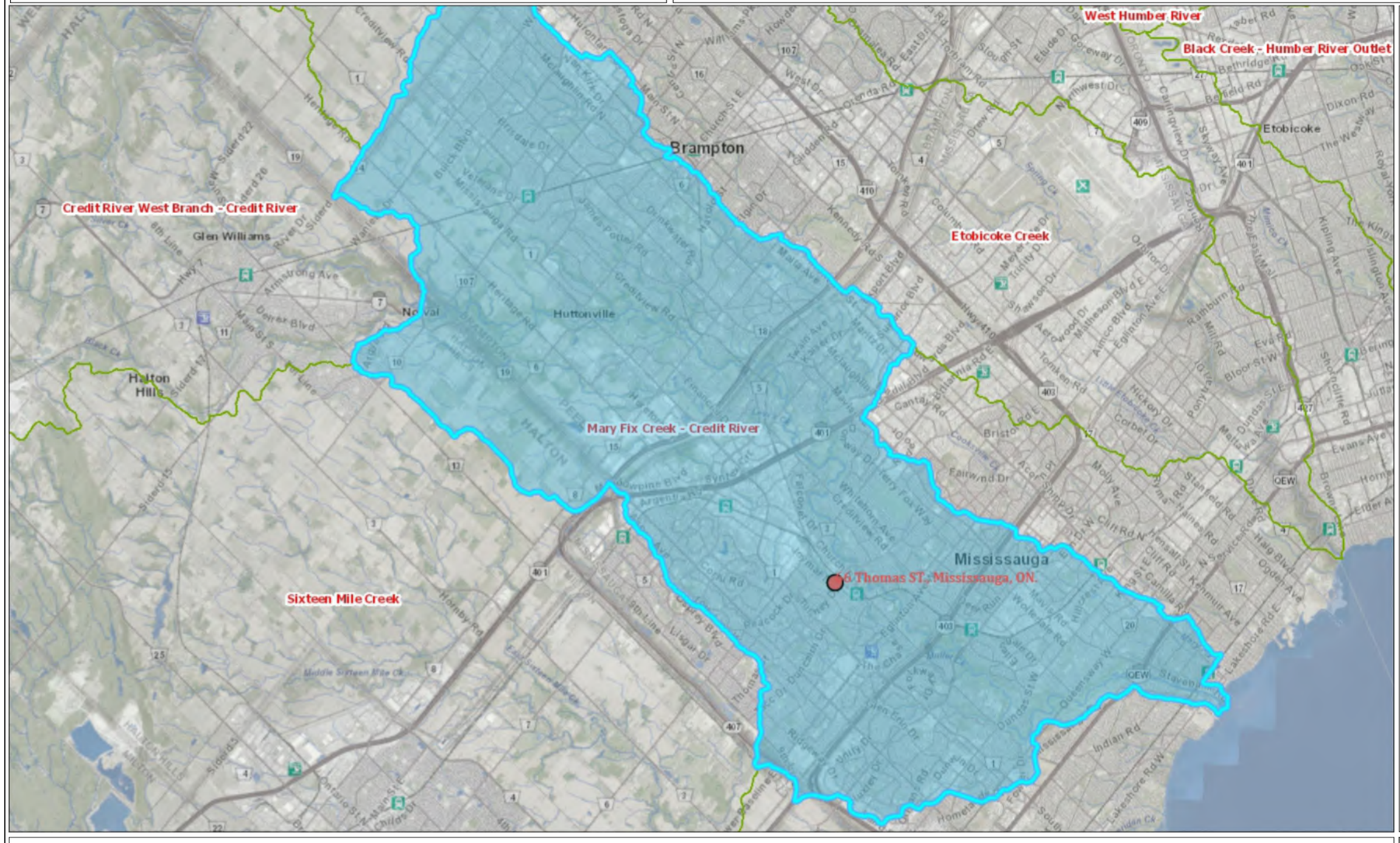
Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	3-1

Ontario — Ministry of Natural Resources and Forestry

Ontario Watershed Information Tool

Quaternary Watershed Area- 66
Thomas ST., Mississauga, ON

Notes: Mary Fix Creek - Credit River



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- Community/Infrastructure
- Agriculture and Undifferentiated Rural Land Use

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Projection: Web Mercator

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North:

Legend:

Approximate Property Location

Project Title:

Hydrogeological Investigations

Site Location:

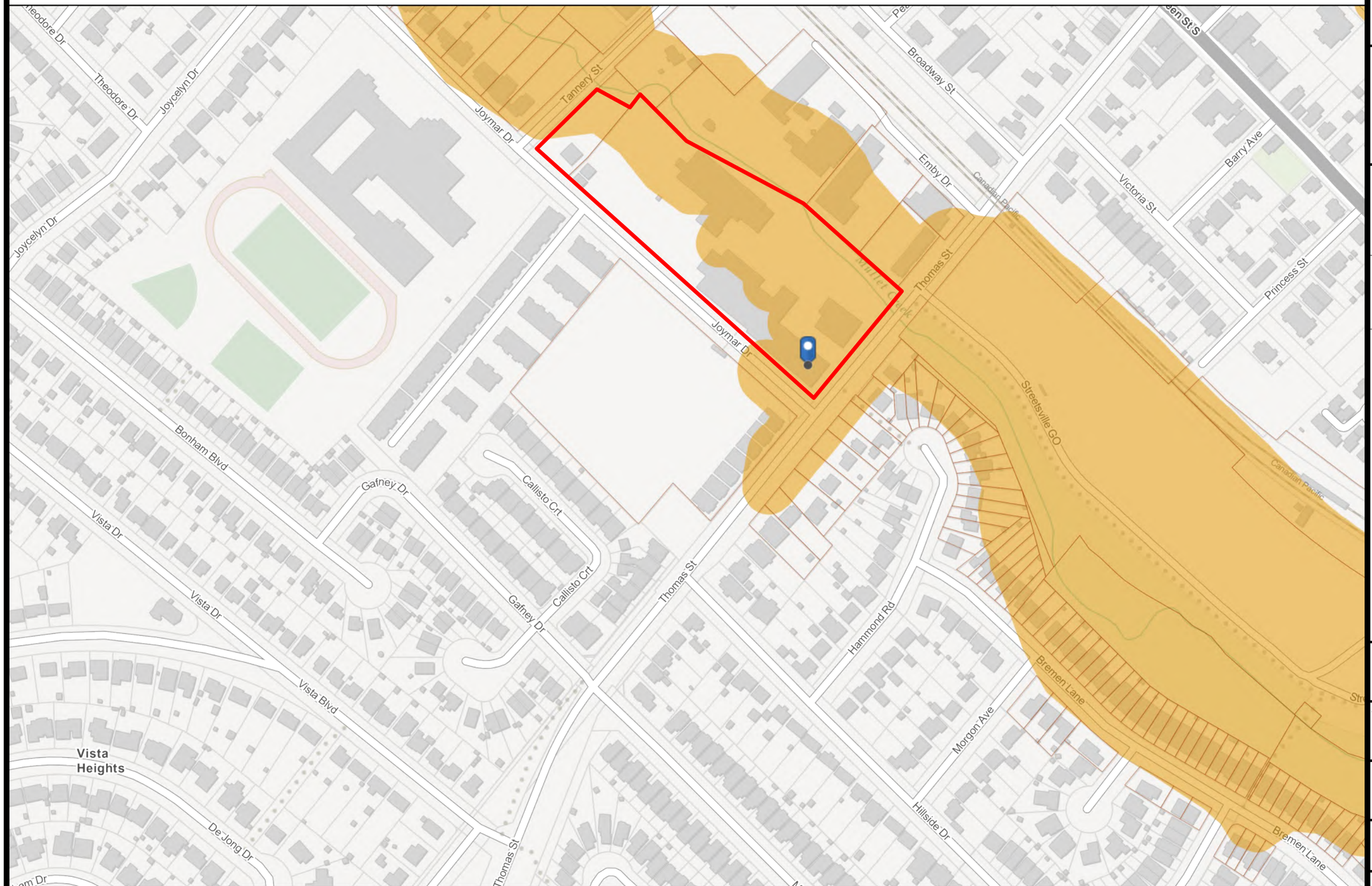
64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:

Sub-Watershed Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	3-2

Regulation Screening- Credit Valley Conservation



Source: Credit Valley Conservation

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North:

Legend:

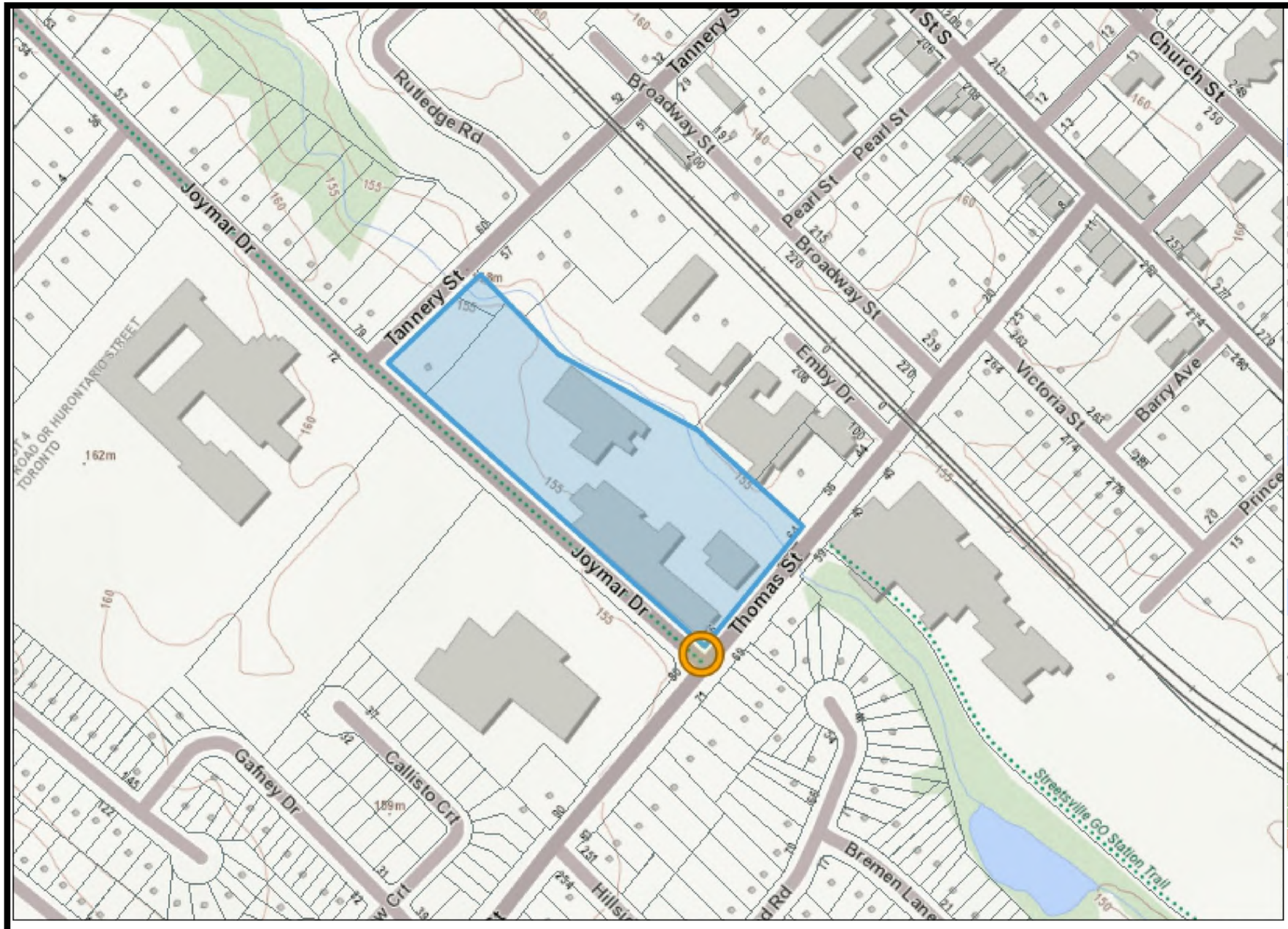
- Approximate Property Boundary
- Credit River Watershed Boundary
- Parcels around Regulated Area
- Generic Regulation Mapping

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive,
65 Tannery Street, Mississauga, ON.

Figure Title:
CVC Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	3-3



Topographic Legend

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- Building to Scale
- Runway
- Heliport \ Hospital Heliport
- Seaplane Base
- Ferry Route
- Trail Head \ Trail
- Railway
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- Winter Road
- Road with Bridge
- Road with Tunnel
- One Way Road
- Road with Permanent Blocked Passage
- Road with Address Ranges
- Hydro Line, Communication Line or Unknown Transmission Line
- Natural Gas Pipeline, Water Pipeline or Unknown Pipeline
- Spot Height
- Index Contour
- Contour
- Wooded Area
- Wetland
- Waterbody
- Waterbody Elevation
- Watercourse
- Falls
- Rapids
- Rapids \ Falls
- Rapids
- Rocks
- Lock Gate
- Dam \ Hydro Wall
- Dam \ Hydro Wall
- Provincial \ State Boundary
- International Boundary
- Upper Tier \ District Municipal Boundary
- Lower Tier \ Single Tier Municipal Boundary
- Lot Line
- Indian Reserve
- Provincial Park
- National Park
- Conservation Reserve
- Military Lands

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Projection: Web Mercator

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Source: Make A Map: Natural Heritage Areas

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Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Assessment Parcel
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
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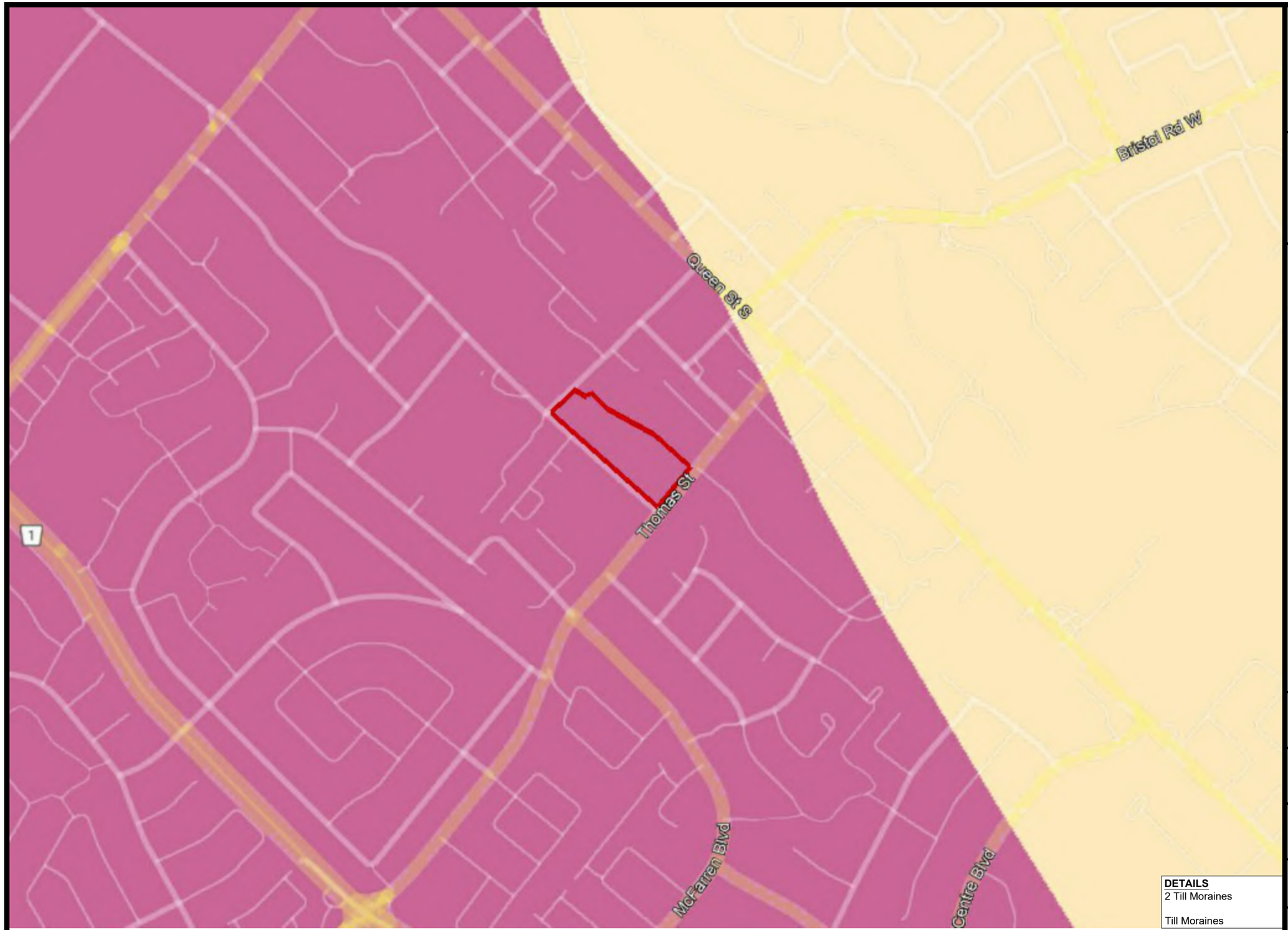
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Conservation Reserve
- Provincial Park
- Natural Heritage System

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:
Topography & Natural Heritage Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	3-4



Source: Ontario Geological Survey (OGS) Google Earth

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Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

Approximate Property Boundary

LEGEND

Physiographic Landforms

1	Escarpments
2	Till Moraines
3	Spillways
4	Kame Moraines
5	Till Plains (Undrumlinized)
6	Till Plains (Drumlinized)
7	Drumlins
8	Bevelled Till Plains
9	Limestone Plains
10	Shale Plains

Project Title:

Hydrogeological Investigations

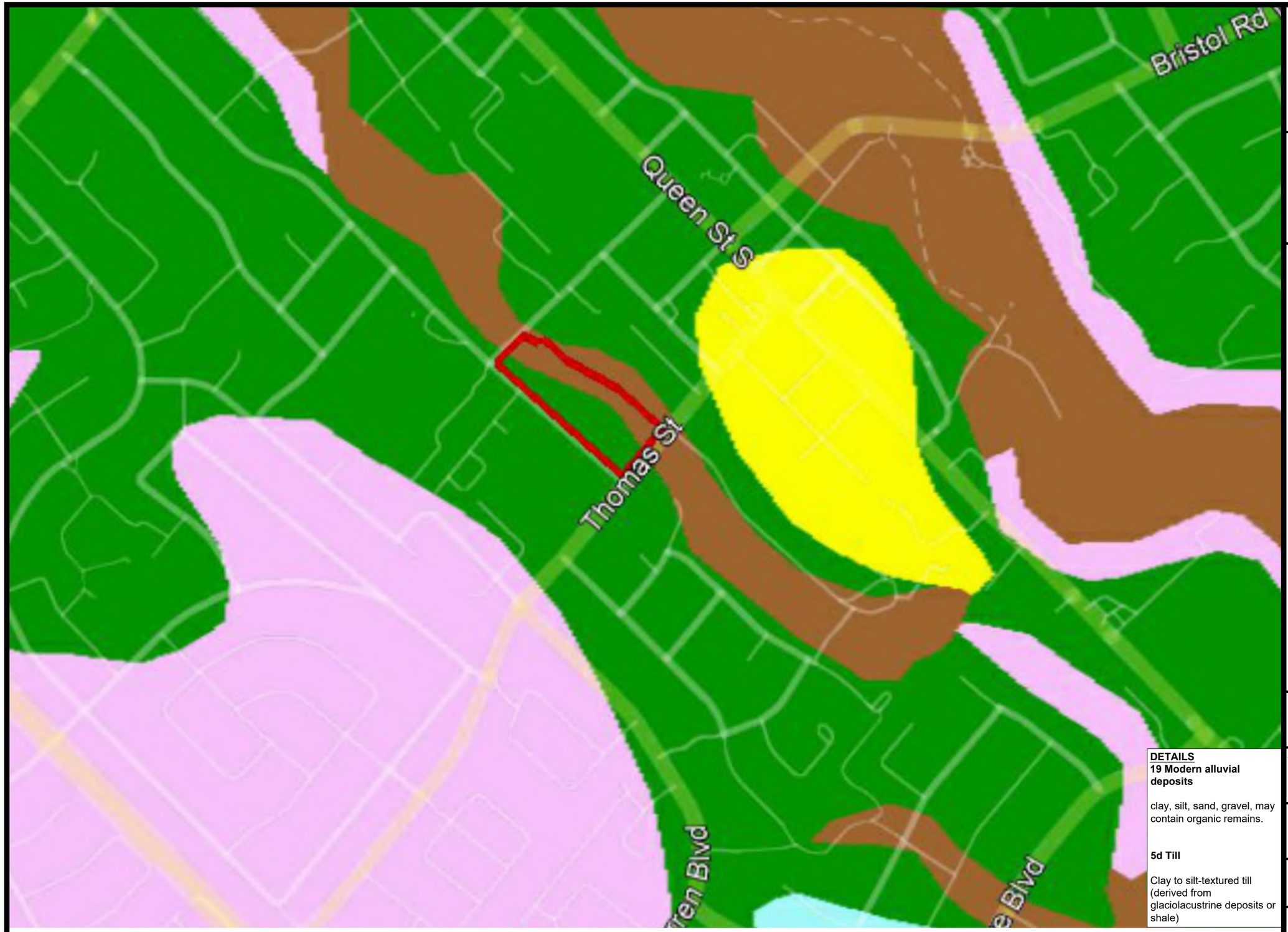
Site Location:

64, 66 Thomas Street, 95 Joymar Drive,
65 Tannery Street, Mississauga, ON.

Figure Title:

Physiography Map

Scale: As Shown	**Project Number:** SP23-01177-00
Date: July, 2023	**Figure Number:** 4-1



Source: Ontario Geological Survey (OGS) Google Earth

0 100 m

DETAILS

19 Modern alluvial deposits

clay, silt, sand, gravel, may contain organic remains.

5d Till

Clay to silt-textured till (derived from glaciolacustrine deposits or shale)

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North:

N

Legend:

Approximate Property Boundary

- 20 — **Organic Deposits:** peat, muck, marl
- 19 — **Modern alluvial deposits:** clay, silt, sand, gravel, may contain organic remains
- 18 — **Colluvial deposits:** boulders, scree, talus, undifferentiated landslide materials
- 17 — **Eolian deposits:** fine to very fine sand and silt
- 9 — **Coarse-textured glaciolacustrine deposits:** sand, gravel, minor silt and clay
  - 9a Deltaic deposits
  - 9b Littoral deposits
  - 9c Foreshore and basinal deposits
- 8 — **Fine-textured glaciolacustrine deposits:** silt and clay, minor sand and gravel
  - 8a Massive to well laminated
  - 8b Interbedded silt and clay and gritty, pebbly flow till and rainout deposits
- 7 — **Glaciofluvial deposits:** river deposits and delta topset facies
  - 7a Sandy deposits
  - 7b Gravelly deposits
- 6 — **Ice-contact stratified deposits:** sand and gravel, minor silt, clay and till
  - 6a In moraines, eskers, kames and crevasse fills
  - 6b In subaquatic fans
- 5a — **Till:** Silty sand to sand-textured till on Precambrian terrain
  - 5a Silty sand to sand-textured till on Precambrian terrain
- 5b — 5b Stone-poor, sandy silt to silty sand-textured till on Paleozoic terrain
- 5c — 5c Stony, sandy silt to silty sand-textured till on Paleozoic terrain
- 5d — 5d Clay to silt-textured till (derived from glaciolacustrine deposits or shale)
- 5e — 5e Undifferentiated older tills, may include stratified deposits

Project Title:

Hydrogeological Investigations

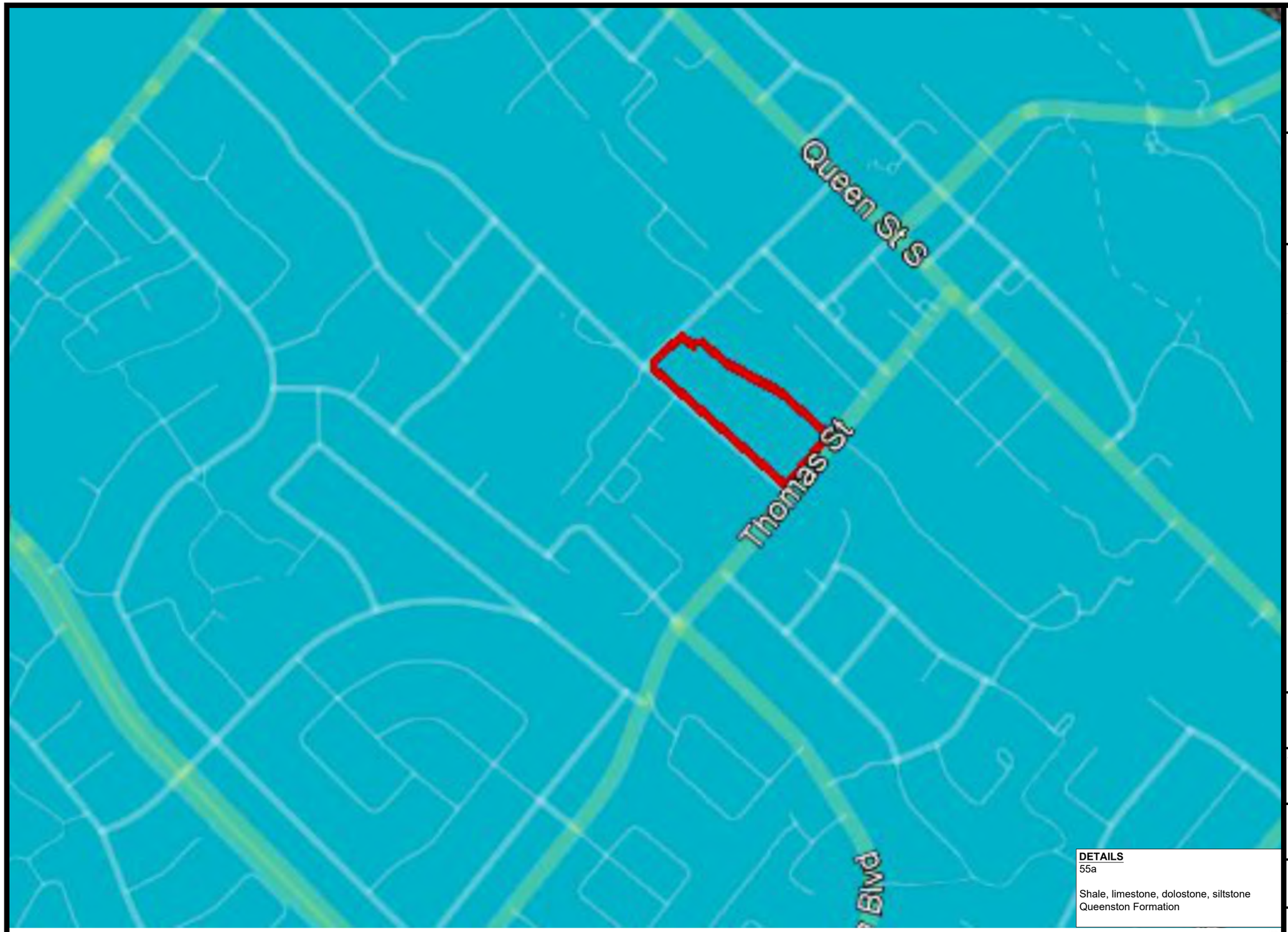
Site Location:

64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:

Surficial Geology Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	4-2



DETAILS
55a

Shale, limestone, dolostone, siltstone
Queenston Formation

m
0 250

Source: Ontario Geological Survey (OGS) Google Earth

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Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

Approximate Property Boundary

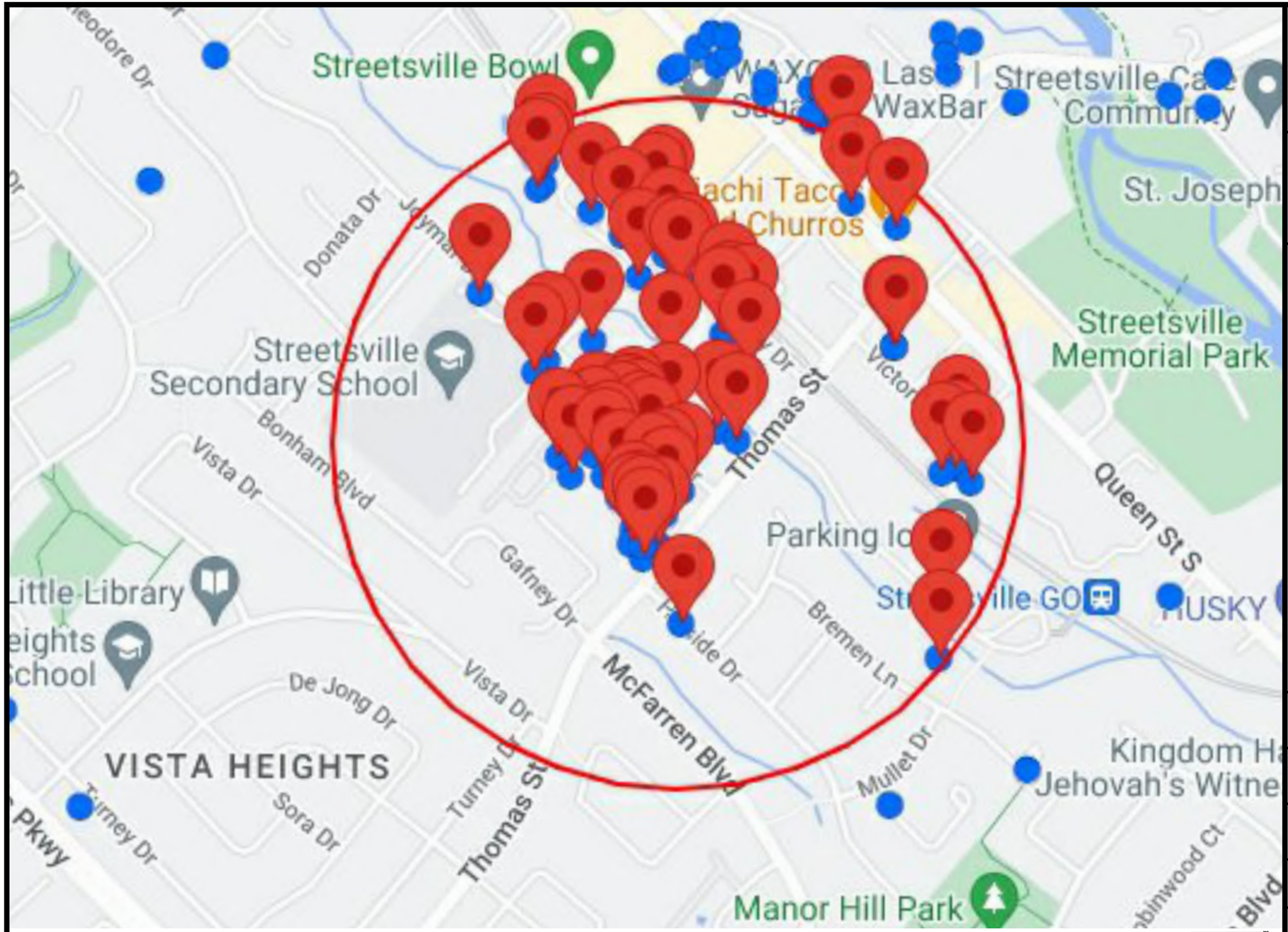
55 Shale, limestone, dolostone, siltstone
- 55a Queenston Fm.
- 55b Georgian Bay Fm.; Blue Mountain Fm.; Billings Fm.; Collingwood Mb.; Eastview Mb.
- 55c Linkward Gp.
- 55d Red Head Rapids Fm.
- 55e Churchill River Gp.
- 55f Bad Cache Rapids Gp.

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive,
65 Tannery Street, Mississauga, ON.

Figure Title:
Bedrock Geology Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date: July, 2023	**Figure Number:** 4-3



Source: MECP Well Record Map

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North:

Legend:

500m Study Area

MECP Well

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:
MECP Water Well Records Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	5-1

Source: Google Earth Map

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North:

Legend:

Approximate Property Boundary

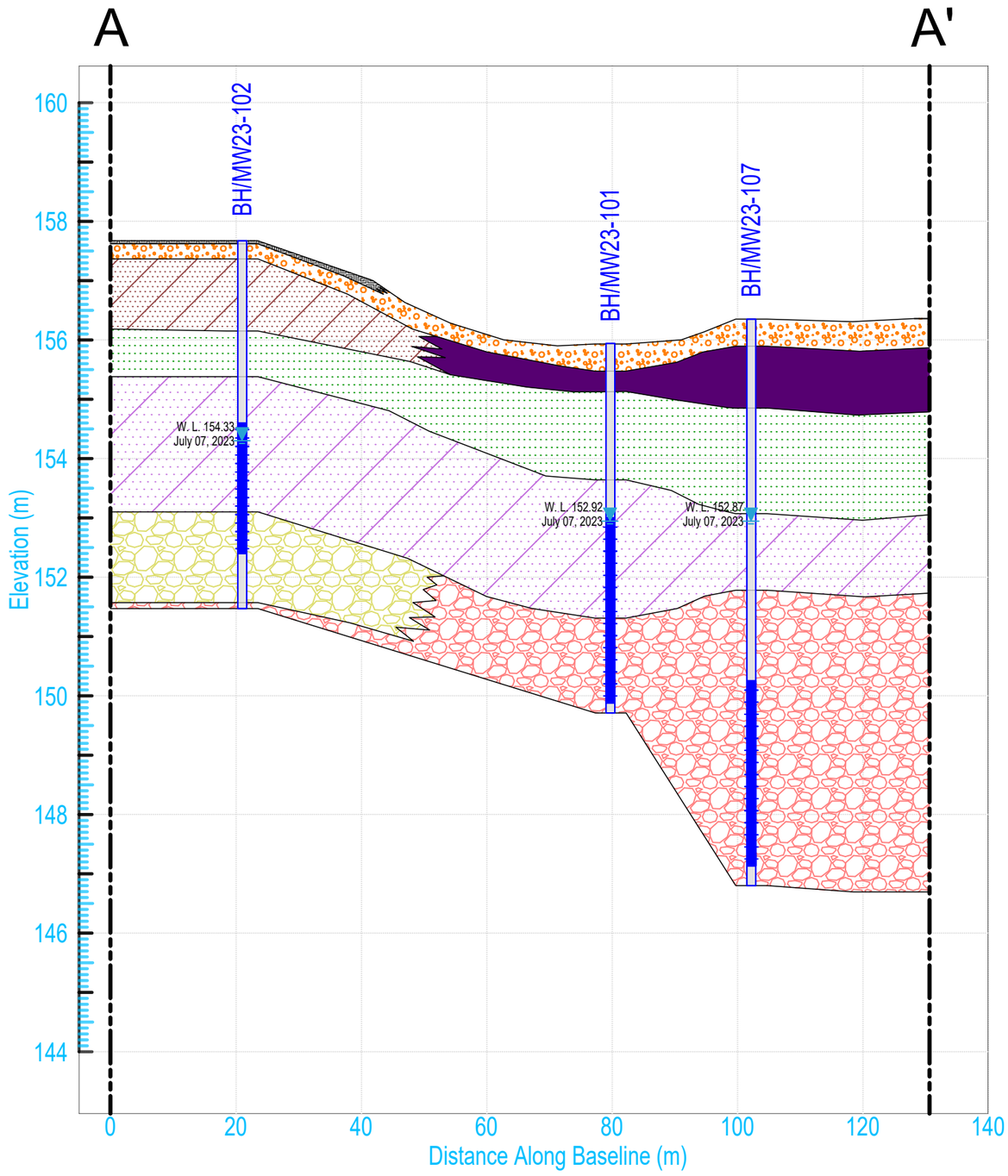
Borehole/ Monitoring Well

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive,
65 Tannery Street, Mississauga, ON.

Figure Title:
Borehole/Monitoring Well and Cross Section Location Plan

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	6-1



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Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Asphalt
- Granular Fill
- Fill
- Clayey Silt
- Clayey Silt till
- Sandy Silt Till
- Inferred bedrock
- Shale bedrock
- BH/MW-XX — Borehole / Well ID
- Water Level
- Well Screen

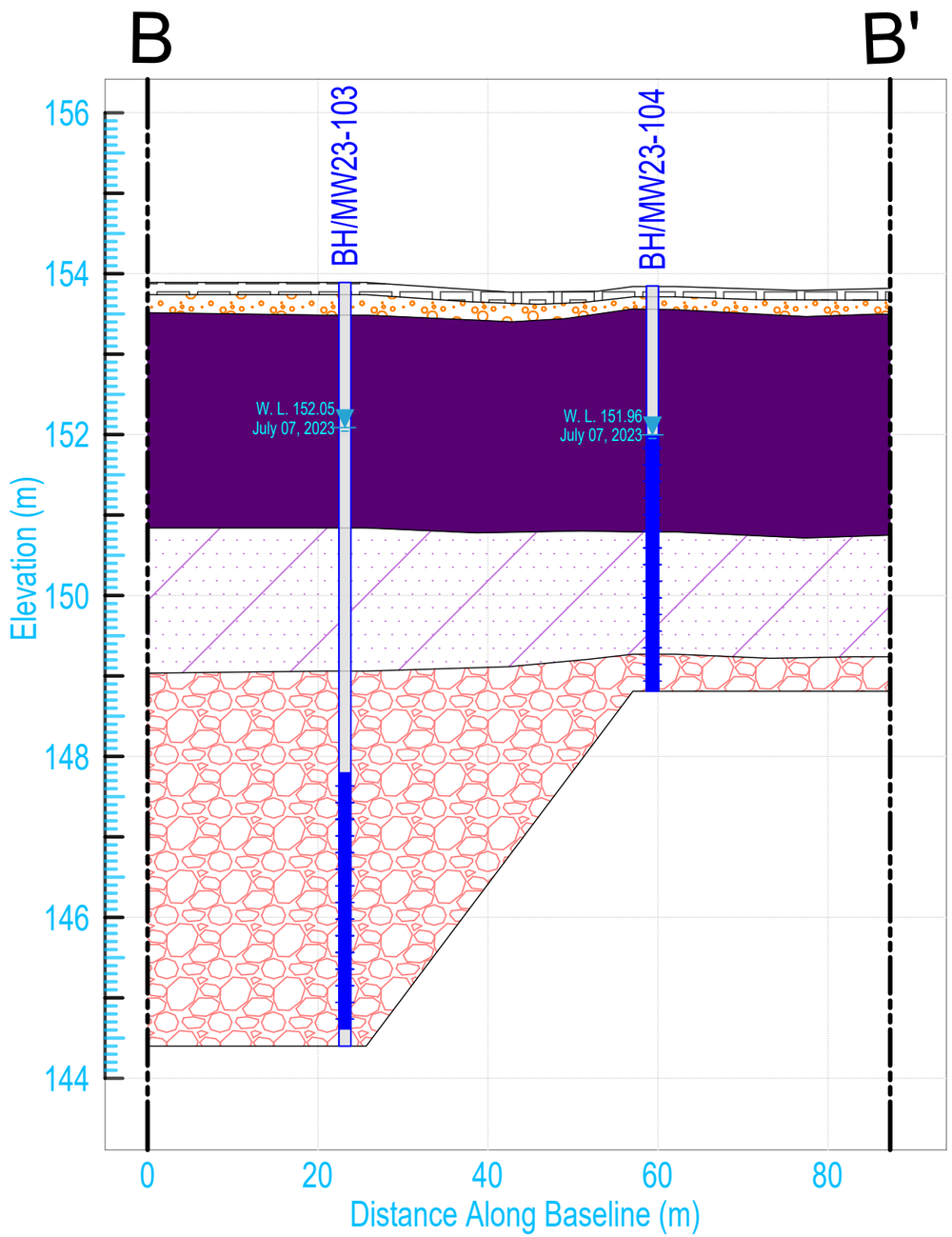
Note: Groundwater Elevation were obtained on July 07, 2023

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:
Geologic Cross Section A - A'

Scale:	Project Number:
N.T.S	SP23-01177-00
Date:	**Figure Number:**
July, 2023	7-1



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Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

Approximate Property Boundary

Asphalt

Granular Fill

Fill

Sandy Silt Till

Inferred bedrock

BH/MW-XX

Borehole / Well ID

Water Level

Well Screen

Note: Groundwater Elevation were obtained on July 07, 2023

Project Title:

Hydrogeological Investigations

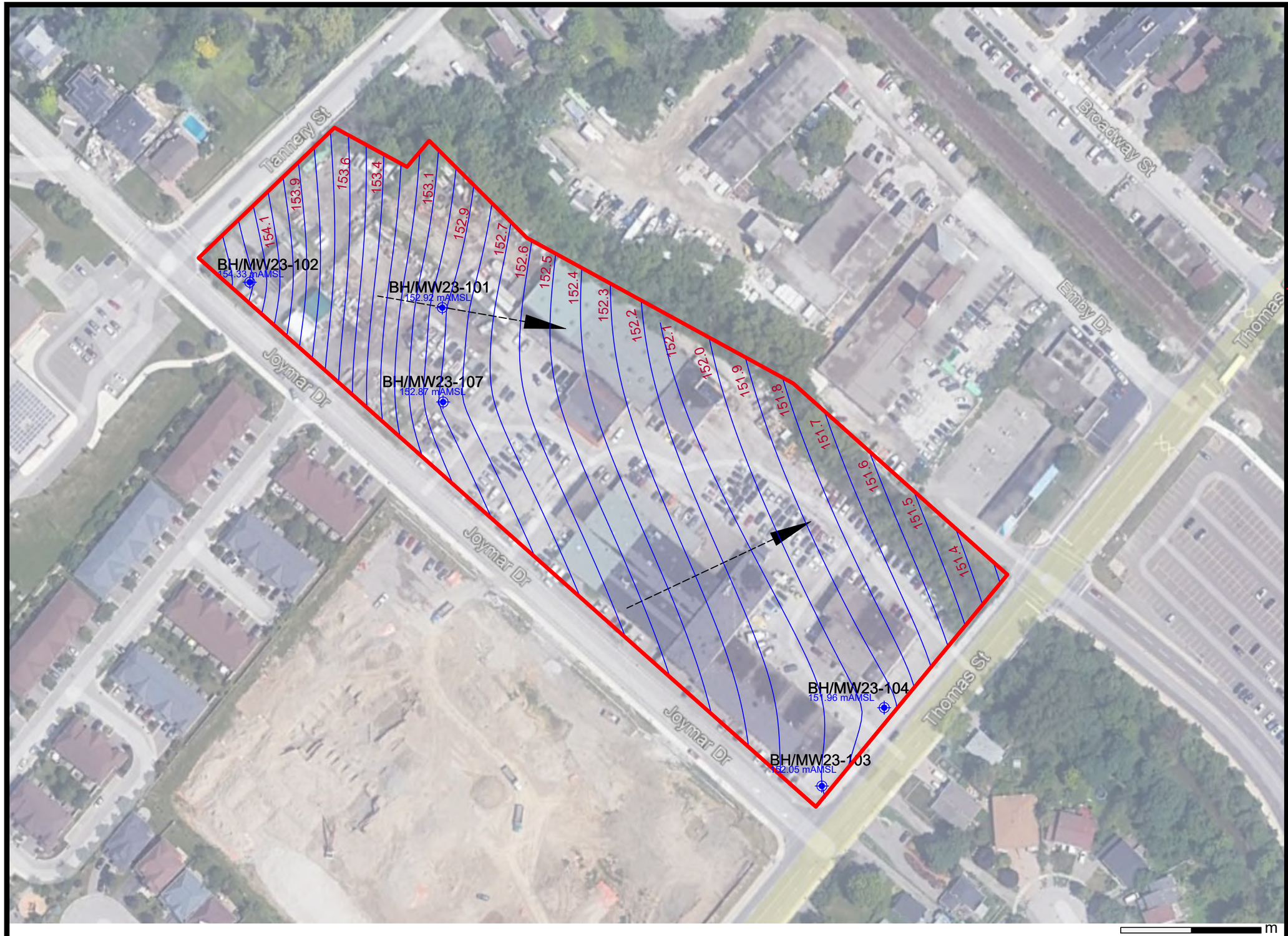
Site Location:

64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:

Geologic Cross Section B - B'

Scale:	Project Number:
N.T.S	SP23-01177-00
Date:	**Figure Number:**
July, 2023	7-2



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Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Approximate Property Boundary
- Geotechnical Borehole/Monitoring well
- Contour Line
- Inferred Shallow Groundwater Flow Direction

Note: Groundwater Elevation were obtained on July 07, 2023

Project Title:

Hydrogeological Investigations

Site Location:

64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:

Inferred Groundwater Flow Direction Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
March, 2024	7-3

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Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

- Property Boundary
- Paved Area
- Roof
- Landscape Area

Site Statistics:

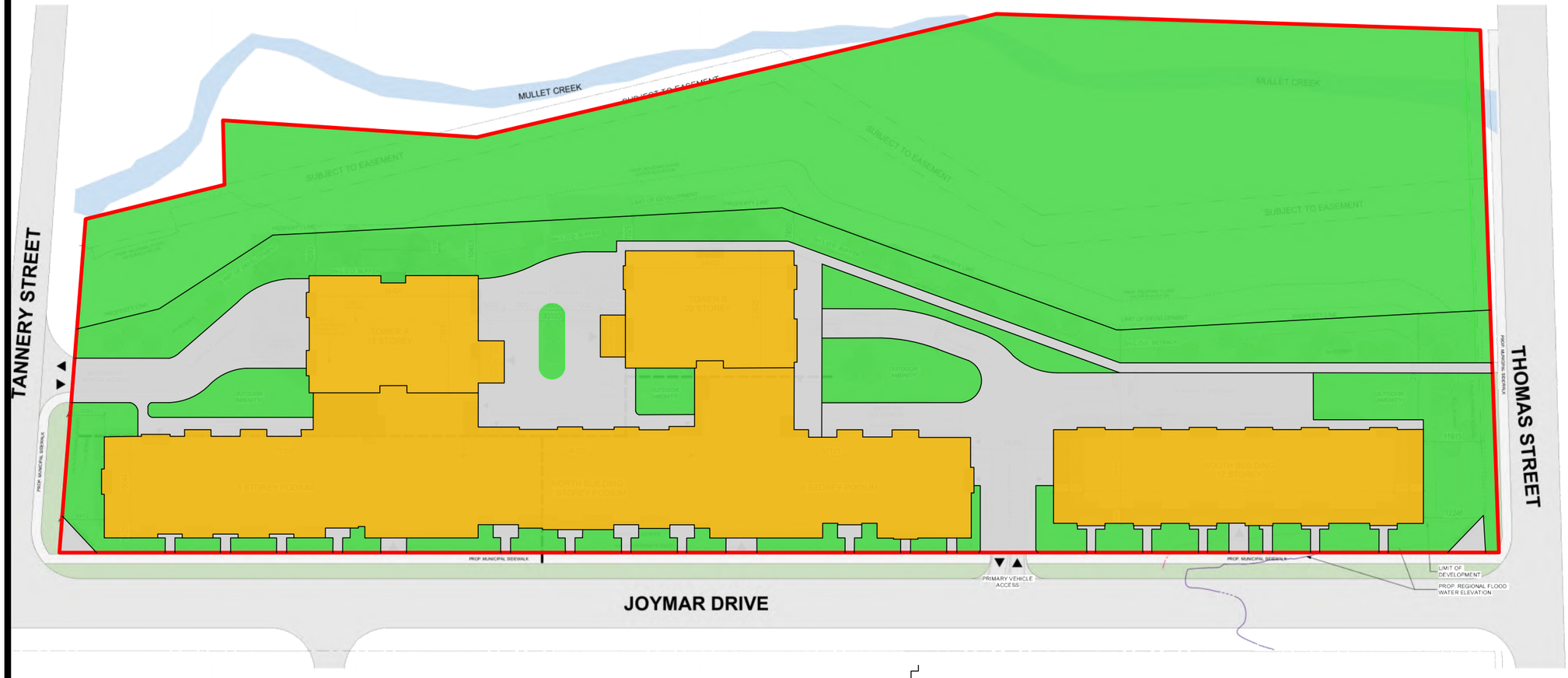
Paved Area:	17,230.24 sq.m
Roof:	7,670.14 sq.m
Landscape Area:	2,875.26 sq.m
Total	27,775.64 sq.m

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive,
65 Tannery Street, Mississauga, ON.

Figure Title:
Pre-Development Plan

Scale: As Shown	**Project Number:** SP23-01177-00
Date: March, 2024	**Figure Number:** 9-1



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DISCUSSION ONLY

SITE PLAN

D1.1

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 4 8 20

Scale 1 : 400 FULL SIZE
Scale 1 : 800 HALF SIZE

2024-01-09

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Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

Legend:

- Property Boundary
- Paved Area
- Roof
- Landscape Area

Site Statistics:

Paved Area:	4,139.18 sq.m
Roof:	7,366.25 sq.m
Landscape Area:	16,270.21 sq.m
Total	27,775.64 sq.m

Project Title:

Hydrogeological Investigations

Site Location:

64, 66 Thomas Street, 95 Joymar Drive,
65 Tannery Street, Mississauga, ON.

Figure Title:

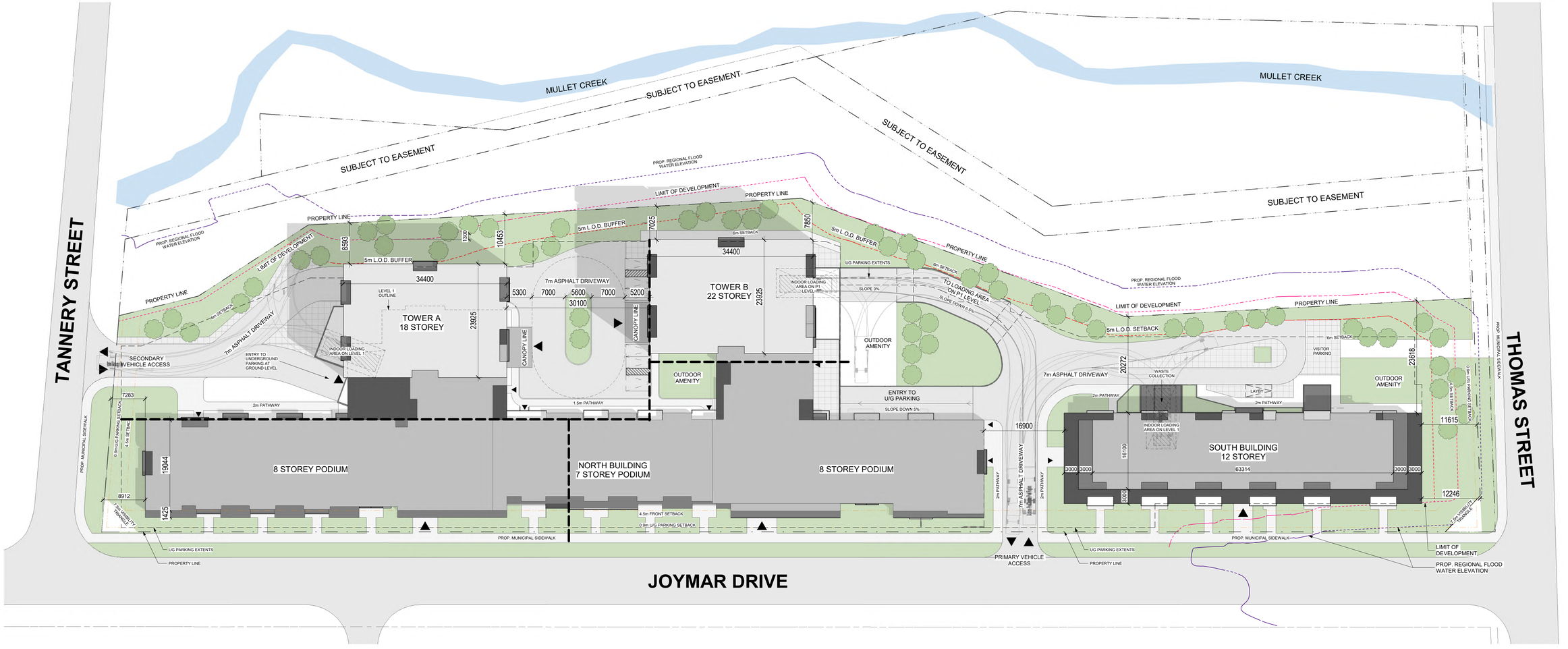
Post-Development Plan

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
March, 2024	9-2

APPENDIX A

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions



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SITE PLAN

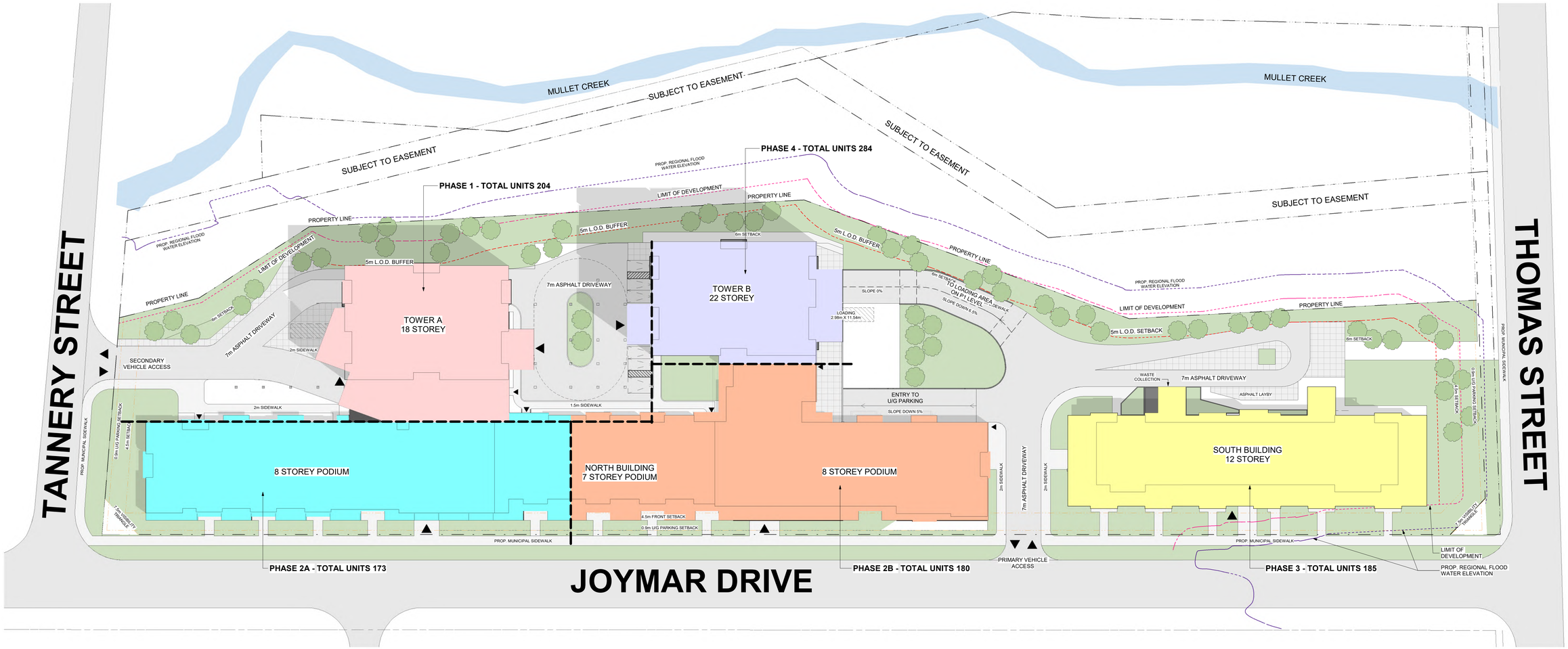
D1.1

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 C45 8 '20

Scale 1 : 400 FULL SIZE
Scale 1 : 800 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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BUILDING PHASING

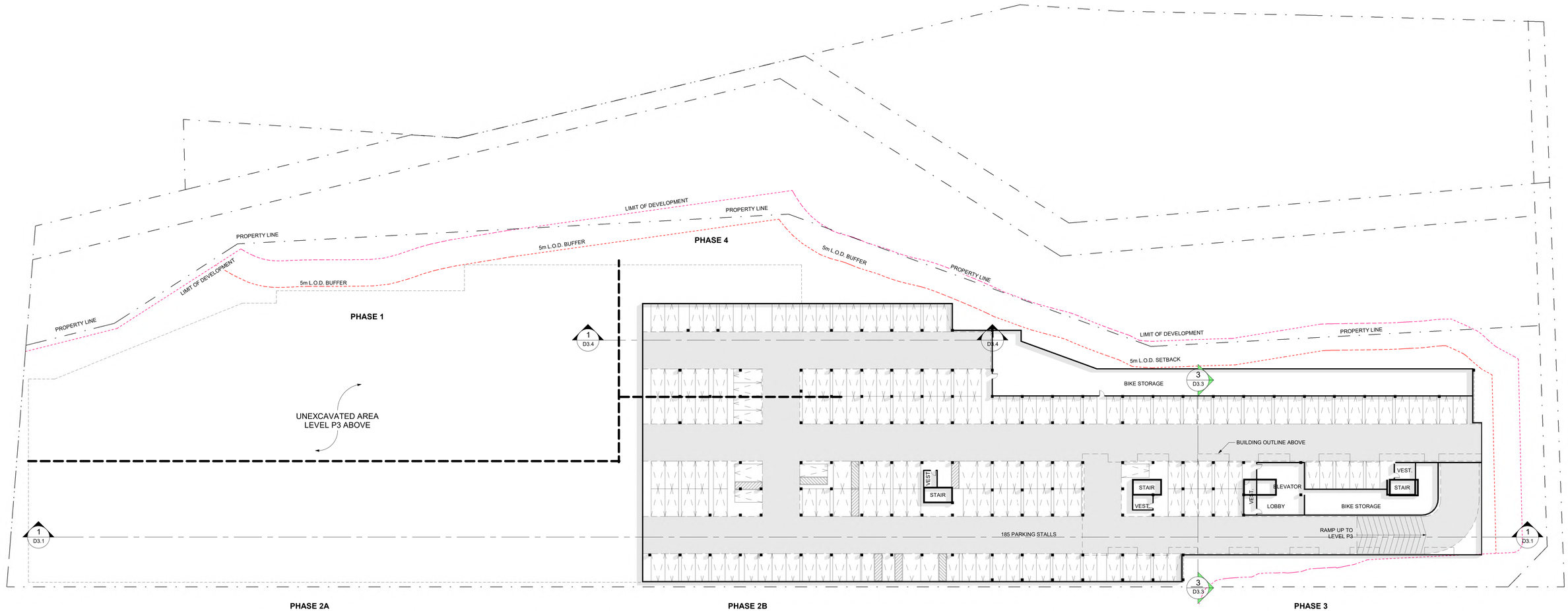
D1.3

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 (45 8 '20

Scale 1 : 400 FULL SIZE
Scale 1 : 800 HALF SIZE

2024-01-09



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PARKING LEVEL P4

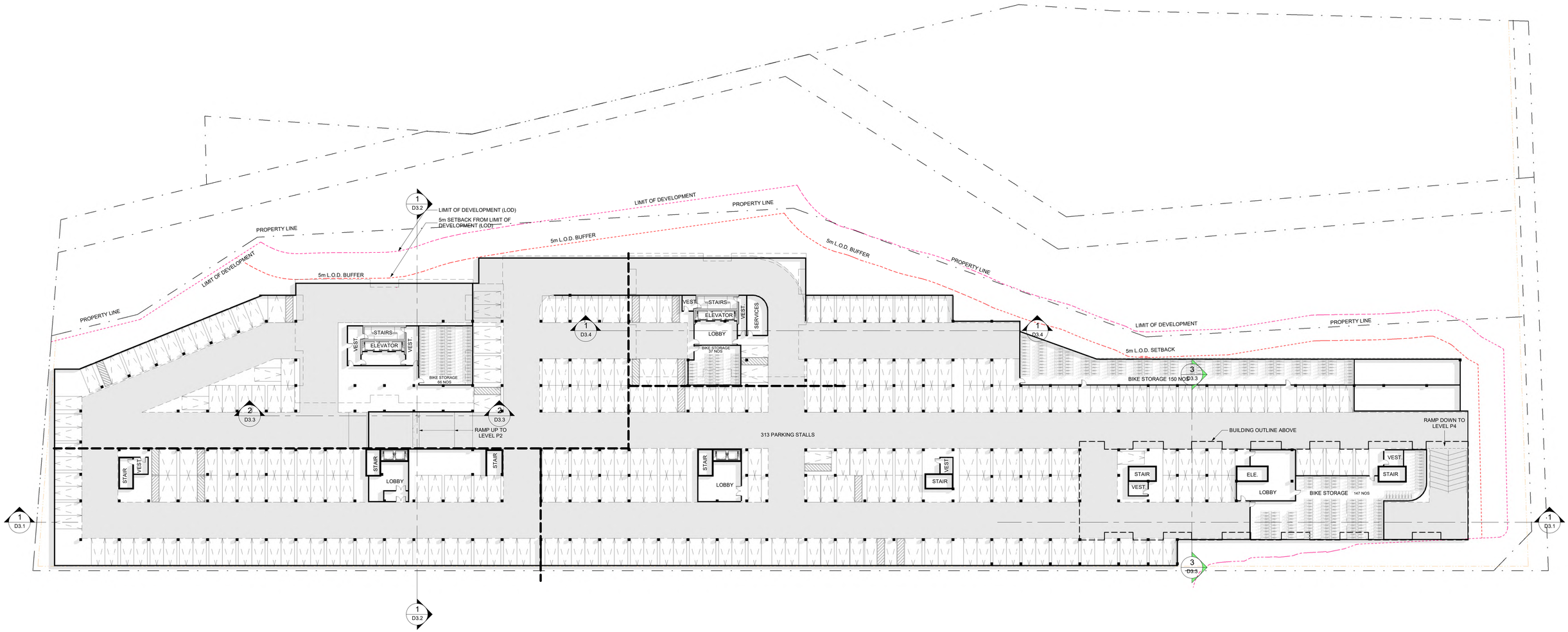
D2.1

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



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PARKING LEVEL P3

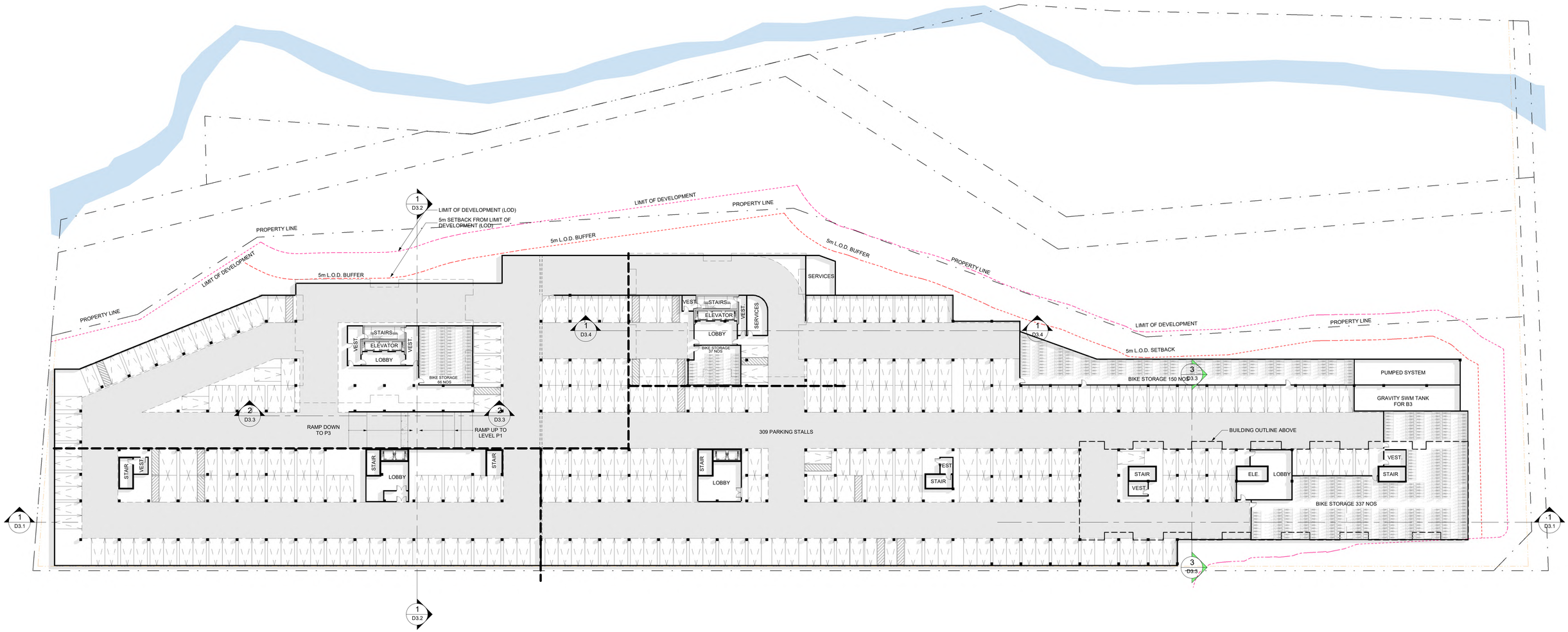
D2.2

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



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PARKING LEVEL P2

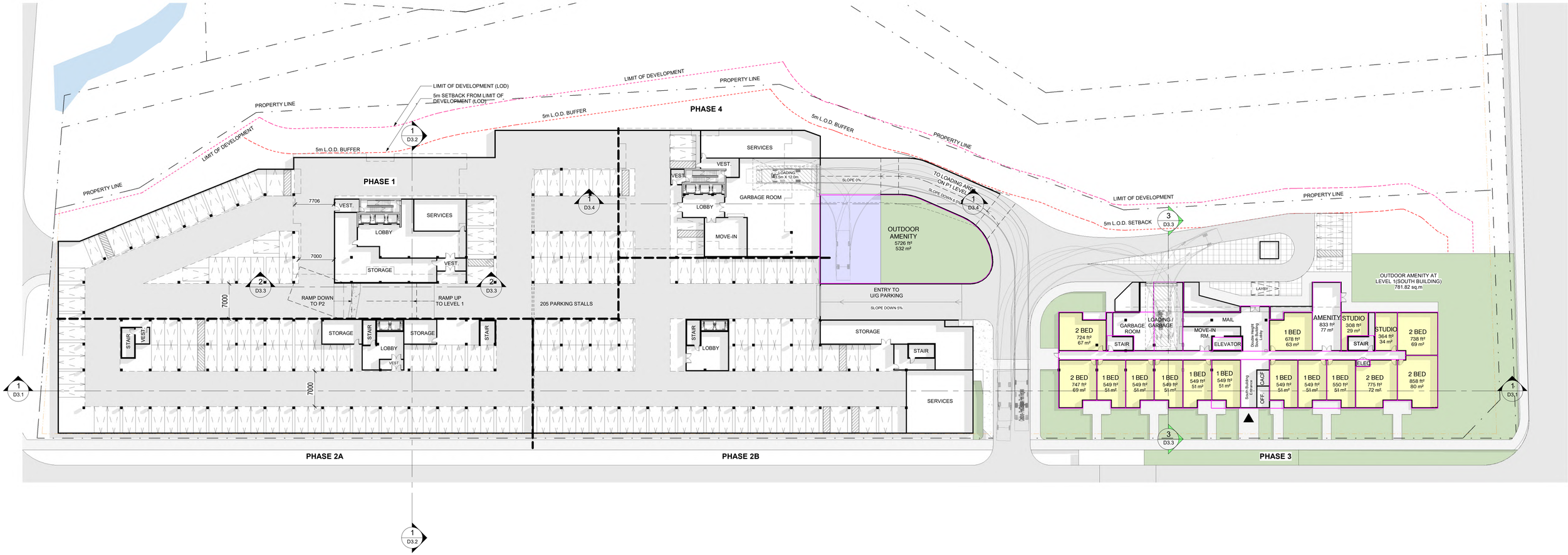
D2.3

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



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PARKING LEVEL P1

D2.4

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

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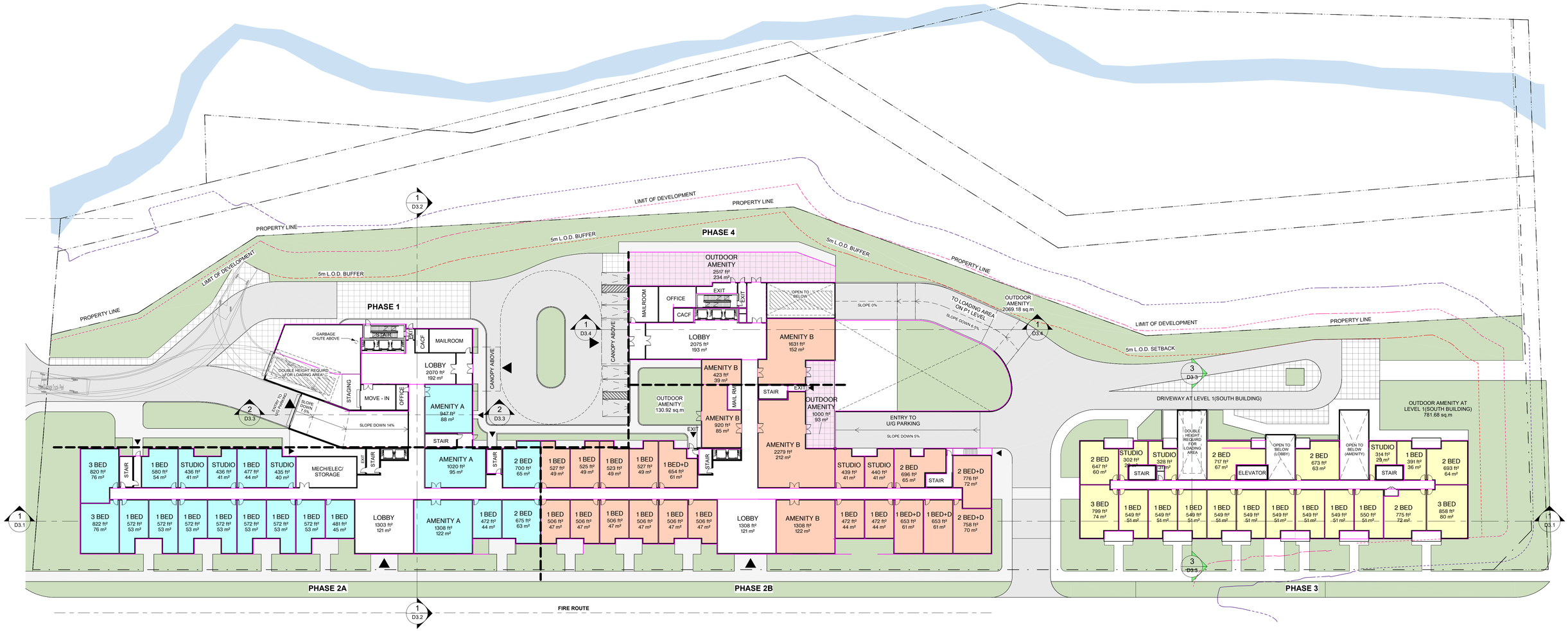
Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

NORTH BUILDING - LEVEL 1

SOUTH BUILDING - LEVEL 2

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NORTH BUILDING - LEVEL 1

SOUTH BUILDING - LEVEL 2

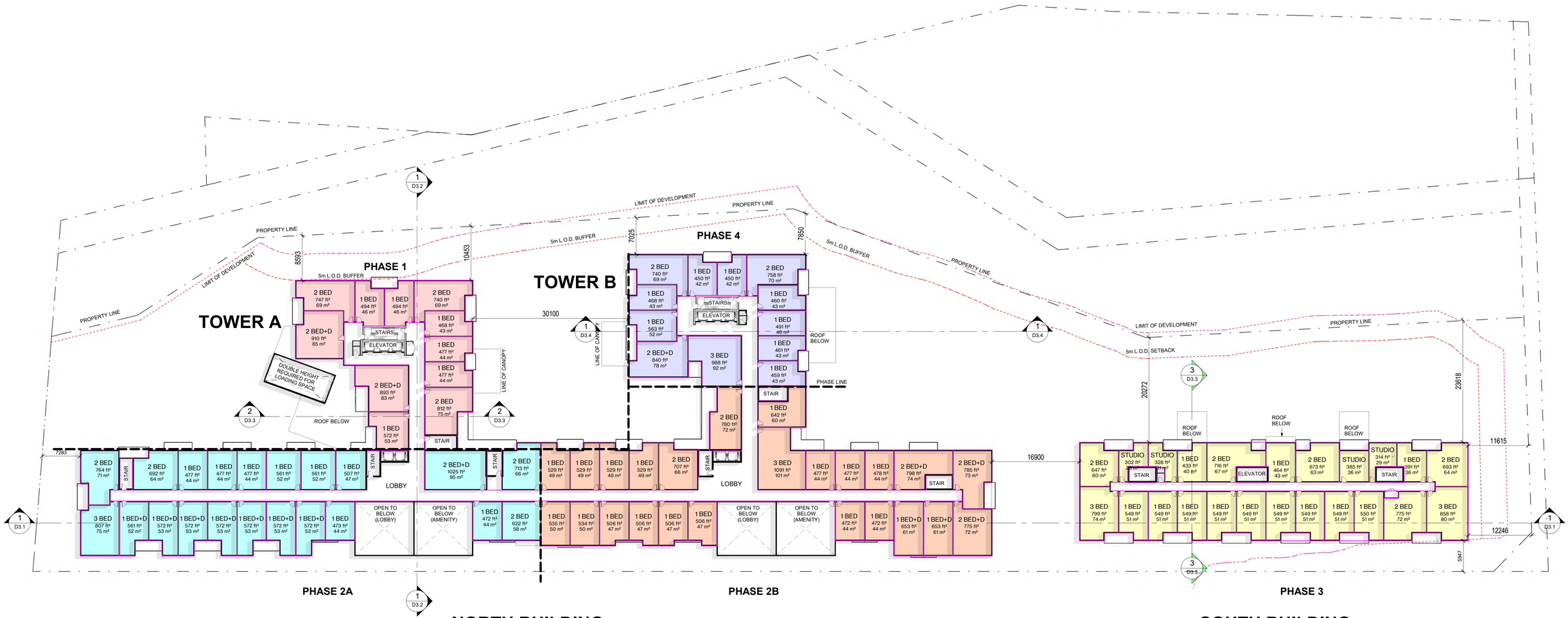
D2.5

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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NORTH BUILDING - LEVEL 2

D2.6

SOUTH BUILDING - LEVELS 3

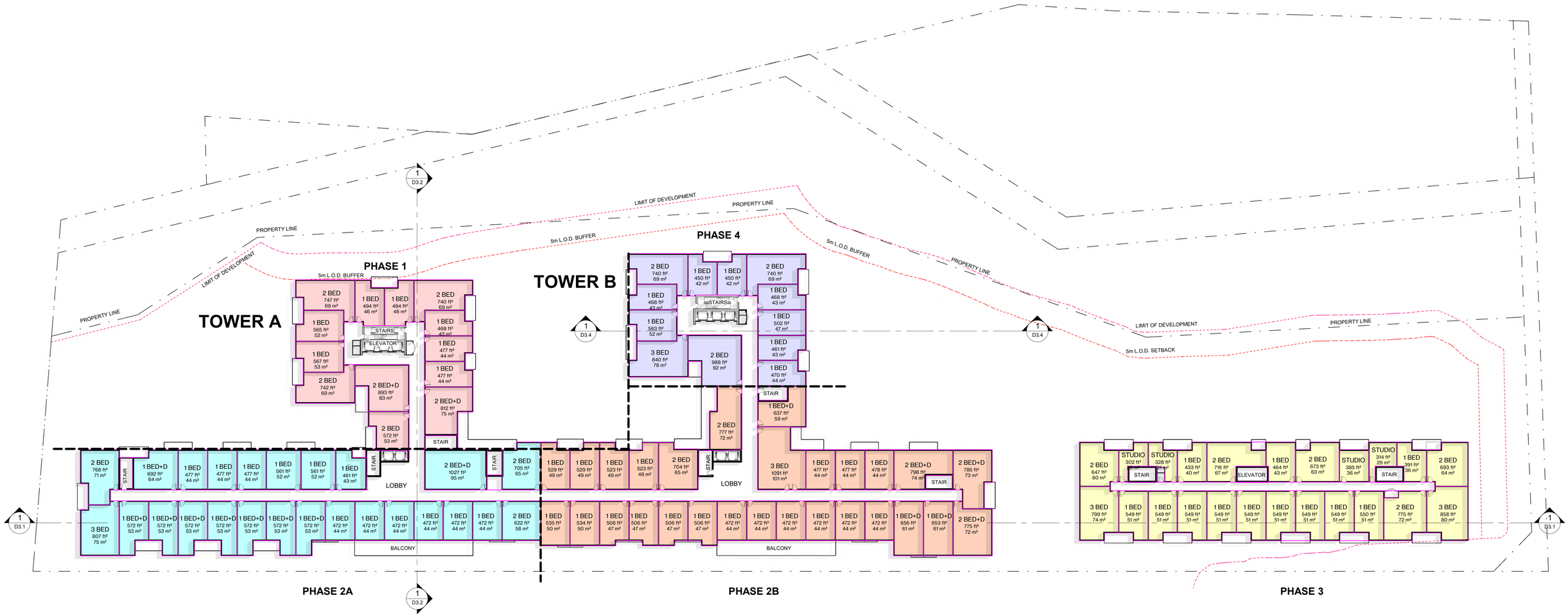
JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE

Scale 1 : 700 HALF SIZE

2024-01-09



NORTH BUILDING

SOUTH BUILDING

- PHASE 1
- PHASE 2A
- PHASE 2B
- PHASE 3
- PHASE 4

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NORTH BUILDING - LEVEL 3

SOUTH BUILDING - LEVELS 4

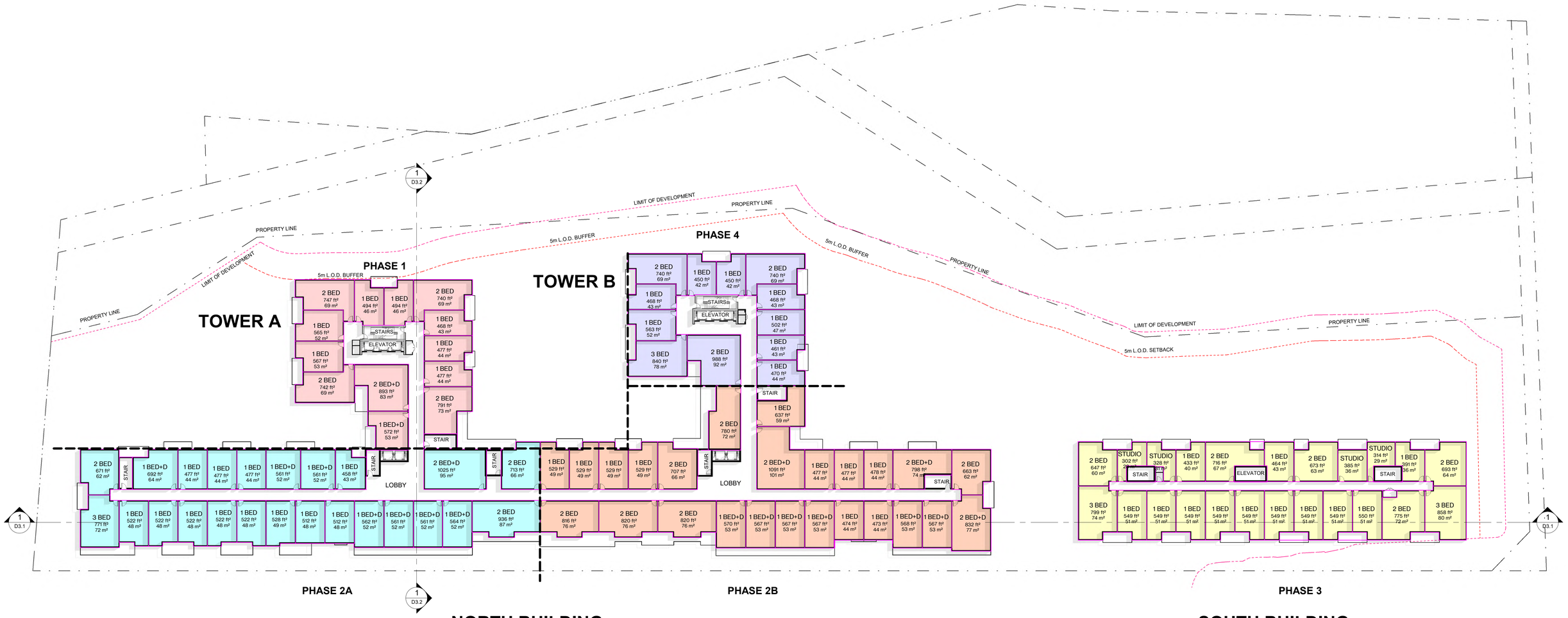
D2.7

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



NORTH BUILDING

SOUTH BUILDING

- PHASE 1
- PHASE 2A
- PHASE 2B
- PHASE 3
- PHASE 4

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NORTH BUILDING - LEVEL 4

D2.8

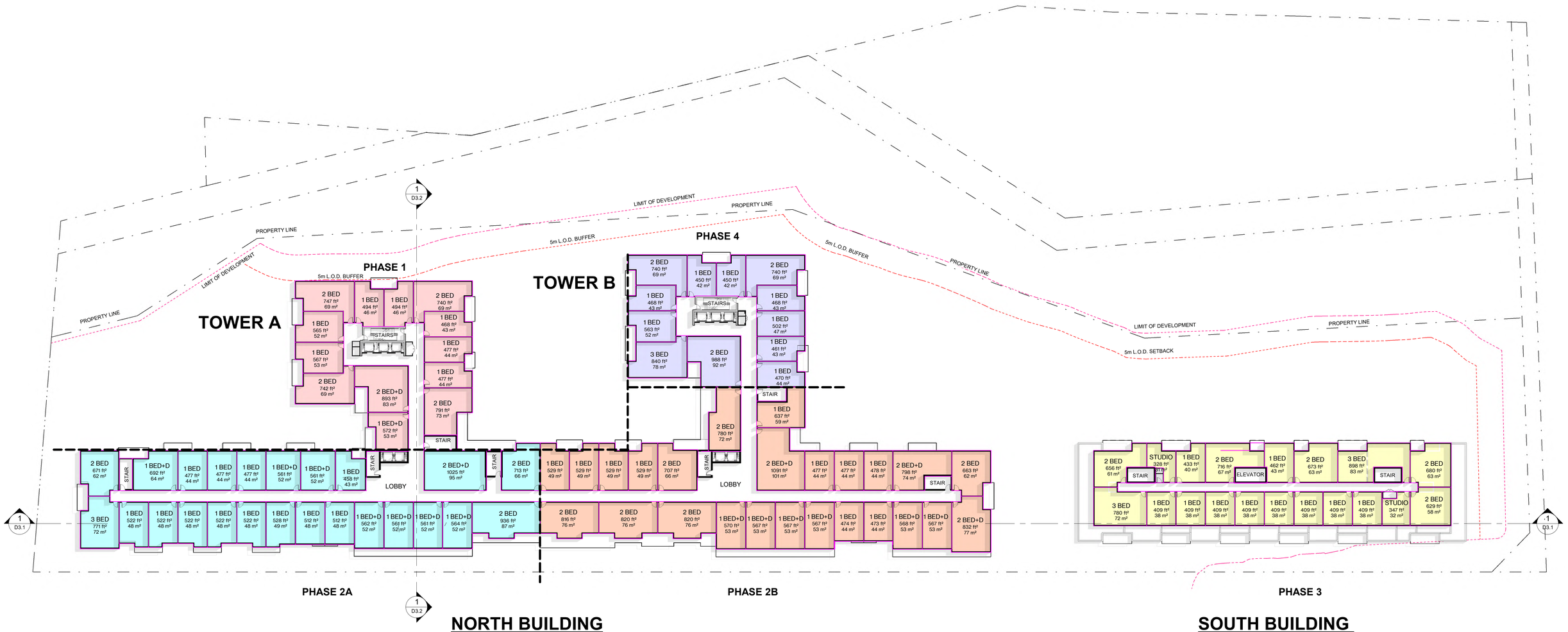
SOUTH BUILDING - LEVEL 5

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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NORTH BUILDING - LEVEL 5-7

SOUTH BUILDING - LEVEL 6-8

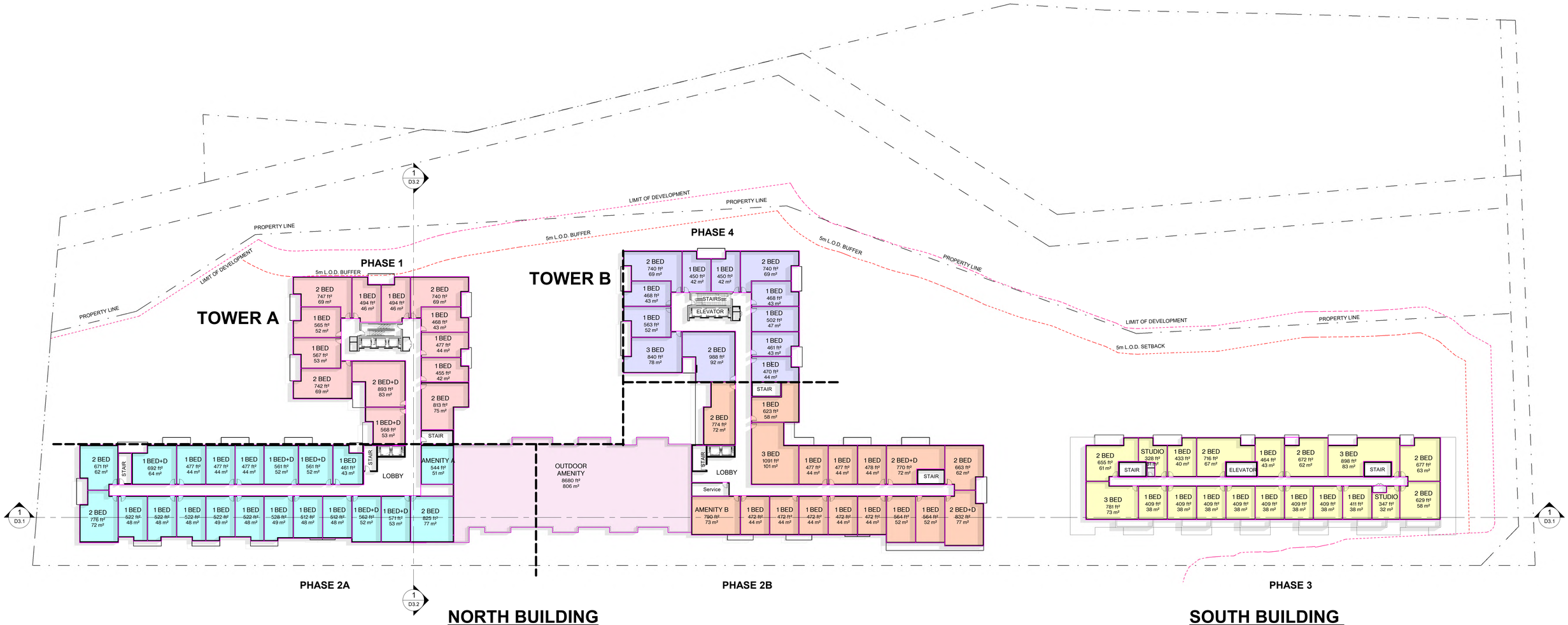
D2.9

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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NORTH BUILDING - LEVEL 8

D2.10

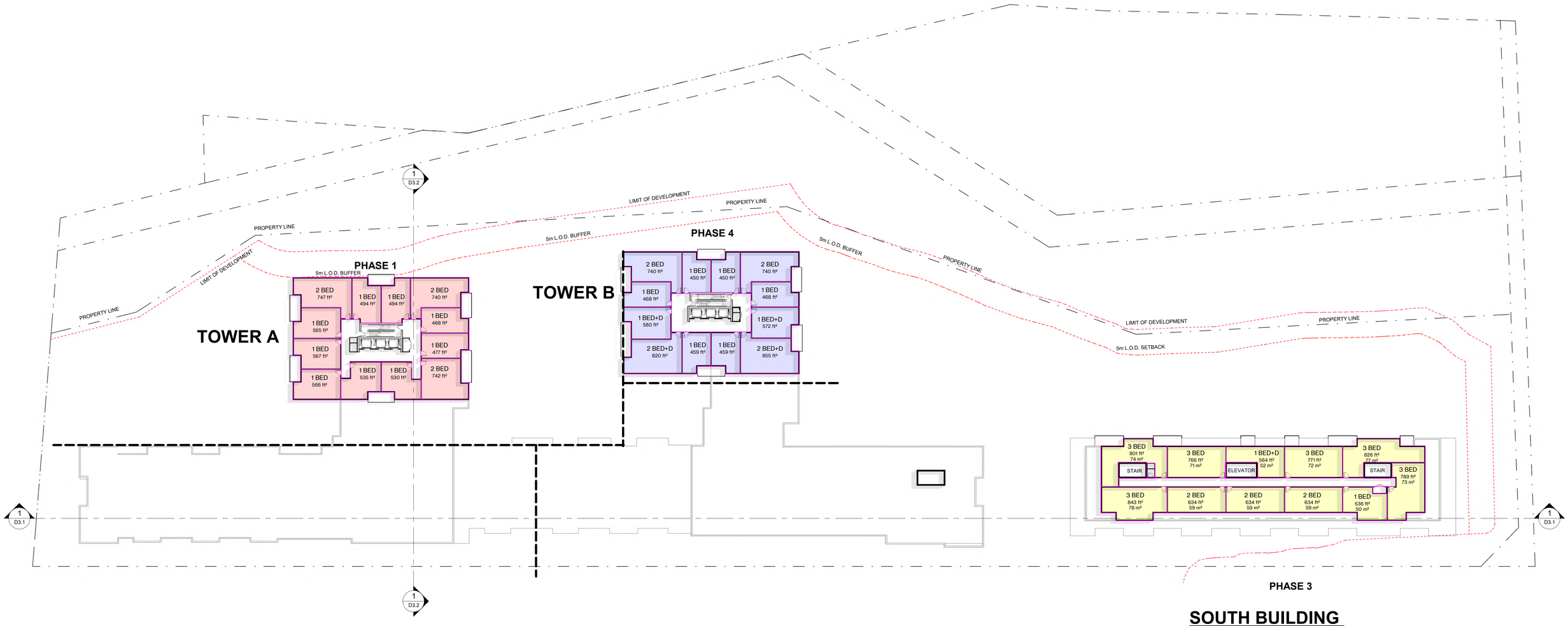
SOUTH BUILDING - LEVEL 9

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-27



SOUTH BUILDING

PHASE 1
PHASE 2A
PHASE 2B
PHASE 3
PHASE 4

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NORTH BUILDING - LEVEL 9

D2.11

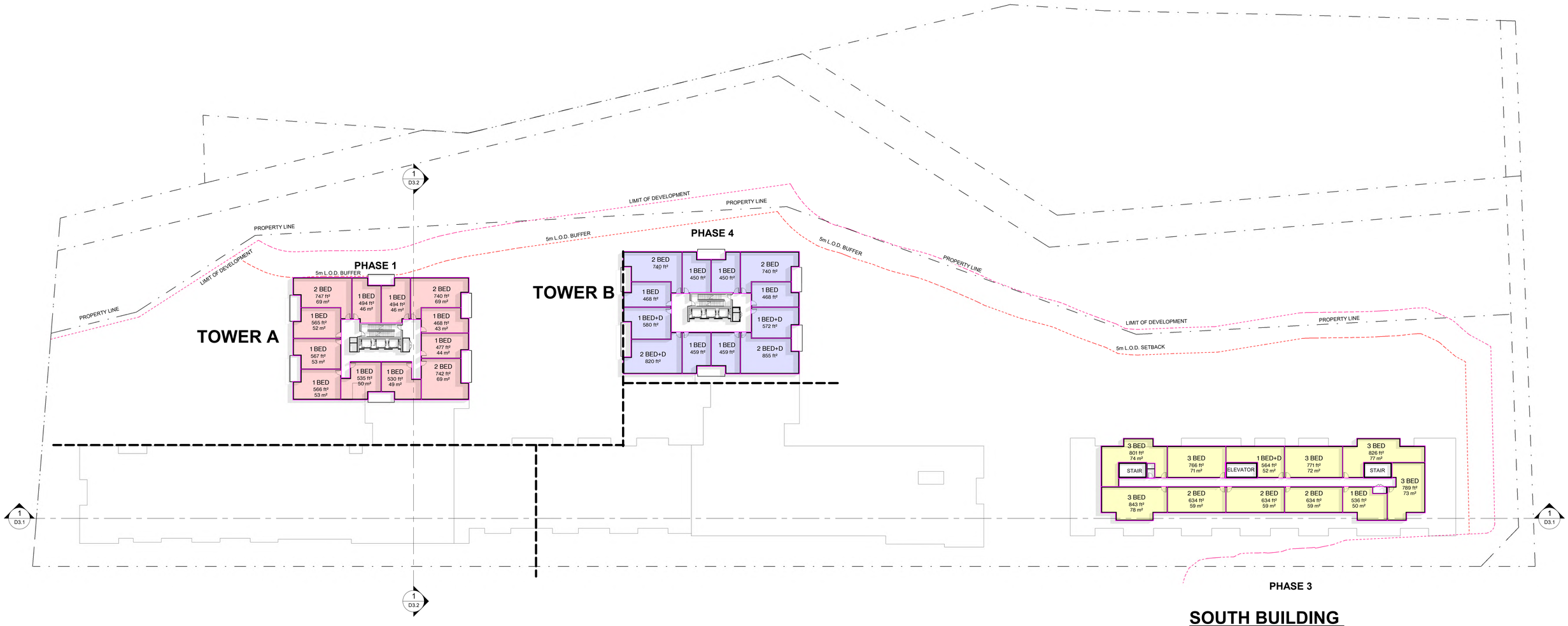
SOUTH BUILDING - LEVEL 9-10

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



SOUTH BUILDING

PHASE 1
PHASE 2A
PHASE 2B
PHASE 3
PHASE 4

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NORTH BUILDING - LEVEL 10

D2.12

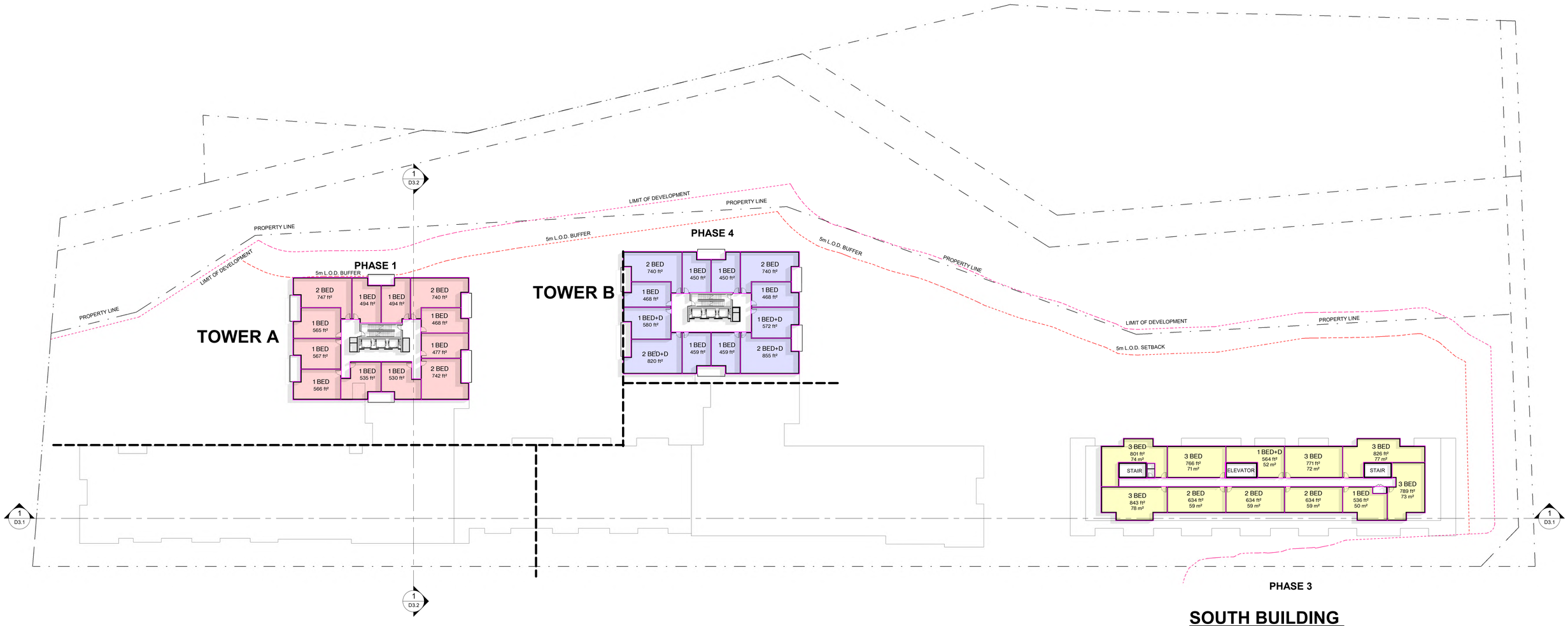
SOUTH BUILDING - LEVEL 11

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



SOUTH BUILDING

PHASE 1
PHASE 2A
PHASE 2B
PHASE 3
PHASE 4

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NORTH BUILDING - LEVEL 11

D2.13

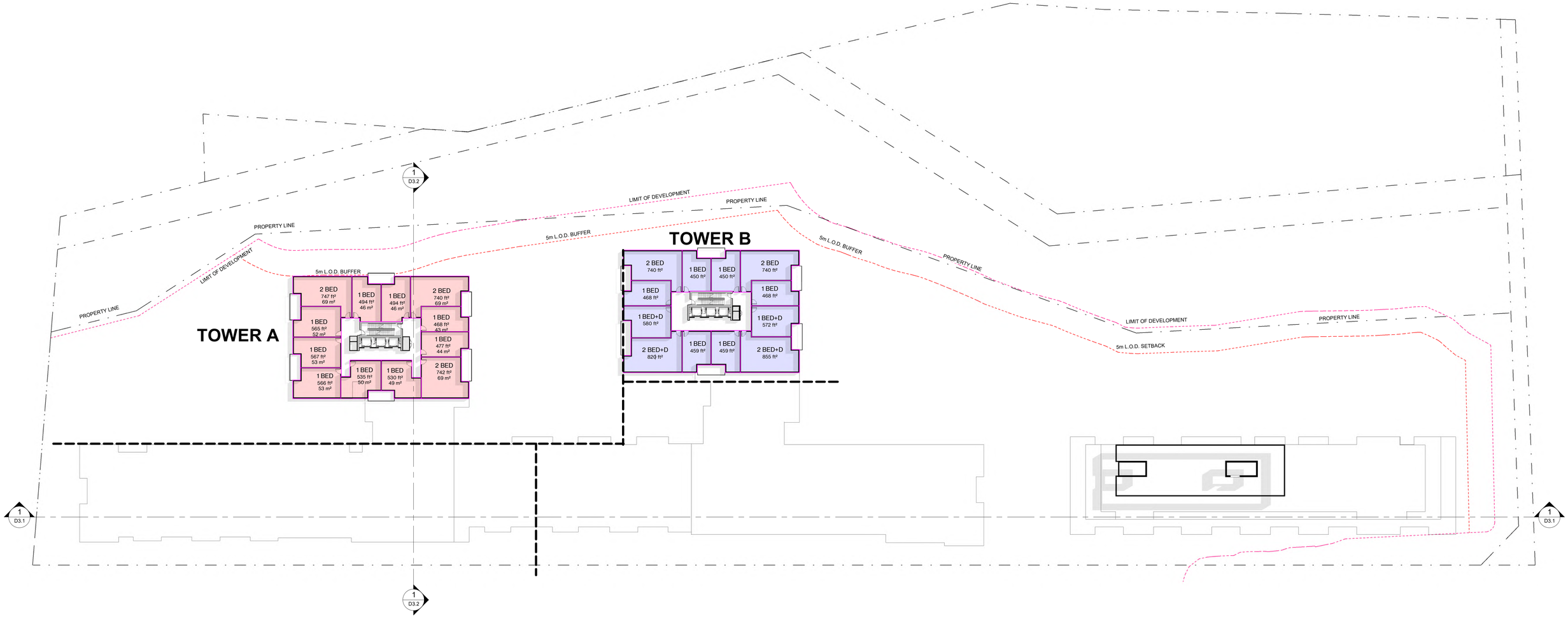
SOUTH BUILDING - LEVEL 12

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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NORTH BUILDING - LEVEL 12

D2.14

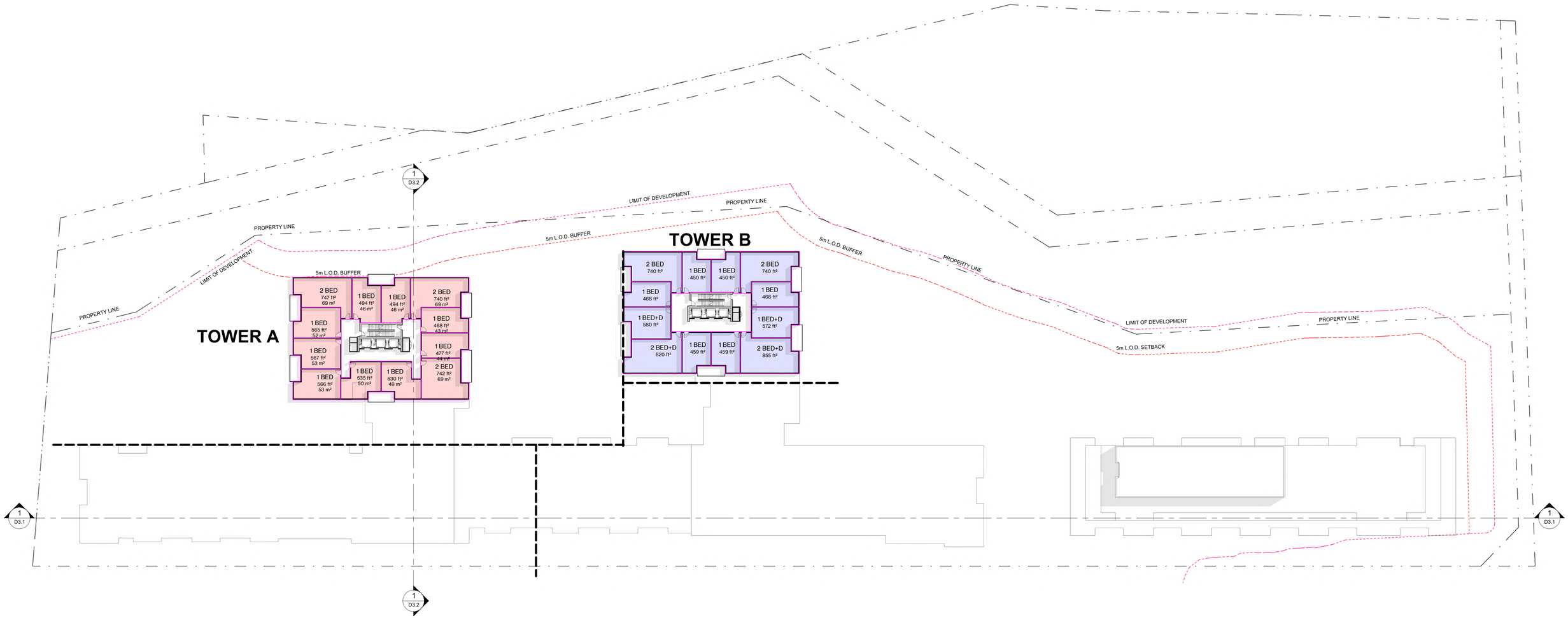
SOUTH BUILDING - MECHANICAL

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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NORTH BUILDING - LEVEL 13

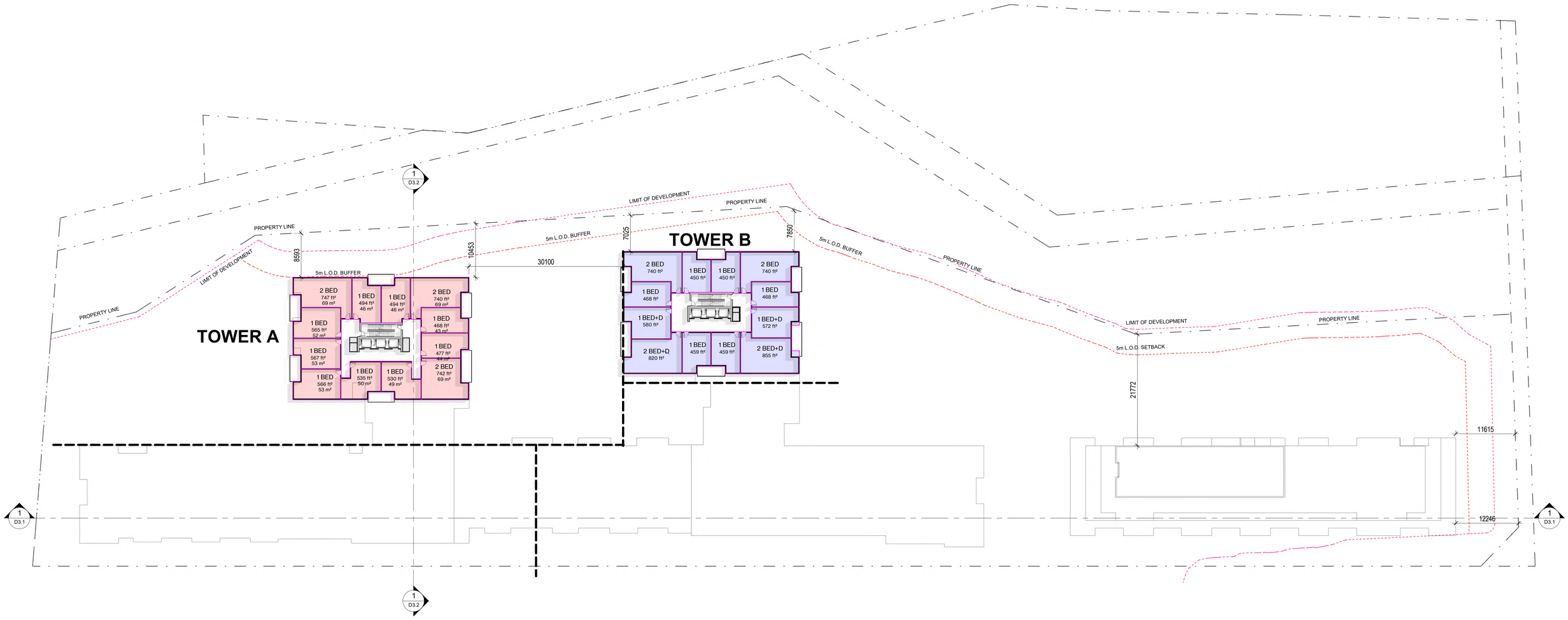
D2.15

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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NORTH BUILDING - TOWER B - LEVELS 14-18

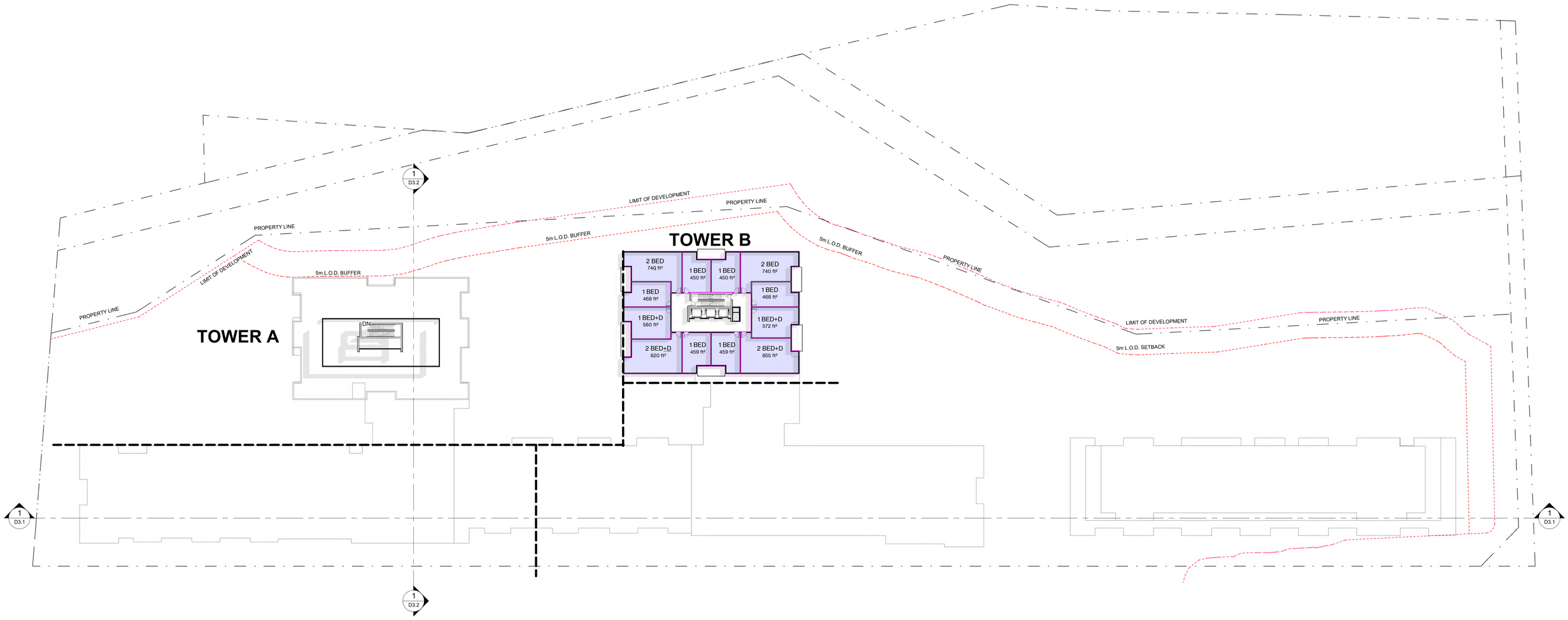
D2.16

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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GROUP

NORTH BUILDING - TOWER B - LEVELS 19-22

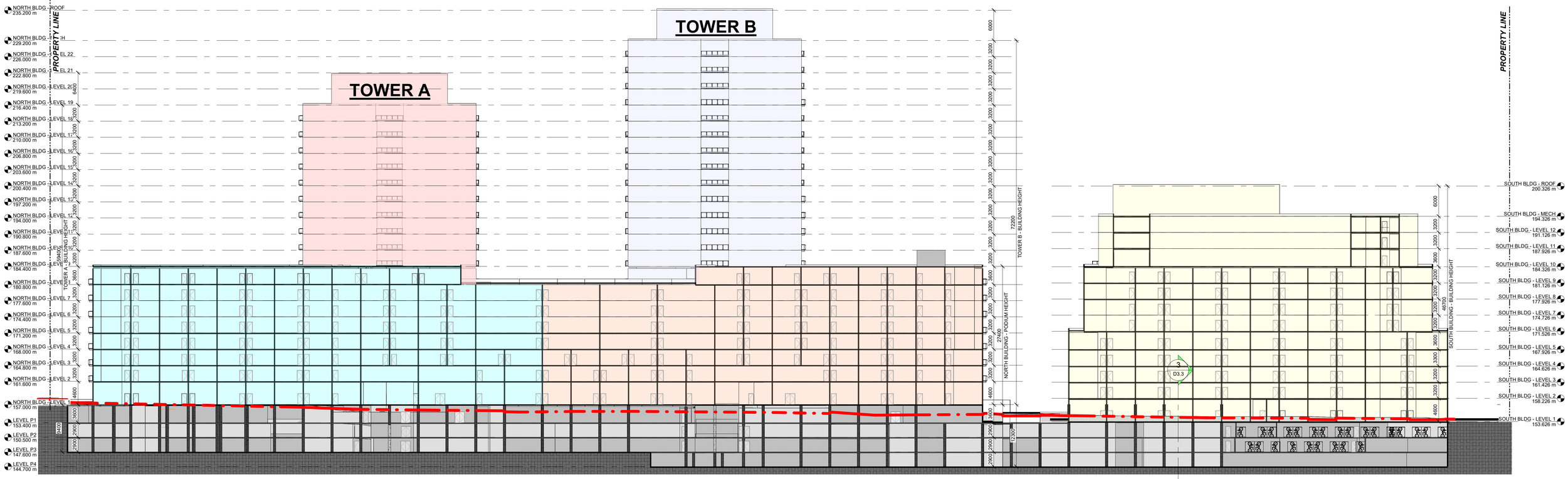
D2.17

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2024-01-09



NORTH BUILDING

SOUTH BUILDING

PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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BUILDING SECTIONS

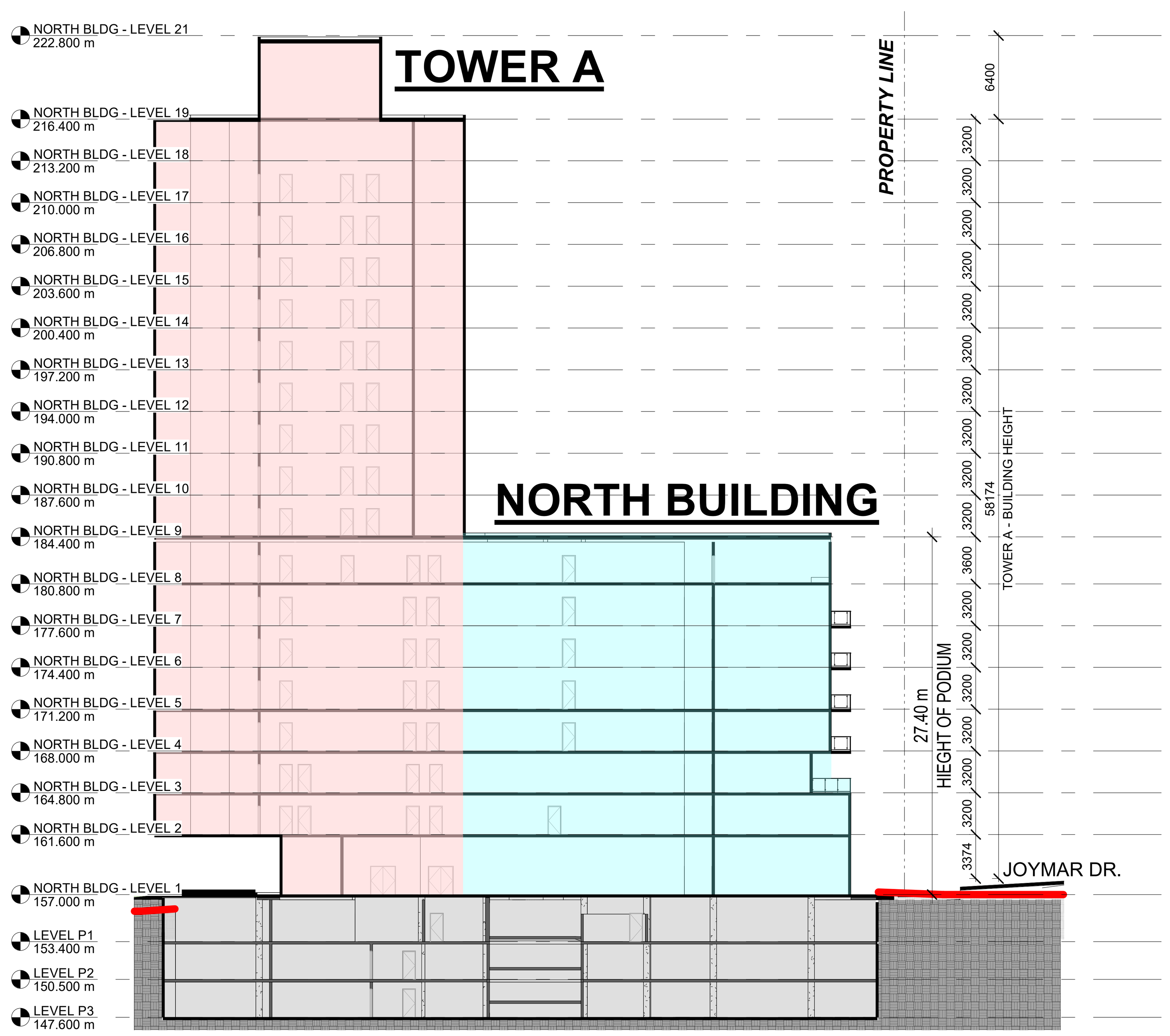
D3.1

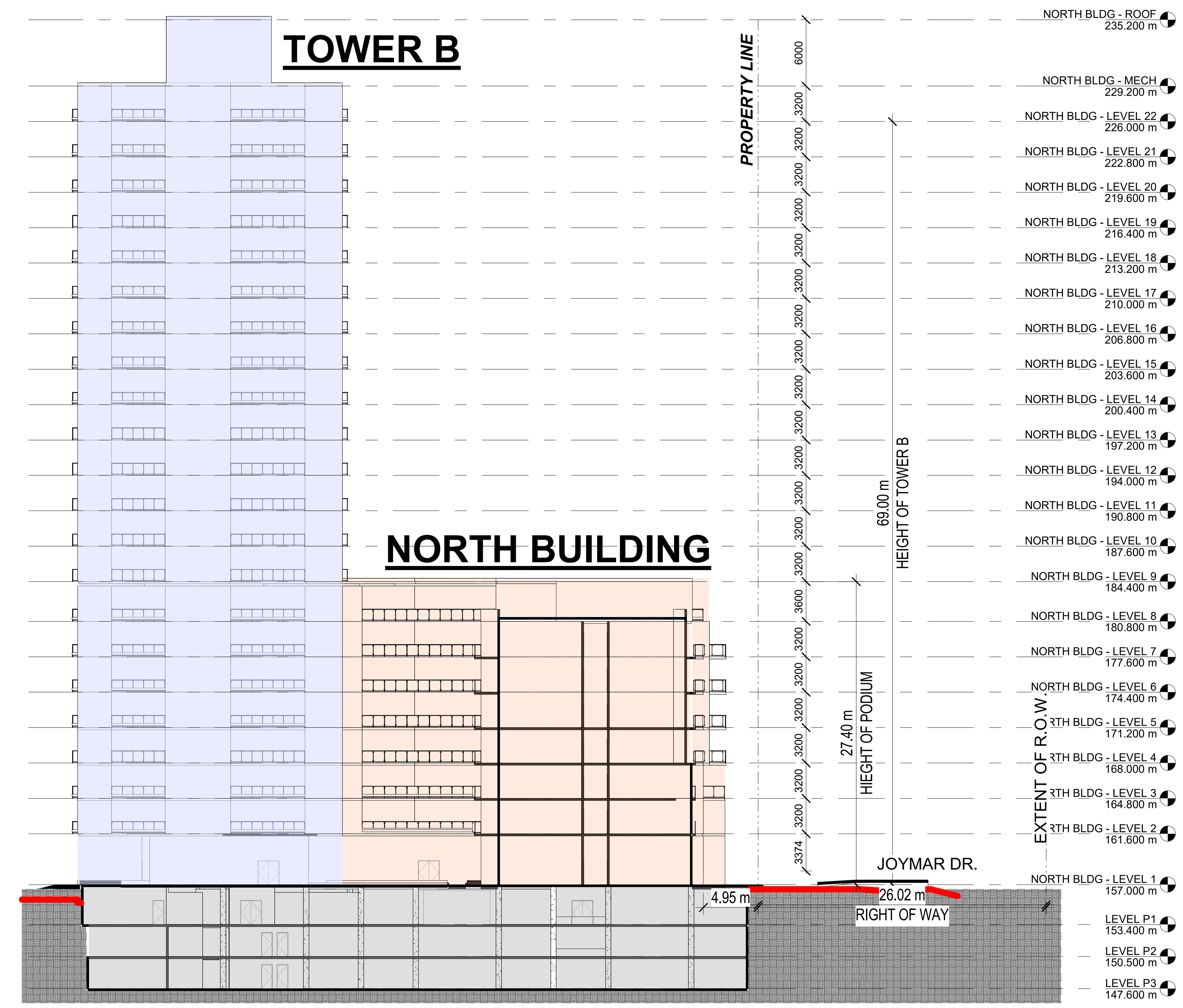
JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2023-11-08





PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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BUILDING SECTIONS

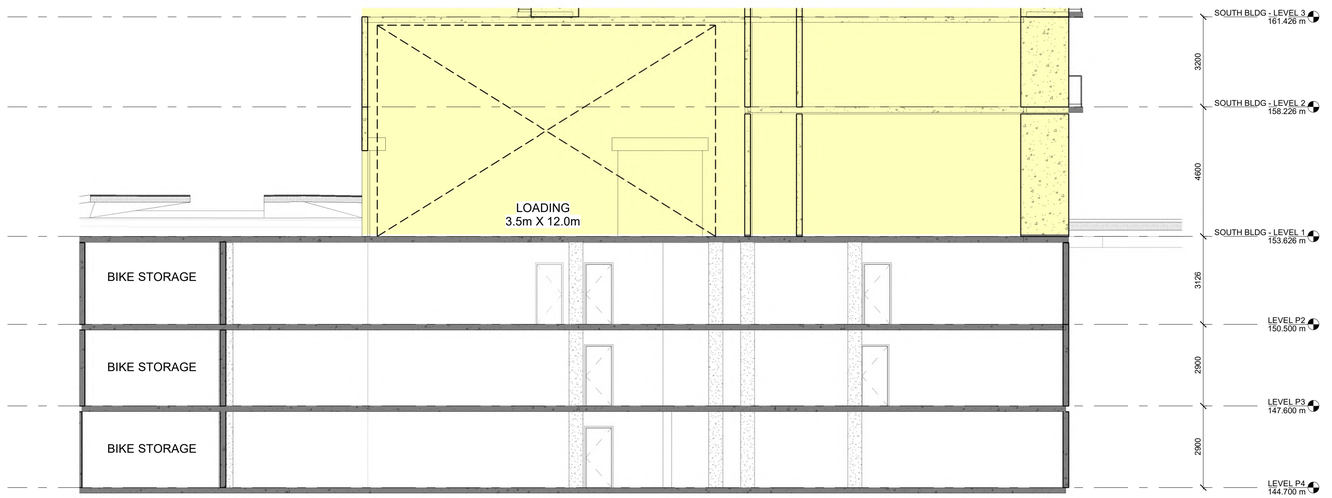
D3.2

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

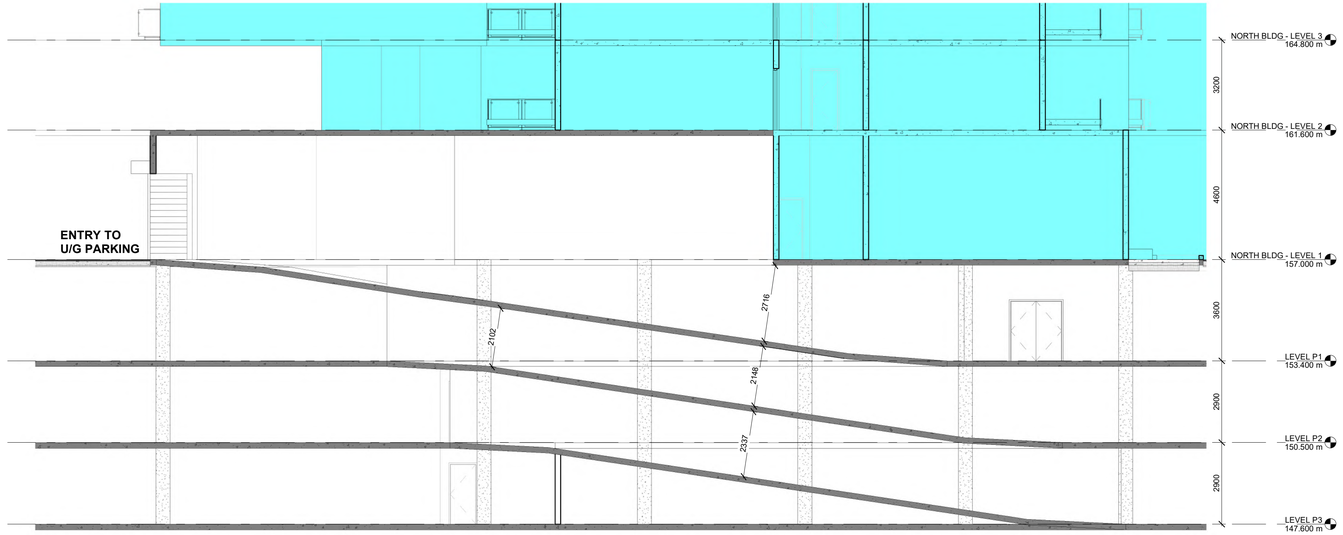
0 3.5 7 17.5

Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

01/10/24



SECTION THROUGH SOUTH BUILDING LOADING AREA



SECTION THROUGH PHASE 1 - PARKING RAMP

PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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BUILDING SECTIONS

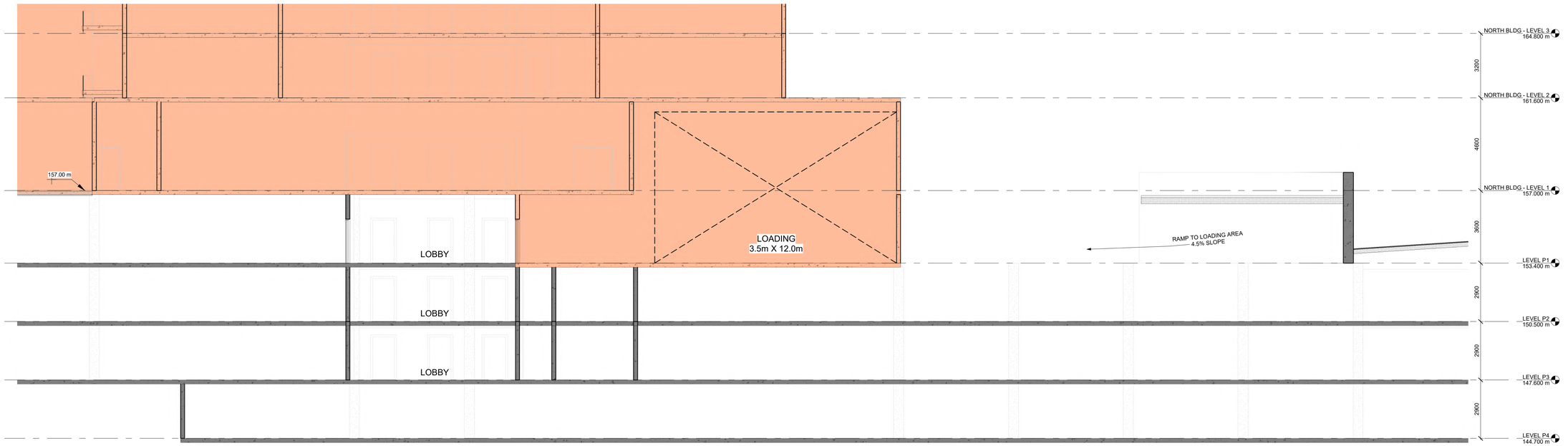
D3.3

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 C15 2 255

Scale 1 : 100 FULL SIZE
Scale 1 : 200 HALF SIZE

2023-11-08



SECTION THROUGH PHASE 2 - LOADING AREA

PHASE 1

PHASE 2A

PHASE 2B

PHASE 3

PHASE 4

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BUILDING SECTIONS

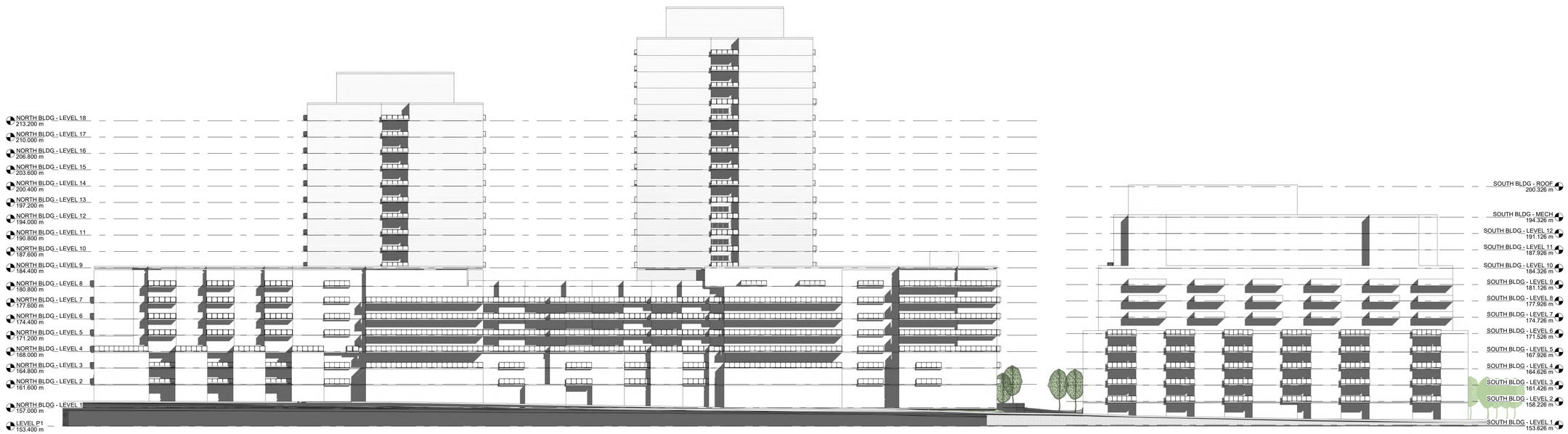
D3.4

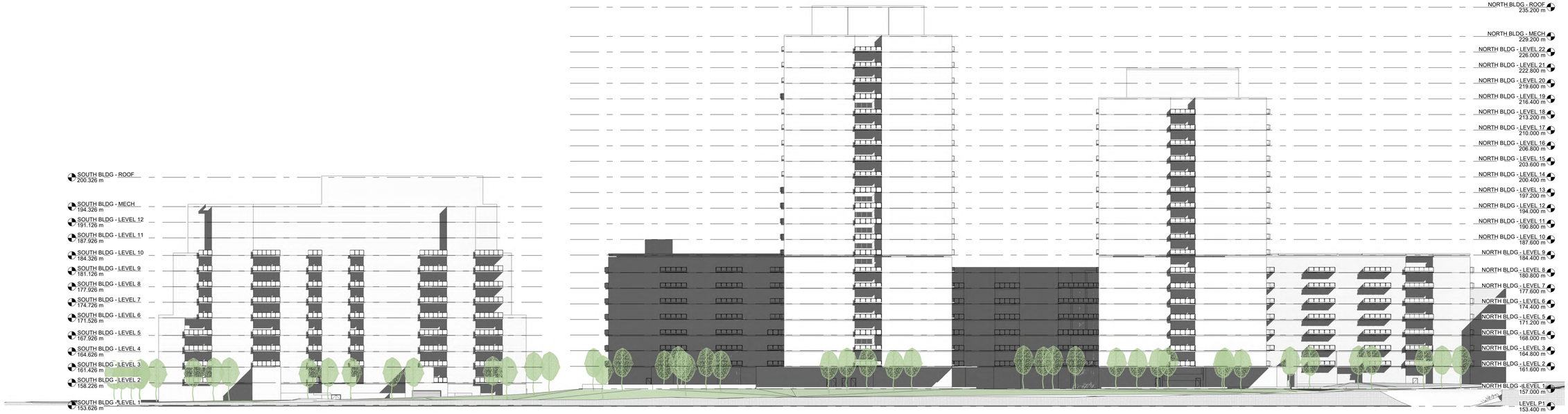
JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 C15 2 255

Scale 1 : 100 FULL SIZE
Scale 1 : 200 HALF SIZE

2023-11-08





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GROUP

BUILDING ELEVATIONS

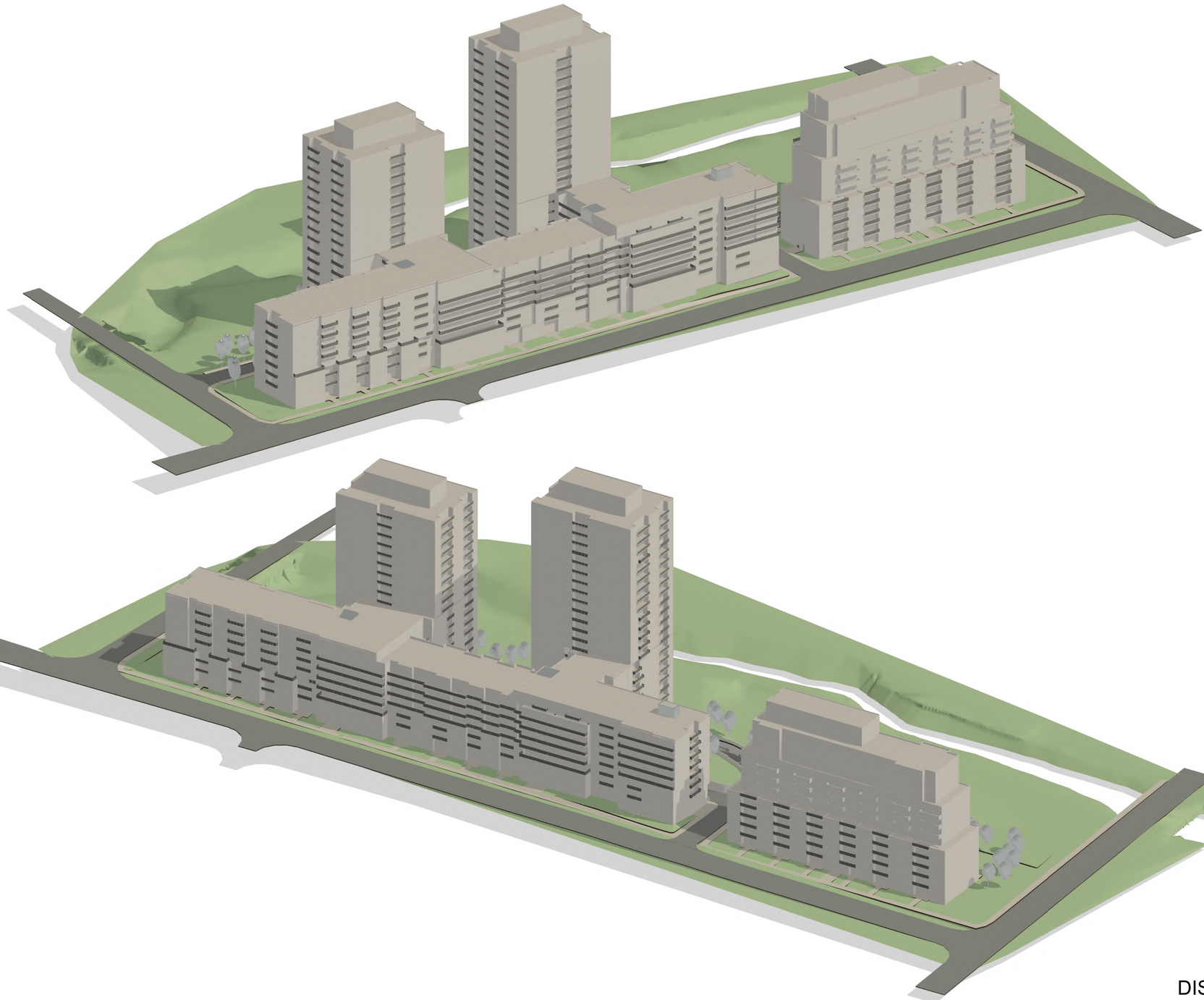
D3.5

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

0 (45 8 '20

Scale 1 : 400 FULL SIZE
Scale 1 : 800 HALF SIZE

2023-11-08



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De Zen
GROUP

AXO VIEW

D4.1

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

2024-13-03

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DISCUSSION ONLY

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architects+
urban⋆designers

De Zen
GROUP

AXO VIEW

D4.2

JOYMAR DRIVE & TANNERY ST, MISSISSAUGA

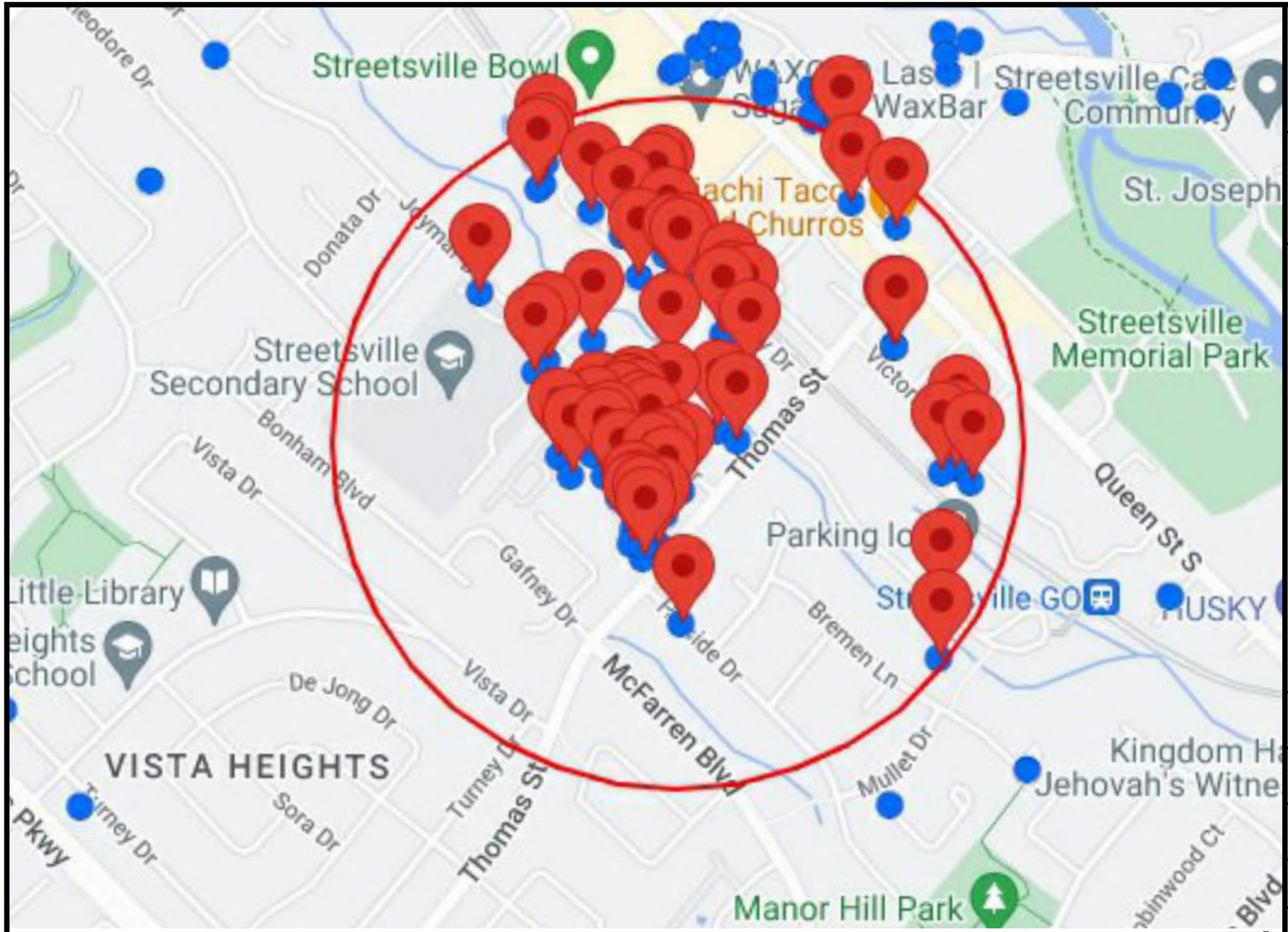
0 3.5 7 17.5
Scale 1 : 350 FULL SIZE
Scale 1 : 700 HALF SIZE

2023-11-08

APPENDIX B

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions



Source: MECP Well Record Map

SIRATI & PARTNERS
160 Konrad Crescent
Markham, ON. L3R 9T9
Phone# 905 940 1582, Fax# 905 940 2440

North:

Legend:

500m Study Area

MECP Well

Project Title:
Hydrogeological Investigations

Site Location:
64, 66 Thomas Street, 95 Joymar Drive, 65 Tannery Street, Mississauga, ON.

Figure Title:
MECP Water Well Records Map

Scale:	Project Number:
As Shown	SP23-01177-00
Date:	**Figure Number:**
July, 2023	5-1

Latitude:43.57722, Longitude:-79.70004 (UTM Zone:17, Easting:604961, Northing:4825738)

Show 100 entries Search:

Well ID	Well Record Information	Well Tag # (since 2003)	Audit #	Contractor Lic#	Well Depth (m)
4902143	PDF|HTML	N/A	N/A	3513	38.1
4909511	PDF|HTML	N/A	Z15858	6607	N/A
4909697	PDF|HTML	A024778	Z25171	7230	4.9
7151894	PDF|HTML	A103034	Z121891	7241	6.1
7162891	PDF|HTML	A095114	Z109765	7247	6.1
7174622	PDF|HTML	A123805	Z143397	7241	4.6
7174623	PDF|HTML	A126488	Z143395	7241	1.8
7174624	PDF|HTML	A126511	Z143396	7241	1.8
7189898	PDF|HTML	A120887	Z158465	7241	5.5
7203857	PDF|HTML	A143187	Z165107	7501	4.6
7207318	HTML	A144993	C21947	7215	N/A
7207903	HTML	A142339	C22779	7215	N/A
7211401	HTML	A145015	C21150	7215	N/A
7217445	PDF|HTML	A160740	Z185549	7241	7.6
7217446	PDF|HTML	A160739	Z185551	7241	8.5
7217447	PDF|HTML	A160738	Z185550	7241	7.5
7217448	PDF|HTML	A160737	Z185552	7241	7.6
7217882	HTML	A149705	C25011	7147	N/A
7218669	HTML	A153727	C25331	7230	N/A
7220655	HTML	A157286	C23888	6607	N/A
7221009	PDF|HTML	A163059	Z186952	7241	5.2
7224895	PDF|HTML	A157286	Z192709	7472	N/A
7224897	PDF|HTML	N/A	Z192708	7472	N/A
7224931	PDF|HTML	A163059	Z192726	7472	N/A
7234423	HTML	A153727	C26960	7147	N/A
7239356	HTML	A178737	C27822	7215	N/A
7239357	PDF|HTML	A176995	C27828	7215	N/A
7242253	HTML	N/A	Z203296	7147	N/A
7263878	HTML	A201558	Z223850	6607	5.1
7263879	HTML	A196752	Z223851	6607	5.1
7263880	HTML	A201580	Z223852	6607	5.5
7263881	HTML	A192915	Z223853	6607	5.2
7263882	HTML	A196654	Z223854	6607	4.9
7273991	HTML	A178737	C34042	7147	N/A
7284560	HTML	A212567	C35200	7215	N/A
7287634	HTML	A198626	C37207	7147	N/A
7294563	HTML	A230107	C38915	7215	N/A
7302257	PDF|HTML	A199244	Z273883	7241	4.0
7302258	PDF|HTML	A199245	Z273880	7241	4.6
7311674	HTML	A243779	C40519	7147	N/A
7311919	PDF|HTML	A223517	Z278772	7147	1.4
7312446	PDF|HTML	A245593	Z284078	7360	12.2
7314274	PDF|HTML	A243748	Z278792	7147	3.7
7322901	PDF|HTML	A259532	Z302018	7215	7.6
7325288	HTML	A248723	C42398	7609	N/A
7325307	HTML	A253485	C42162	7215	N/A
7332938	HTML	A258425	C43812	7437	N/A
7334014	PDF|HTML	A264659	4LURH7TB	6607	5.8
7334053	PDF|HTML	A264705	AL6MZTFU	6607	5.6
7334140	PDF|HTML	A264708	N4VFJE4Q	6607	4.5
7334144	PDF|HTML	A264589	O52LQOWC	6607	4.5
7334179	PDF|HTML	A264704	XW8SYIP3	6607	4.5
7351712	HTML	_NO_TAG	C43864	7437	N/A

MECP Water Well Records

Well ID Number	Well Tag Number	Completion Date	Type of Well	Depth of Well	Water Found Depth	STATIC	Water Type (Kind)	Pump Rate	Soils
7151894	A103034	08/20/2010	Test Hole/ Monitoring	20 (ft)	No information	-	-	-	0' ~ 15': Sand (Silt-Brown, Very dense) 15' ~ 20': Clay (Silt, Gray)
7203857	A143187	05/28/2013	monitoring/ observation well	15 (ft)	No information	-	-	-	0' ~ 4': Silt (Gravel-Brown, Hard) 4' ~ 15': Silt (Clay, Gravel-Gray, Hard)
7287634	A198626	-	-	-	-	-	-	-	-
7242253	N/A	05/07/2015	-	-	-	-	-	-	-
7224931	A163059	06/19/2014	Decommission 50mm. MW	5.3m	-	-	-	-	-
7224895	A157286	07/08/2014	Decommission 50mm. MW	5.5m	-	-	-	-	-
7189898	A120887	09/24/2012	Test Hole/ Observation and Monitoring Hole	18'	-	-	-	-	0' ~ 5': Sand (Fill-Brown) 5' ~ 14': Silt (Brown, Moist) 14' ~ 18': Silt (Gray, Moist)
7224897	N/A	07/08/2014	Decommission 50mm. MW	5.5m	-	-	-	-	-
7221009	A163059	04/14/2014	Test Hole/ Observation and Monitoring Hole	5.2m	-	-	-	-	0' ~ 2': Fill (Brown) 2' ~ 11': Sand (Silt, Brown) 11' ~ 17': Sand (Silt, Gray)
4902143	N/A	09/18/1963	Commercial	38.1m	80'	18'	Salty	2 GPM	0' ~ 1': Topsoil 1' ~ 35': Clay and Stones 35' ~ 128': Blue Shale
4909511	N/A	07/14/2004	Abandoned	1.82m	-	-	-	-	-
7162891	A095114	02/16/2010	monitoring/ observation well	6.1m	Dry	-	-	-	0' ~ 10': Sandy silt fill (Organics, Cobbles, Roots-Brown, Dense) 10' ~ 20': Sandy silt (Clay-Reddish brown, Dense)

7174622	A123805	12/01/2011	Test Hole/ Observation and Monitoring Hole	4.6m	-	-	-	-	0’ ~ 5’: Fill (Topsoil-Brown) 5’ ~ 10’: Clay (Silt-Brown) 10’ ~ 15’: Clay (Silt-Gray)
7174623	A126488	12/01/2011	Test Hole/ Observation and Monitoring Hole	1.8m	-	-	-	-	0’ ~ 0.5’: Gravel (Gray) 0.5’ ~ 6’: Clay (Silt-Brown)
7174624	A126511	12/01/2011	Test Hole/ Observation and Monitoring Hole	1.8m	-	-	-	-	0’ ~ 0.5’: Gravel (Gray) 0.5’ ~ 6’: Clay (Silt-Brown)
7207318	A144993	05/03/2013		N/A					
7207903	A142339	05/22/2013		N/A					
7211401	A145015	02/27/2013		N/A					
7217445	A160740	02/21/2014	Test Hole/ Observation and Monitoring Hole	7.6m					0’ ~ 6’: Sand (Gravel, Fill-Brown) 6’ ~ 15’: Silt (Sand-Brown) 15’ ~ 25’: Silt (Clay-Gray)
7217446	A160739	02/21/2014	Test Hole/ Observation and Monitoring Hole	8.5m					0’ ~ 6’: Sand (Gravel, Fill-Brown) 6’ ~ 15’: Silt (Sand-Brown) 15’ ~ 28’: Silt (Clay-Gray)
7217447	A160738	02/21/2014	Test Hole/ Observation and Monitoring Hole	7.5m					0’ ~ 6’: Sand (Gravel, Fill-Brown) 6’ ~ 15’: Silt (Sand-Brown) 15’ ~ 24.5’: Silt (Clay Rock-Gray)
7217448	A160737	02/21/2014	Test Hole/ Observation and Monitoring Hole	7.6m					0’ ~ 6’: Sand (Gravel, Fill-Brown) 6’ ~ 15’: Silt (Sand-Brown) 15’ ~ 25’: Silt (Clay-Gray)
7217882	A149705	03/06/2014		N/A					

7218669	A153727	12/23/2013		N/A					
7220655	A157286	04/21/2014		N/A					
7234423	A153727	12/15/2014		N/A					
7239356	A178737	01/07/2015		N/A					
7239357	A176995	01/08/2015		N/A					
7242253	N/A	05/07/2015		N/A					
7263878	A201558	05/03/2016		5.1m					
7263879	A196752	05/03/2016		5.1m					
7263880	A201580	05/02/2016		5.5m					
7263881	A192915	05/02/2016		5.2m					
7263882	A196654	05/02/2016		4.9m					
7273991	A178737			N/A					
7284560	A212567	01/20/2017		N/A					
7287634	A198626			N/A					
7294563	A230107	07/20/2017		N/A					
7311674	A243779	04/18/2018		N/A					
7311919	A223517	05/01/2018	monitoring/ observation well	4.6m Depth not correct in site	4m				0~ 2.1m Fill (Brown) 2.1 ~ 4.6m: Silt (Brown-Dense)
7312446	A245593 (in drilling sheet it's A245592)	05/23/2018	monitoring/ observation well	12.2m	N/A				0' ~ 6': Asphalt 6' ~ 13': Gravel (Brown) 13' ~ 15': Gravel (Silt, Sand-Brown) 15' ~ 40': Silt (Sand-Grey)
7322901	A259532	10/29/2018	Test Hole/ Observation and Monitoring Hole	7.6m	23'				0' ~ 3': Fill (Gravel, Silt-Brown-loose) 3' ~ 20': Silt (Clay, Gravel-Brown-Dense, Packed) 20' ~ 23': Silt, Till (Gray-Dense)

									23’ ~ 25’: Sand, Gravel (Silt-Gray-Wet)
7325288	A248723	08/24/2018		N/A					
7325307	A253485	09/27/2018		N/A					
7332938	A258425	03/21/2019		N/A					
7334014	A264659	05/14/2019	monitoring/ observation well	5.8	N/A		Untested		0 ~ 0.6m: Fill (Silt, Clay-Brown) 0.6 ~ 3.1m: Silt (Clay-Brown-Hard) 3.1 ~ 5.8m: Silt (Clay-Grey-Hard)
7334053	A264705	05/13/2019	monitoring/ observation well	5.6	N/A		Untested		0 ~ 2.5m: Silt (Clay-Brown-Hard) 2.5 ~ 5.6m: Silt (Clay-Grey-Hard)
7334140	A264708	05/14/2019	monitoring/ observation well	4.5	1.8		Untested		0 ~ 1.8m: Silt (Topsoil-Grey-Soft) 1.8 ~ 3.3m: Silt (Clay-Brown-Hard) 3.3 ~ 4.5m: Silt (Clay-Grey-Hard)
7334144	A264589	05/13/2019	monitoring/ observation well	4.5	N/A		Untested		0 ~ 3.1m: Silt (Clay-Brown-Hard) 3.1 ~ 4.5m: Silt (Clay-Grey-Hard)
7334179	A264704	05/14/2019	monitoring/ observation well	4.5					0 ~ 3.1m: Silt (Clay-Brown-Hard) 3.1 ~ 4.5m: Silt (Clay-Grey-Hard)
7351712	_NO_TAG	10/01/2019		N/A					
7352687	A255699	07/04/2019		N/A					
7355350	A290527	02/05/2020	monitoring/ observation well	5.2					0 ~ 5’: Silt (Brown) 5’ ~ 17’: Silt (Clay-Grey)
7355351	A290500	02/05/2020	monitoring/ observation well	5.8					0 ~ 5’: Silt (Brown)

									5’ ~ 19’: Silt (Clay-Grey)
7355352	A290528	02/05/2020	monitoring/ observation well	5.2					0 ~ 5’: Silt (Brown) 5’ ~ 17’: Silt (Clay-Grey)
7371169	A255762	06/12/2020		N/A					
7402268	A335730	10/15/2021		N/A					
7408706	A258492	12/23/2021	Abandonment	15’			Untested		

APPENDIX B-1

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

15890

Ontario

Ministry of the Environment and Climate Change

Measurements recorded in: ☒ Metric ☐ Imperial

Well Tag (Place Sticker and/or Print Below)

Tag#: A243748

A243748

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	c/o SAMPLE + PAYNTER		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
8-750 MILLWAY AVENUE	CONCORD	ONTARIO		

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
916 Thomas Street	Toronto	4	SW

County/District/Municipality	City/Town/Village	Province	Postal Code
Mississauga Peel	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	600367	4825820		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	SANDY SILT			0.0	3.7
	EOH			3.7	

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0.0	0.3	CONCRETE	
0.3	1.8	BENTONITE	
1.8	3.7	SAND	
	3.7	EOH	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☒ Boring ☐ Digging
☐ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☑ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
5.0	PVC		0.0	2.1

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
6.3	PVC	0.010"	2.1	3.7

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☑ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Hole Diameter Depth From (m/ft)	Depth To (m/ft)	Diameter (cm/in)
3.1	☐	☐ Fresh ☒ Untested ☐ Other, specify	0.0	3.7	11.4
	☐	☐ Fresh ☐ Untested ☐ Other, specify			
	☐	☐ Fresh ☐ Untested ☐ Other, specify			

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

Comments: Map Attached

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
SONIC SOIL SAMPLING INC.	7147

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
668 MILLWAY AVENUE	YORK	ONTARIO	L4K 3V2	sonic@sonicsoil.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
9056600501	ARCHIBALD, ALAN	2881		

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: 20180005

Ministry Use Only

Audit No. Z278792

JUL 06 2018

Received

0506E (2014/11)

Ministry's Copy

C-7147
Z-278792

JUL 0 6 2018

Ontario | Ministry of the Environment

Well Tag Number (Place sticker and print number below) A 024778 (A 024778)

Well Record

Regulation 903 Ontario Water Resources Act

page 1 of 1

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Feet

RR#/Street Number/Name: 65 Tannery Street

City/Town/Village: Mississauga

Site/Compartment/Block/Tract etc.:

GPS Reading: NAD 83 | Zone 17 | Easting 603560 | Northing 4825949

Unit Make/Model: Magellan

Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
Brown	Fill			0.0	0.6
Brown	Silt	Clay, Sand	Dense	0.6	2.7
Grey	Silt	Sand, Gravel	Dense	2.7	4.7
Grey	Shale		Hard	4.7	4.9

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0.0	4.5	12.5
4.5	4.9	5.0

Water Record

Water found at ___ Metres / Kind of Water

NA m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☐ Clear and sediment free ☐ Other, specify

Chlorinated ☐ Yes ☑ No

Construction Record

Casing

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
5.0	☐ Steel ☐ Fibreglass ☑ Plastic ☐ Concrete ☐ Galvanized	0.15	0.1	2.7
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			

Screen

Outside diam	Material	Slot No.	Depth From	Depth To (Metres)
5.3	☐ Steel ☐ Fibreglass ☑ Plastic ☐ Concrete ☐ Galvanized	10	2.7	4.3

No Casing or Screen

☐ Open hole

Test of Well Yield

Pumping test method	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Pump intake set at - (metres)	Static Level			
Pumping rate - (litres/min)	1		1	
Duration of pumping ___hrs +___ min	2		2	
Final water level end of pumping ___metres	3		3	
Recommended pump type. ☐ Shallow ☐ Deep	4		4	
Recommended pump depth. ___metres	5		5	
Recommended pump rate. (litres/min)	10		10	
	15		15	
If flowing give rate - (litres/min)	20		20	
	25		25	
If pumping discontinued, give reason.	30		30	
	40		40	
	50		50	
	60		60	

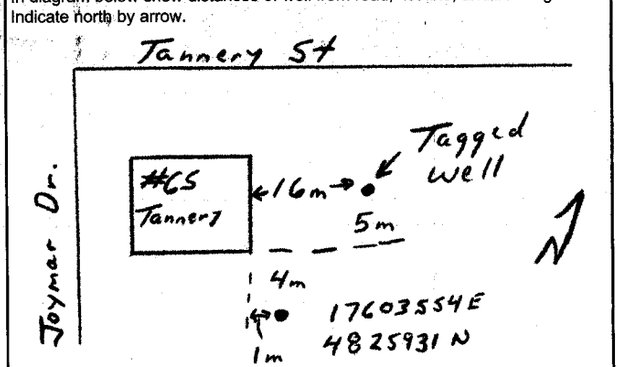
Plugging and Sealing Record

☑ Annular space ☐ Abandonment

Depth set at - From	Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0.0	0.3	Concrete, Flush Cover	—
0.3	2.1	Bentonite	0.02

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.



Method of Construction

☐ Cable Tool ☐ Rotary (air) ☐ Diamond ☐ Digging
☐ Rotary (conventional) ☐ Air percussion ☐ Jetting ☐ Other
☐ Rotary (reverse) ☑ Boring ☐ Driving

Water Use

☐ Domestic ☐ Industrial ☑ Public Supply ☐ Other
☐ Stock ☐ Commercial ☑ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

☐ Water Supply ☐ Recharge well ☐ Unfinished ☐ Abandoned, (Other)
☐ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering
☑ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Well Contractor/Technician Information

Name of Well Contractor: DBW Drilling Ltd — Well Contractor's Licence No.: 7230

Business Address (street name, number, city etc.): 148 Wright Crescent Ajax L1S 6X6

Name of Well Technician (last name, first name): Wilson William — Well Technician's Licence No.: 03-1172

Signature of Technician/Contractor: X W. A. Wilson — Date Submitted YYYY MM DD: 2005 03 21

Audit No. Z 25171 — Date Well Completed YYYY MM DD: 2005 02 28

Was the well owner's information package delivered? ☐ Yes ☑ No — Date Delivered YYYY MM DD: —

Ministry Use Only

Data Source — Contractor: 7230

Date Received YYYY MM DD: APR 05 2005 — Date of Inspection YYYY MM DD:

Remarks — Well Record Number:

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☑ Well Owner's Copy ☐

Cette formule est disponible en français

7302257

A199244

Ontario — Ministry of the Environment and Climate Change

Well Tag No. (Place Sticker and/or Print Below) A199244

Tag#: A199244

Well Record

Regulation 903 Ontario Water Resources Act

S-20455

Page _____ of _____

Measurements recorded in: ☐ Metric ☐ Imperial

[redacted]

CAR HOLDINGS INC.

Address of Well Location (Street Number/Name)	Township	Lot	Concession
64 Thomas Street			
County/District/Municipality	**City/Town/Village**	**Province**	**Postal Code**
	Mississauga	Ontario	
UTM Coordinates Zone Easting Northing	**Municipal Plan and Sublot Number**	**Other**	
NAD 83 17 603743 4825824		WKQ-010494 A0 - A03	

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Blk	Asphalt			0	3"
Brown	clay	silt		3"	9'
Brown	sand			9'	10'
~~Brown~~	shale			10'	13'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	6"	Concrete	
6"	~~7~~ 8'	Bentonite	
~~7~~ 8'	13'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ ~~Rotary~~ (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, specify Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	.225	0	8'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25	PVC	10	8'	13'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh Untested / Other, specify
	☐	☐ ☐ / ☐
	☐	☐ ☐ / ☐
	☐	☐ ☐ / ☐

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	13'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping _____ hrs + _____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map

4"

Comments: General contractor: Pinchin Environmental

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241
Business Address (Street Number/Name)	**Municipality**
165 Shields Court	Markham
Province	**Postal Code**	**Business E-mail Address**
Ontario	L3R 8V2	wrecords@stratasoil.com
Bus. Telephone No. (inc. area code)	**Name of Well Technician (Last Name, First Name)**
905-764-9304	Muir, Mike
Well Technician's Licence No.	**Signature of Technician and/or Contractor**	**Date Submitted**
3144		2017/11/10

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered

Date Work Completed 2017/11/21

Ministry Use Only

Audit No. Z273883

DEC 22 2017 Received

7506E (2014/11) Ministry's Copy

Map data ©2017 Google Imagery ©2017 , DigitalGlobe, First Base Solutions

7302258

A199245

Ontario — Ministry of the Environment and Climate Change

Well Tag No. (Place Sticker and/or Print Below) A199245

Tag#: A199245

Well Record

Regulation 903 Ontario Water Resources Act

S-20455

Page _____ of _____

Measurements recorded in: ☐ Metric ☑ Imperial

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
64 Thomas Street			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603719	4825809		WKQ-010494 A0 - A03

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Blk	Asphalt			0	3"
Brown	clay	silt		3"	12'
Blue					
Grey	shale			12'	15'

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	6"	Concrete	
6"	9'	Bentonite	
9'	15'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☑ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, specify Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	.225	0	10'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25	PVC	10	10'	15'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	15'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map

Comments: General contractor: Pinchin Environmental

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
165 Shields Court	Markham

Province	Postal Code	Business E-mail Address
Ontario	L3R 8V2	wrecords@stratasoil.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
905-764-9304	Muir Mike

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3141		20171110

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered

Date Work Completed 2017/10/26

Ministry Use Only

Audit No. Z273880

Received DEC 22 2017

0506E (2014/11)

Ministry's Copy

DEC 2 2 2017

C-7241 Z-273880

APPENDIX B-2

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

UTM Z E
9 R N

Elev. 9 ft

The Ontario Water Resources Commission Act

WATER WELL RECORD

GROUND WATER BRANCH
49 No. 2143
FEB 17 1964
ONTARIO WATER RESOURCES COMMISSION

Basin 24 V DEEL

County or District ... Township, Village, Town or City STREETSVILLE

Con. ... Lot ... Date completed 18 (day) Sept. (month) 63 (year)

Owner DERBY DOG FOOD LTD. (print in block letters) Address STREETSVILLE ONT.

Casing and Screen Record

Inside diameter of casing 8"
Total length of casing 38'
Type of screen —
Length of screen —
Depth to top of screen —
Diameter of finished hole 8"

Pumping Test

Static level 18'
Test-pumping rate 2 G.P.M.
Pumping level 125'
Duration of test pumping 8 hrs
Water clear or cloudy at end of test CLEAR
Recommended pumping rate 2 G.P.M.
with pump setting of 123 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
TOPSOIL	0	1		
CLAY and STONES	1	35		
BLUE SHALE	35	125	80'	SALTY

For what purpose(s) is the water to be used? COMMERCIAL

Is well on upland, in valley, or on hillside? UPLAND

Drilling or Boring Firm KEITH McCLURE
INGLEWOOD ONT.

Address SAME

Licence Number 1012

Name of Driller or Borer

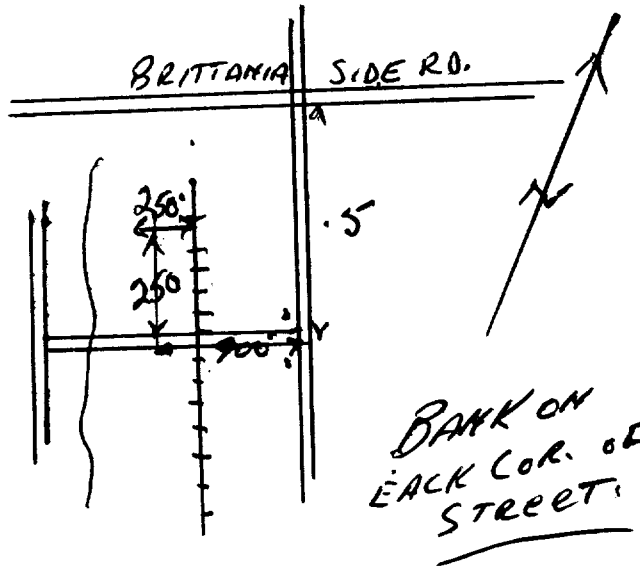
Address

Date Feb 17/64

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



BANK ON EACK COR. OF STREET.

Form 7 15M-60-4138

OWRC COPY

CSS.S8

Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below)

Abandon

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN 49006 CON DS M 05 LOT 04

Well Owner's Information and Location of Well Information

[redacted]

Address of Well Location (County/District/Municipality): Mississauga

Township:

Lot: Part 4

Concession: 5

RR#/Street Number/Name: 80 Thomas St

City/Town/Village: Mississauga

Site/Compartment/Block/Tract etc.:

GPS Reading: NAD 83 | Zone 17 | Easting 603569 | Northing 4825806

Unit Make/Model:

Mode of Operation: ☐ Undifferentiated ☐ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	1.82	21

Water Record

Water found at ___ Metres / Kind of Water

- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was
☐ Clear and sediment free
☐ Other, specify

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
Casing				
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☑ Galvanized	Slot No.		
No Casing or Screen				
	☐ Open hole			

Test of Well Yield

Pumping test method	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Pump intake set at - (metres)	Static Level			
Pumping rate - (litres/min)	1		1	
Duration of pumping _____hrs +_____ min	2		2	
Final water level end of pumping _____metres	3		3	
Recommended pump type. ☐ Shallow ☐ Deep	4		4	
Recommended pump depth. _____metres	5		5	
Recommended pump rate. (litres/min)	10		10	
	15		15	
If flowing give rate - (litres/min)	20		20	
	25		25	
If pumping discontinued, give reason.	30		30	
	40		40	
	50		50	
	60		60	

Plugging and Sealing Record

☑ Annular space ☐ Abandonment

Depth set at - From	Depth set at - To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	1.82	Bentonite	

Method of Construction

☐ Cable Tool ☐ Rotary (air) ☐ Diamond ☐ Digging
☐ Rotary (conventional) ☑ Air percussion ☐ Jetting ☐ Other
☐ Rotary (reverse) ☑ Boring ☐ Driving

Water Use

☐ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

☐ Water Supply ☐ Recharge well ☐ Unfinished ☑ Abandoned, (Other)
☐ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering
☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Well Contractor/Technician Information

Name of Well Contractor: Geo-Environmental

Well Contractor's Licence No.: 6607

Business Address (street name, number, city etc.): 340 Market Drive Milton

Name of Well Technician (last name, first name): Gamble Doug

Well Technician's Licence No.: 3109

Signature of Technician/Contractor: X [signature]

Date Submitted YYYY MM DD: 2004 07 14

Location of Well

In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.

see attached map.

Audit No. Z 15858

Date Well Completed YYYY MM DD: 2004 7 14

Was the well owner's information package delivered? ☐ Yes ☐ No

Date Delivered YYYY MM DD

Ministry Use Only

Data Source

Contractor: 6607

Date Received YYYY MM DD: AUG 25 2004

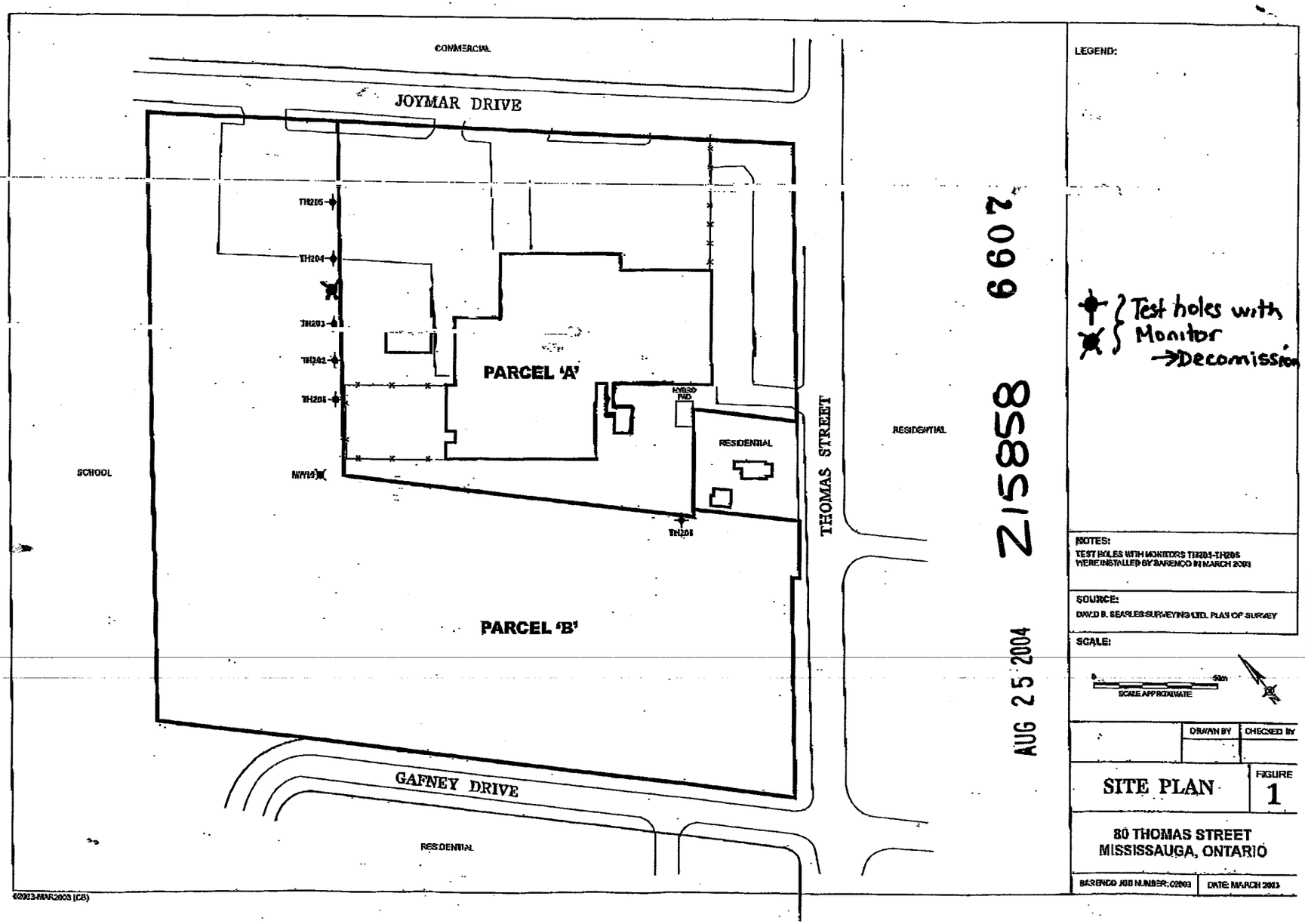
Date of Inspection YYYY MM DD

Remarks

Well Record Number: 4909511

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

Cette formule est disponible en français



LEGEND:

{ Test holes with Monitor → Decomission

NOTES:
TEST HOLES WITH MONITORS TH201-TH205 WERE INSTALLED BY BARENCO IN MARCH 2003

SOURCE:
DAVID B. SEARLES SURVEYING LTD. PLAN OF SURVEY

SCALE:

0 5m
SCALE APPROXIMATE

DRAWN BY	CHECKED BY

SITE PLAN — FIGURE 1

80 THOMAS STREET
MISSISSAUGA, ONTARIO

BARENCO JOB NUMBER: 02903 | DATE: MARCH 2003

AUG 25 2004

215858

6607

Ontario — Ministry of the Environment

Well Record

Regulation 903 Ontario Water Resources Act

Well Tag No. *(Place Sticker and/or Print Below)* A103034

A103034

Page 5 of 5.

Measurements recorded in: ☐ Metric ☒ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
City of	Mississauga.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
950 Burnhamthorpe r.d w.	Mississauga	ON	L5C3B4	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
170 Church Street			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	17	610391	4826234		WKQ-002938 A0 - A04

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand	Silt	Very dense	0	15'
Grey	Clay	Silt.		15'	20'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	1'	Concrete.	
1'	9'	Bentseal.	
9'	20'	Sand.	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☒ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☒ Test Hole ☒ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
1.5"	Pvc	1/4"	0	10'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
1 3/4"	Pvc	10	10'	20'

Status of Well

☐ Water Supply
☐ Replacement Well
☒ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
	☐ Fresh ☐ Untested	☐	
	☐ Fresh ☐ Untested	☐	
	☐ Fresh ☐ Untested	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	20'	10.92.

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map #5.

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
905-764-9304	FENELIUS JOHAN

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3069		

Comments: General contractor: Pinchin Environmental

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered

Date Work Completed 2010/08/20

Ministry Use Only

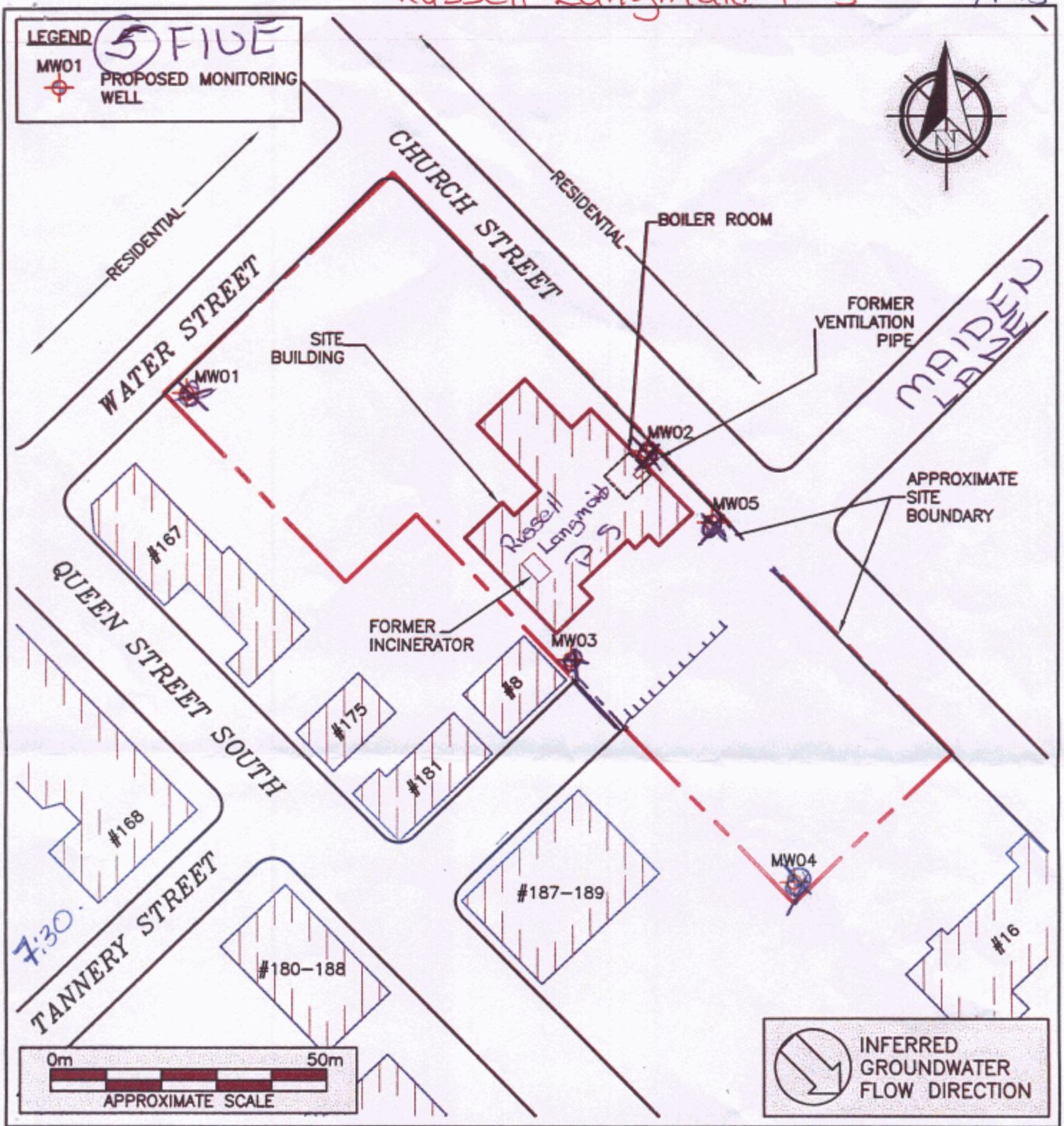
Audit No. z121891

Received SEP 24 2010

0506E (2007/12)

Ministry's Copy

Russell Langmaid P.S 7145



PINCHIN ENVIRONMENTAL

PROJECT NAME: PHASE II ENVIRONMENTAL SITE ASSESSMENT			
CLIENT NAME: CITY OF MISSISSAUGA			
PROJECT LOCATION: 170 CHURCH STREET, MISSISSAUGA, ONTARIO			
FIGURE NAME: PROPOSED MONITORING WELL LOCATION PLAN			FIGURE NO.: 1
APPROXIMATE SCALE: AS SHOWN	PROJECT NO.: 59786.003	DATE: JULY 2010	

C-7241

2121888 2121886 2121891
2121887 2121885

SEP 24 2010

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Ta (Print Below) **A 095114**

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
BOB	PUNIA		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
26 NEWBURY CRES.	BRAMPTON	ONT	L6S5H2	9055649111

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
86 THOMAS STREET			

County/District/Municipality	City/Town/Village	Province	Postal Code
	MISSISSAUGA	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	0603644	4825640		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sandy Silt Fill	organics, cobbles, Roots	Dense	0.0	10'
Redish Brown	Sandy Silt	Clay	Dense	10'	20'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0.0	8'	Bentonite	2-50lb bags

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☑ Boring ☐ Digging ☐ Air percussion ☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☑ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	Plastic	4"	0.0	10'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2 1/4"	Plastic	10	10'	20'

Status of Well

☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify

Water Details

Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify
Dry	

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0.0	20'	6"

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

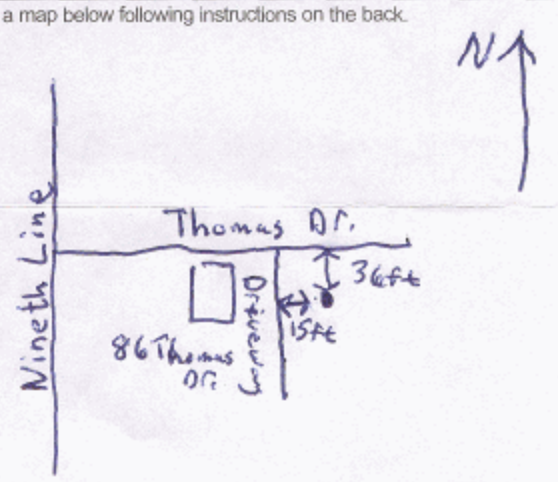
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strong Soil Search Inc	7247

Business Address (Street Number/Name)	Municipality
5265 Sinclair Ln	Clarksburg

Province	Postal Code	Business E-mail Address
ONT	L1Y1A1	strongsoilsearchinc@bellnet.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
9056491115	LATOUR, TERRY.

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3581	Terry	20110428

Well owner's information package delivered ☐ Yes ☑ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: 20100216

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Audit No. Z109765

Received MAY 06 2011

0506E (12/2007)

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Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☒ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*
Tag#: A123805 A123805

Well Record

Regulation 903 Ontario Water Resources Act

0322 Page 1 of 4

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
136 Queen Street South	Streetsville		

County/District/Municipality	City/Town/Village	Province	Postal Code
		Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603656	4826133		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Fill	Top soil		0	5'
Brown	Clay	Silt		5'	10'
Gray	Clay	Silt		10'	15'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	0.5'	Flush Mount / Concrete	
0.5	4'	Bensea /	
4'	15'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☒ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☒ Test Hole ☒ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
1.25"	Plastic	0.25"	0	5'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
1.5"	Plastic	10	5'	15'

Status of Well

☐ Water Supply
☐ Replacement Well
☒ Test Hole
☐ Recharge Well
☐ Dewatering Well
☒ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	15'	2.25"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* _____

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map

MW 1

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
#2-147 West Beaver Creek Rd.	Richmond Hill

Province	Postal Code	Business E-mail Address
ON	L4B1C6	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
905 764 9604	Milne Brown

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
7297		2011 12 09

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2011 12 01

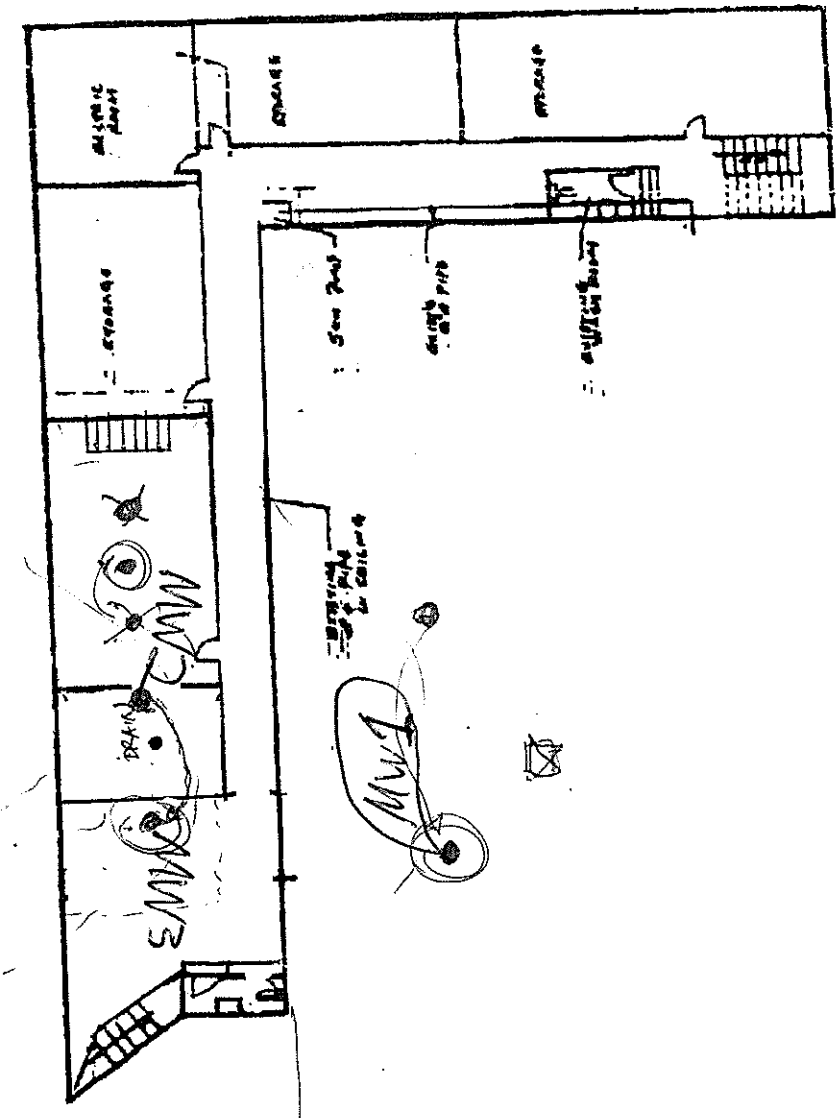
Ministry Use Only

Audit No. Z143397

Received JAN 09 2012

9322

BASEMENT



ORIGINAL PLAN

C-72941

2143397

2143395

2143396

JAN 0 9 2012

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*

Tag#: A126488 A126488

Well Record

Regulation 903 Ontario Water Resources Act

Page 2 of 4

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
136 Queen Street South	Streetsville		

County/District/Municipality	City/Town/Village	Province	Postal Code
		Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603136	4832611		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Gray	Gravel			0	.5
Brown	Clay	Silt.		.5	6'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	.5	Flushmount/Concrete.	

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☑ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☑ Test Hole ☑ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
1"	Plastic	0.25"	0	4'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
1.25"	Plastic	10	4'	6'

Status of Well

☐ Water Supply
☐ Replacement Well
☑ Test Hole
☐ Recharge Well
☐ Dewatering Well
☑ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, specify
☐ Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: ☐ Fresh ☐ Untested	Other, specify

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	6'	2.25"

Map of Well Location

Please provide a map below following instructions on the back.

See Map

MW 3

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7041

Business Address (Street Number/Name)	Municipality
#2-147 West Beaver Creek	Richmond Hill

Province	Postal Code	Business E-mail Address
ON	L4B 1G8	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
905 764 9301	Mike Brown

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
7297		2011/12/09

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered

Date Work Completed 2011/12/01

Ministry Use Only

Audit No. Z 143395

Received JAN 09 2012

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Measurements recorded in: ☐ Metric ☑ Imper

Well Tag No. *(Place Sticker and/or Print Below)*

Tag#: A126511 A126511.

Well Record

Regulation 903 Ontario Water Resources Act

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
136 Queen Street South	Streetsville		
County/District/Municipality	**City/Town/Village**	**Province**	**Postal Code**
		Ontario	
UTM Coordinates Zone / Easting / Northing	**Municipal Plan and Sublot Number**	**Other**	
NAD 8 3 — 17 603646 — 4826120			

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Gray	Gravel			0	.5'
Brown	Clay	silt.		.5	6'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☑ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☑ Test Hole ☑ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
1"	Plastic	0.25"	0	4'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
1.25"	Plastic	10	4'	6'

Status of Well

☐ Water Supply
☐ Replacement Well
☑ Test Hole
☐ Recharge Well
☐ Dewatering Well
☑ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	6'	2.25"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* _____

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping _____ hrs + _____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map

MW2.

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc	7241
Business Address (Street Number/Name)	**Municipality**
2-147 West Beaver Creek	Richmond Hill
Province	**Postal Code** / **Business E-mail Address**
ON	L4B 1B6
Bus. Telephone No. (inc. area code)	**Name of Well Technician (Last Name, First Name)**
905 764 9380	Brown, Mike
Well Technician's Licence No.	**Signature of Technician and/or Contractor** / **Date Submitted**
T-2977	2011/12/08

Comments:

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
☐ Yes ☐ No	Y Y Y Y M M D D	Audit No. Z143396
	Date Work Completed: 2011/12/01	Received JAN 09 2012

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Ontario — Ministry of the Environment

S-13052

Well Record

Regulation 903 Ontario Water Resources Act

Page 4 of 4

Well Tag No. *(Place Sticker and/or Print Below)* **A120887**

Measurements recorded in: ☐ Metric ☑ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	ALHOWALIA Group of Investments		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
271 Queen St South	Mississauga	Ontario	L5M 1L9	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
271 Queen Street South			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	17	609086	4825777		WKQ-005297 A0 - A03

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand	fill		0	5'
Brown	Silt		moist	5'	14'
Grey	Silt		Moist	14'	18'

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	1'	Concrete	
1'	7'	Holeplug	
7'	18'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☒ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☒ Test Hole ☒ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	0.25"	0	8'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25"	PVC	10	8'	18'

Status of Well

☐ Water Supply ☐ Replacement Well ☒ Test Hole ☐ Recharge Well ☐ Dewatering Well ☒ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, *specify* ☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From	Hole Diameter Depth To	Hole Diameter (cm/in)
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	0	2'	8"
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	2'	18'	4.5"
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*			

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See map

MW2

Comments: General contractor: Pinchin Environmental

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
905-764-9304	Muir, Mike

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3148		2012 09 05

Well owner's information package delivered ☐ Yes ☒ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: 2012 09 24

Ministry Use Only

Audit No. z158465

Received: 2012/10/03

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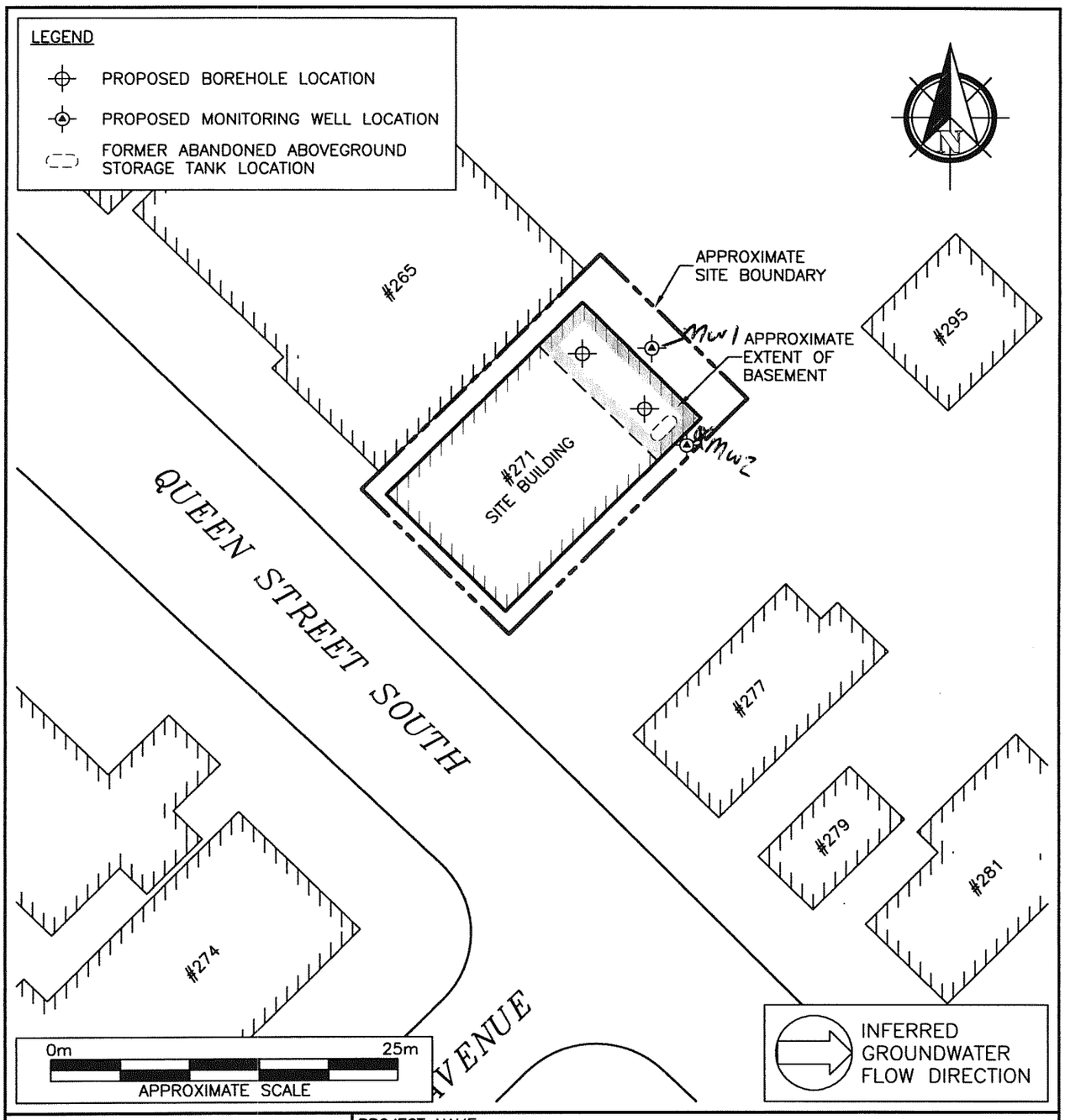
Ministry's Copy

S-13052



PROJECT NAME: PHASE II ENVIRONMENTAL SITE ASSESSMENT			
CLIENT NAME: ALHOWALIA GROUP OF INVESTMENTS			
PROJECT LOCATION: 271 QUEEN STREET SOUTH, MISSISSAUGA, ONTARIO			
FIGURE NAME: PROPOSED BOREHOLE AND MONITORING WELL LOCATION PLAN			FIGURE NO. 1
APPROXIMATE SCALE: AS SHOWN	PROJECT NO.: 58098.001	DATE: JULY 2012	

PINCHIN ENVIRONMENTAL

C-72041

2158465

J:\58000s\58098 S. Paramalingan\001 Ph.II ESA\Proposal\58098.001 Proposal Figure.dwg, Proposal, 7/17/2012 6:13:09 PM

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)*: A143187

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☐ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Exp. Services Inc.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
1595 Clark Blvd	Brampton	ON	L6T4V1	9057939809

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
Main St. / Queen St S.			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Streetsville	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603928	4826153		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Silt	gravel	Hard	0'	4'
Grey	Silt	clay / gravel	Hard	4'	15'
	zone	Easting	Northing		
BH #2 = GPS	17	603968	4826195		

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed (m^3/ft^3)
0'	8'	Bentonite	5.56 ft3

Method of Construction

☐ Cable Tool ☐ Diamond
☑ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* ____

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☑ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* ____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
1"	Plastic	Schedule 40	0'	10'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
1"	Plastic	10	10'	15'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☑ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify* ____
☐ Other, *specify* ____

Water Details

Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	15'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* ____

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

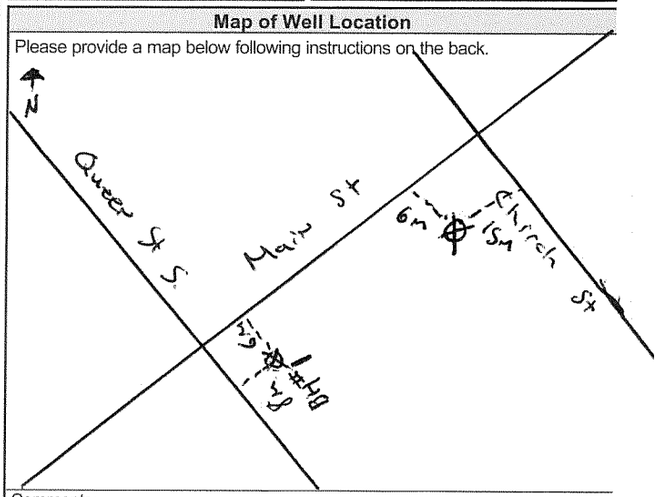
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Terex Drilling Solutions	7501

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
43 Deer Ridge Rd. PO Box 333	Goodwood	ON	L0C1A0	terexdrillingsolutions@gmail.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
4167503636	MacEachern - Jon	3681		2013 05 28

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No	Y Y Y Y M M D D	2013 05 28

Ministry Use Only

Audit No. Z 165107

Received JUN 25 2013

Ministry's Copy

S-15167

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imper

Well Tag No. *(Place Sticker and/or Print Below)*

Tag#: A160740 A160740

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

[redacted]

Organization: 2003990 Ontario Inc.

E-mail Address:

☐ Well Constructed by Well Owner

[redacted]

Telephone No. *(inc. area code)*:

Address of Well Location (Street Number/Name)	Township	Lot	Concession
51 Tannery Street			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates NAD 83: Zone 17, Easting 603664, Northing 4826074

Municipal Plan and Sublot Number:

Other: WKQ-006707 A0 - A03

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand	Gravel	Fill	0	6'
Brown	Silt	Sand		6'	15'
Grey	Silt	Clay		15'	25'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0,	1'	Concrete	
1'	14'	Holeplug	
14'	25'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☑ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2 in	PVC	0.25 in	0	15'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25 in	PVC	10	15'	25'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☑ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	
☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	
Water found at Depth (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	
Water found at Depth (m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*	

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	1'	8 in
1'	25'	6 in

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See map

BH 1

Comments: General contractor: Coffey

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
905-764-9304	Teskey Sean

Well Technician's Licence No. | Signature of Technician and/or Contractor | Date Submitted: 20140221

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		20140221

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Audit No: Z 185549

Received: MAR 12 2014

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S-1516-

BUILDING LOCATION SURVEY OF

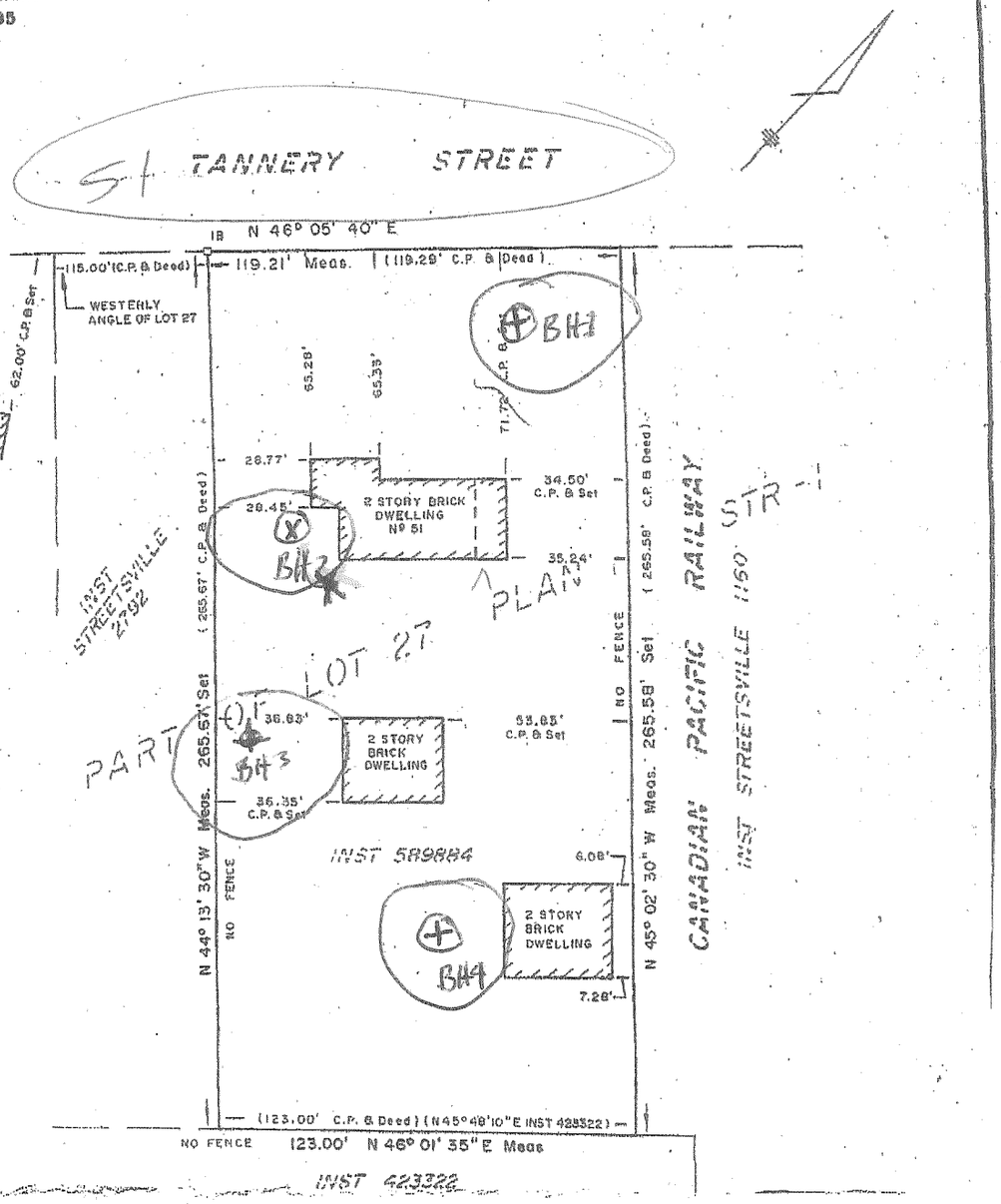
PART OF LOT 27, PLAN STR-1 (HUGH BLACK'S PLAN OF THE VILLAGE OF STREETSVILLE)

CITY OF MISSISSAUGA,
REGIONAL MUNICIPALITY OF PEEL

SCALE 1" = 40'

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
1985

EE 2260



NOTE

- ⊕ DENOTES SURVEY MONUMENT FOUND
- □ DENOTES SURVEY MONUMENT SET
- SIB DENOTES STANDARD IRON BAR
- IB DENOTES IRON BAR
- Deed DENOTES INST 589884
- C.P. DENOTES C.PEAT OLS

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTHEASTERLY LIMIT OF TANNERY STREET, AS SHOWN ON A PLAN OF SURVEY BY C. PEAT OLS DATED JULY 11, 1971, ASSUMED AS NORTH 46° 05' 40" EAST.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THE FIELD SURVEY REPRESENTED ON THIS PLAN WAS COMPLETED ON AUGUST 8, 1985.

AUGUST 13, 1985
MISSISSAUGA, ONTARIO

W. P. TARASICK
ONTARIO LAND SURVEYOR

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
106 LAKESHORE ROAD EAST
MISSISSAUGA, ONTARIO

C-2241 2185549 MAR 12 2001

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* **Tag#: A160739** 39

S-15167

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

[redacted] | Organization: 2003990 Ontario Inc. | E-mail Address | ☐ Well Constructed by Well Owner

[redacted] | Telephone No. *(inc. area code)*

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
51 Tannery Street			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603673	4826035		WKQ-006707 A0 - A03

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand	Gravel	Fill	0	6'
Brown	Silt	Sand		6'	15'
Grey	Silt	Clay		15'	28'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	1'	Concrete	
1'	17'	Holeplug	
17'	28'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☑ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	0.25"	0	18'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25"	PVC	10	18'	28'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	
	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	1'	8"
1'	28'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See map

BH2

Comments: General contractor: Coffey

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
905-764-9304	Tesky, Sean

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
5717		20140221

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		20140221

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Audit No Z 185551

MAR 13 2014 Received

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S-1516

BUILDING LOCATION SURVEY OF

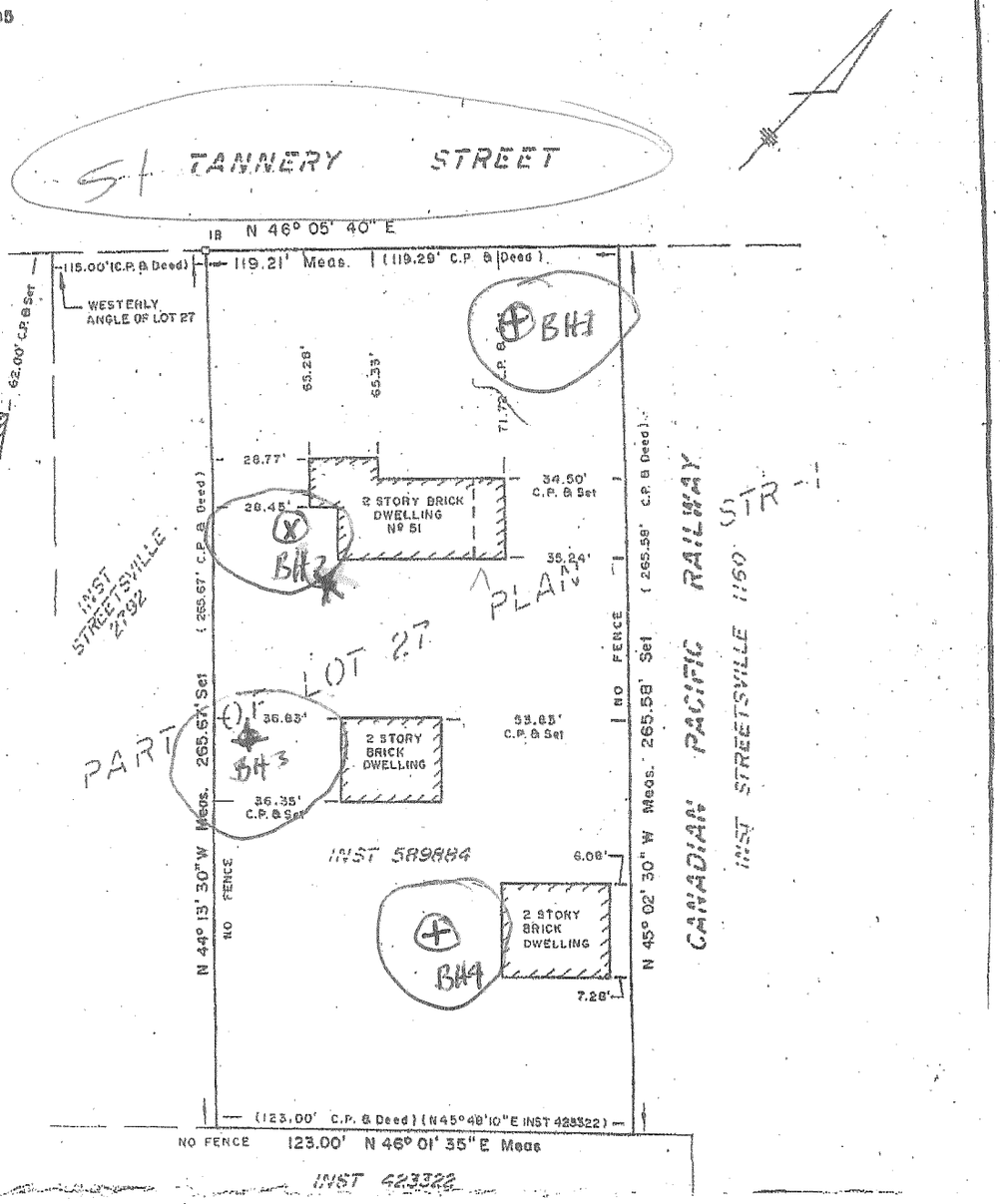
PART OF LOT 27, PLAN STR-1 (HUGH BLACK'S PLAN OF THE VILLAGE OF STREETSVILLE)

CITY OF MISSISSAUGA,
REGIONAL MUNICIPALITY OF PEEL

SCALE 1" = 40'

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
1985

EE 22620



NOTE

- ■ DENOTES SURVEY MONUMENT FOUND
- □ DENOTES SURVEY MONUMENT SET
- SIB DENOTES STANDARD IRON BAR
- IB DENOTES IRON BAR
- Deed DENOTES INST 589884
- C.P. DENOTES C.PEAT OLS

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTHEASTERLY LIMIT OF TANNERY STREET, AS SHOWN ON A PLAN OF SURVEY BY C. PEAT OLS DATED JULY 11, 1971, ASSUMED AS NORTH 46° 05' 40" EAST.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE FIELD SURVEY REPRESENTED ON THIS PLAN WAS COMPLETED ON AUGUST 8, 1985.

AUGUST 13, 1985
MISSISSAUGA, ONTARIO

W. P. TARASICK
ONTARIO LAND SURVEYOR

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
106 LAKESHORE ROAD EAST
MISSISSAUGA, ONTARIO

C-7241 2185551

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*

Tag#: A160738 8

5-15167

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

[redacted] | nization: 2003990 Ontario Inc. | E-mail Address | ☐ Well Constructed by Well Owner

[redacted] | Telephone No. *(inc. area code)*

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
51 Tannery Street			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603603	4862 60 28		WKQ-006707 A0 - A03

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand	Gravel	Fill	0	6'
Brown	Silt	& Sand		6'	15'
Grey	Silt	Clay Rock		15'	24.5'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	1'	Concrete	
1'	13.5	Holeplug	
13.5'	24.5'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☑ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	0.25"	0	14.5'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25"	PVC	10	14.5'	24.5'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, *specify*
	☐	☐	☐	
	☐	☐	☐	
	☐	☐	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	1'	8"
1'	24.5'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See map

BH3

Comments: General contractor: Coffey

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
905-764-9304	Tesky, Sean

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3717		2014 02 21

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2014 02 21

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Audit No Z 185550

Received 13 2014

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S-1516

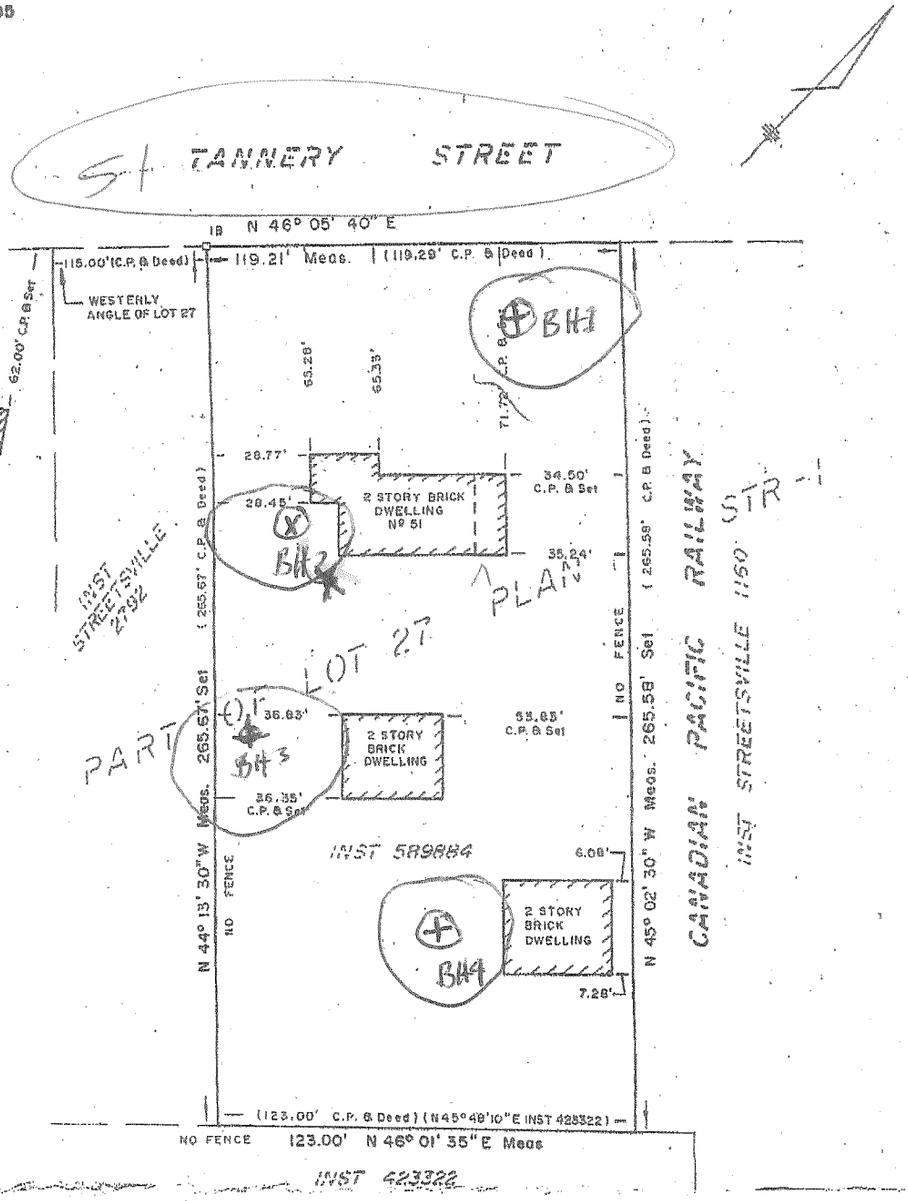
BUILDING LOCATION SURVEY OF

PART OF LOT 27, PLAN STR-1 (HUGH BLACK'S PLAN OF THE VILLAGE OF STREETSVILLE)

CITY OF MISSISSAUGA,
REGIONAL MUNICIPALITY OF PEEL
SCALE 1" = 40'

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
1985

EE 2260



NOTE

- ● DENOTES SURVEY MONUMENT FOUND
- □ DENOTES SURVEY MONUMENT SET
- SIB DENOTES STANDARD IRON BAR
- IB DENOTES IRON BAR
- Deed DENOTES INST 589884
- C.P. DENOTES C.PEAT OLS

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTHEASTERLY LIMIT OF TANNERY STREET, AS SHOWN ON A PLAN OF SURVEY BY C. PEAT OLS DATED JULY 11, 1971, ASSUMED AS NORTH 46° 05' 40" EAST.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE FIELD SURVEY REPRESENTED ON THIS PLAN WAS COMPLETED ON AUGUST 8, 1985.

AUGUST 13, 1985
MISSISSAUGA, ONTARIO

W. P. TARASICK
ONTARIO LAND SURVEYOR

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
106 LAKESHORE ROAD EAST
MISSISSAUGA, ONTARIO

C-7241 2185580

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*
Tag#: A160737

5-15167

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

[redacted] | zation: 2003990 Ontario Inc | E-mail Address | ☐ Well Constructed by Well Owner

[redacted] | Telephone No. *(inc. area code)*

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
51 Tannery Street			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603696	4826034		WKQ-006707 A0 - A03

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand	Gravel	Fill	0	6'
Brown	Silt	Sand		6'	15'
Grey	Silt	Clay		15'	25'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	1'	Concrete	
1'	14'	Holeplug	
14'	25'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☑ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	0.25"	0	15'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25"	PVC	10	15'	25'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	
	☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*
	☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*
	☐ Gas	☐ Fresh ☐ Untested ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	1'	8"
1'	25'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map

BH4

Comments: General contractor: Coffey

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
147-2 West Beaver Creek Road	Richmond Hill

Province	Postal Code	Business E-mail Address
Ontario	L4B 1C6	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
905-764-9304	Testey, Sean

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3747		2014/02/21

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2014/02/21

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Audit No. Z 185552

MAR 13 2014

Received

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S-1516

BUILDING LOCATION SURVEY OF

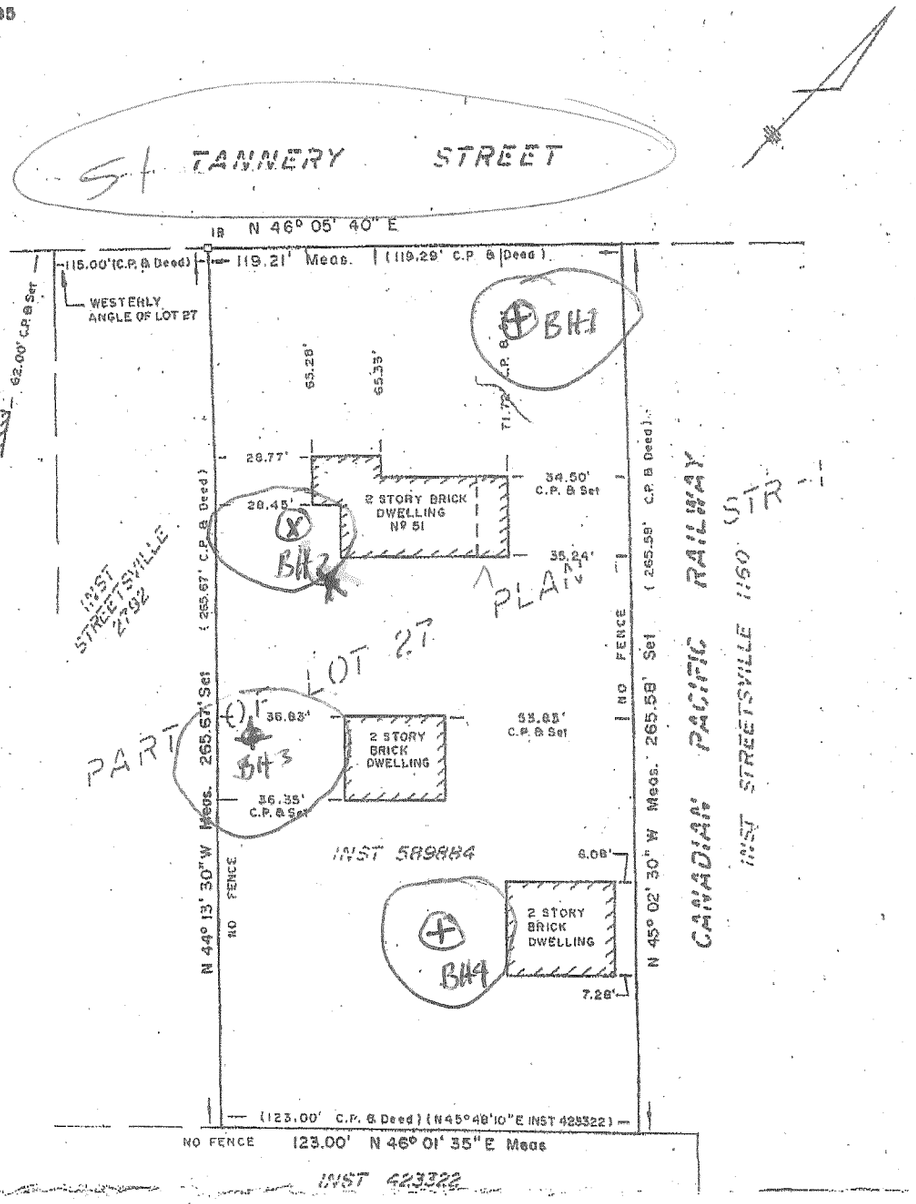
PART OF LOT 27, PLAN STR-1 (HUGH BLACK'S PLAN OF THE VILLAGE OF STREETSVILLE)

CITY OF MISSISSAUGA,
REGIONAL MUNICIPALITY OF PEEL

SCALE 1" = 40'

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
1985

EE 2260



NOTE

- ■ DENOTES SURVEY MONUMENT FOUND
- □ DENOTES SURVEY MONUMENT SET
- SIB DENOTES STANDARD IRON BAR
- IB DENOTES IRON BAR
- Deed DENOTES INST 589884
- C.P. DENOTES C.PEAT OLS

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTHEASTERLY LIMIT OF TANNERY STREET, AS SHOWN ON A PLAN OF SURVEY BY C. PEAT OLS DATED JULY 11, 1971, ASSUMED AS NORTH 46° 05' 40" EAST.

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE FIELD SURVEY REPRESENTED ON THIS PLAN WAS COMPLETED ON AUGUST 8, 1985.

AUGUST 13, 1985
MISSISSAUGA, ONTARIO

W. P. TARASICK
ONTARIO LAND SURVEYOR

TARASICK, McMILLAN LIMITED
ONTARIO LAND SURVEYORS
106 LAKESHORE ROAD EAST
MISSISSAUGA, ONTARIO

C-7241 2185552 MAR 13 2001

Ontario — Ministry of the Environment

S-15387

Well Tag No. (Place Sticker and/or Print Below) A163059

Tag #: A163059

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Measurements recorded in: ☐ Metric ☑ Imperial

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
25 & 39 Princess Street			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	0604069	4825587		WKQ-006810 A0 - A03

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Fill			0	2'
Brown	Sand	Silt		2'	11'
Grey	Sand	Silt		11'	17'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	0.5'	Aushamount/Concrete	
0.5'	6'	Bensea	
6'	17'	Sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* Direct Push

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	0.25"	0	7'

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.25"	PVC	10	7	17'

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	17'	8"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

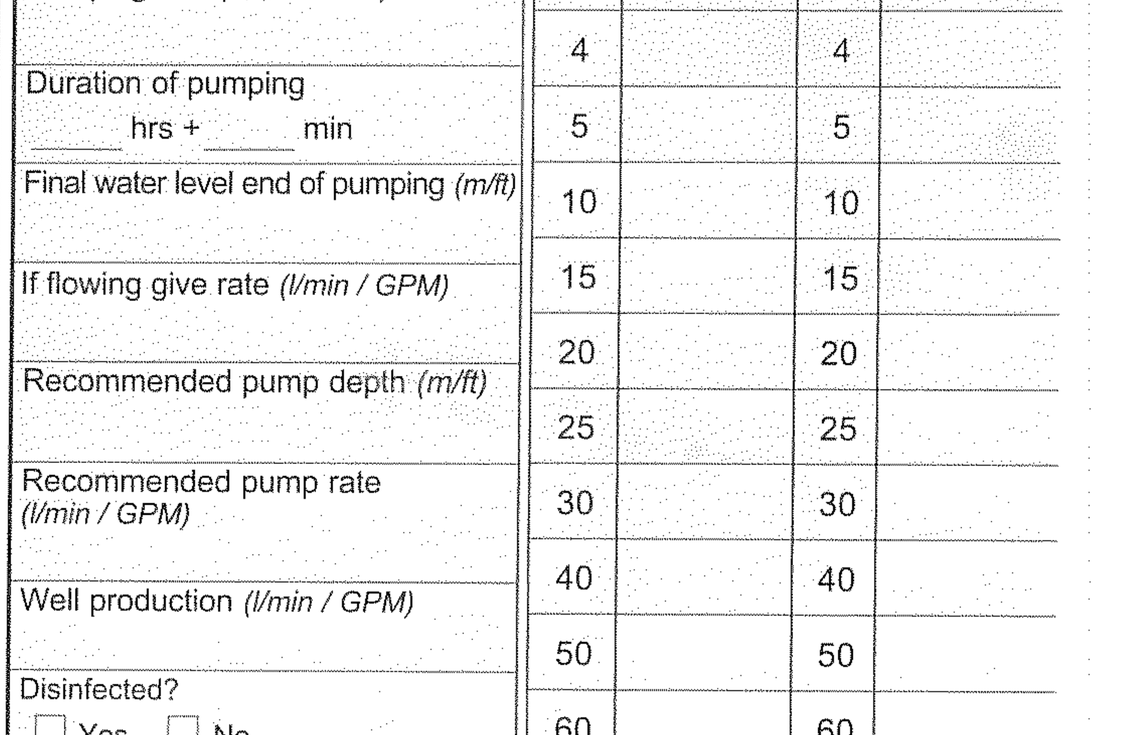
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: General contractor: Franz Environmental Inc.

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling Inc.	7241

Business Address (Street Number/Name)	Municipality
165 Shields Court	Markham

Province	Postal Code	Business E-mail Address
Ontario	L3R 8V2	wrecords@stratasoil.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
905-764-9304	Cudmore, Mark

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
37018		2014 05 30

Well owner's information package delivered: ☐ Yes ☒ No

Date Package Delivered: ____

Date Work Completed: 2014 04 14

Ministry Use Only

Audit No. Z186952

MAY 30 2014

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Ontario — Ministry of the Environment

Measurements recorded in: [X] Metric [ ] Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A157286

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Well Owner's Information

[redacted] ation	E-mail Address	[ ] Well Constructed by Well Owner
Metrolinx		

Mailing Address (Street Number/Name)	Municipality	Province	[redacted]
20 Bay St	Toronto	Ont	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
39 Princess St			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	604110	4825757		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
			Bentonite	0	5.5
	Decommission 50m MW				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)

Method of Construction

[ ] Cable Tool [ ] Diamond
[ ] Rotary (Conventional) [ ] Jetting
[ ] Rotary (Reverse) [ ] Driving
[ ] Boring [ ] Digging
[ ] Air percussion
[ ] Other, *specify*

Well Use

[ ] Public [ ] Commercial [ ] Not used
[ ] Domestic [ ] Municipal [ ] Dewatering
[ ] Livestock [ ] Test Hole [ ] Monitoring
[ ] Irrigation [ ] Cooling & Air Conditioning
[ ] Industrial
[ ] Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

[ ] Water Supply
[ ] Replacement Well
[ ] Test Hole
[ ] Recharge Well
[ ] Dewatering Well
[ ] Observation and/or Monitoring Hole
[ ] Alteration (Construction)
[ ] Abandoned, Insufficient Supply
[ ] Abandoned, Poor Water Quality
[ ] Abandoned, other, *specify* not needed
[X] Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	
	[ ] Gas	[ ] Fresh [ ] Untested [ ] Other, *specify*
	[ ] Gas	[ ] Fresh [ ] Untested [ ] Other, *specify*
	[ ] Gas	[ ] Fresh [ ] Untested [ ] Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	5.5	21.0

Results of Well Yield Testing

After test of well yield, water was:
[ ] Clear and sand free
[ ] Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? [ ] Yes [ ] No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map Attached
Labelled MW1

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Davis Drilling Ltd	7172

Business Address (Street Number/Name)	Municipality
873 Nipissing Rd	Milton

Province	Postal Code	Business E-mail Address
Ont	L9T4Z4	davisdrilling@bellnet.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
9052996915	Harvat, Peter

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3759		2014 07 14

Well owner's information package delivered	Date Package Delivered	Date Work Completed
[X] Yes [ ] No	2014 07 14	2014 07 08

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Audit No. Z 192709

JUL 31 2014

0506E (2007/12)

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Google earth

feet 400
meters 100

C-7472
219709

JUL 31 2014

Ontario — Ministry of the Environment

Measurements recorded in: [X] Metric [ ] Imperial

Well Tag No. *(Place Sticker and/or Print Below)*: No Tag Found

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Well Owner's Information

[redacted] / Metrolinx | E-mail Address | [ ] Well Constructed by Well Owner

Mailing Address (Street Number/Name): 20 Bay St | Municipality: Toronto | Province: Ont | [redacted]

Well Location

Address of Well Location (Street Number/Name): 39 Princess St | Township | Lot | Concession

County/District/Municipality | City/Town/Village: Mississauga | Province: Ontario | Postal Code

UTM Coordinates: NAD 83 | Zone: 17 | Easting: 604066 | Northing: 4825770 | Municipal Plan and Sublot Number | Other

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
			Bentonite	0	5.5
	Decommission 50m MW				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)

Method of Construction

[ ] Cable Tool [ ] Diamond [ ] Rotary (Conventional) [ ] Jetting [ ] Rotary (Reverse) [ ] Driving [ ] Boring [ ] Digging [ ] Air percussion [ ] Other, specify

Well Use

[ ] Public [ ] Commercial [ ] Not used [ ] Domestic [ ] Municipal [ ] Dewatering [ ] Livestock [ ] Test Hole [ ] Monitoring [ ] Irrigation [ ] Cooling & Air Conditioning [ ] Industrial [ ] Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To

Status of Well

[ ] Water Supply [ ] Replacement Well [ ] Test Hole [ ] Recharge Well [ ] Dewatering Well [ ] Observation and/or Monitoring Hole [ ] Alteration (Construction) [ ] Abandoned, Insufficient Supply [ ] Abandoned, Poor Water Quality [X] Abandoned, other, specify: not needed [ ] Other, specify

Water Details

Water found at Depth (m/ft)	Kind of Water	
	[ ] Fresh [ ] Untested [ ] Gas [ ] Other, specify	
	[ ] Fresh [ ] Untested [ ] Gas [ ] Other, specify	
	[ ] Fresh [ ] Untested [ ] Gas [ ] Other, specify	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	5.5	21.0

Results of Well Yield Testing

After test of well yield, water was: [ ] Clear and sand free [ ] Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? [ ] Yes [ ] No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map Attached labelled MW2

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: Davis Drilling LTD | Well Contractor's Licence No.: 7172

Business Address (Street Number/Name): 873 Nipissing Rd | Municipality: Milton

Province: Ont | Postal Code: L9T 4Z4 | Business E-mail Address: davisdrilling@bellnet.ca

Bus. Telephone No. (inc. area code): 905 2996215 | Name of Well Technician (Last Name, First Name): Horvat, Peter

Well Technician's Licence No.: 3759 | Signature of Technician and/or Contractor | Date Submitted: 2014 07 14

Well owner's information package delivered: [X] Yes [ ] No | Date Package Delivered: 2014 07 14

Date Work Completed: 2014 07 08

Ministry Use Only

Audit No. Z 192708

JUL 31 2014

Received

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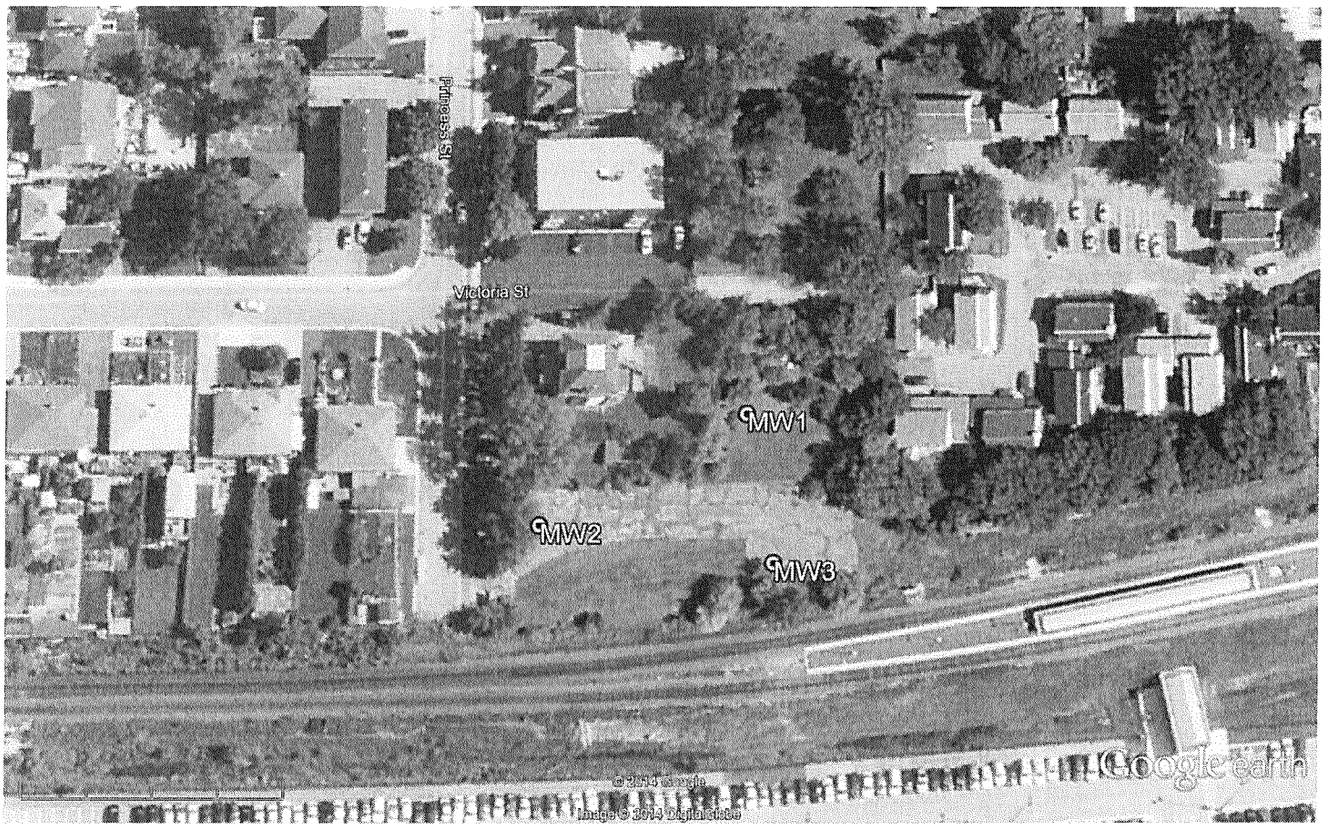

Google earth

feet 400
meters 100

C-7472
219208

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)* A163059

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 2

Measurements recorded in: ☒ Metric ☐ Imperial

Well Owner's Information

[redacted] | Organization: Metrolinx | E-mail Address | ☐ Well Constructed by Well Owner

Mailing Address (Street Number/Name): 20 Bay Street | Municipality: Toronto | Province: Ont | [redacted]

Well Location

Address of Well Location (Street Number/Name): 25 Princess St | Township | Lot | Concession

County/District/Municipality | City/Town/Village: Mississauga | Province: Ontario | Postal Code

UTM Coordinates: NAD 83 Zone 17 Easting 604089 Northing 4825811 | Municipal Plan and Sublot Number | Other

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
			Bentonite	0	5.3

Decommission 50mm MW

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☐ Other, *specify*

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☐ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To

Status of Well

☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☒ Abandoned, other, *specify* Not Needed ☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	5.3	21.0

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

See Map Attached

Labelled MW1

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: Davis Drilling LTD | Well Contractor's Licence No.: 7172

Business Address (Street Number/Name): 873 Nipissing Rd | Municipality: Milton

Province: Ont | Postal Code: L9T 4Z4 | Business E-mail Address: davisdrilling@bellnet.ca

Bus. Telephone No. *(inc. area code)*: 905 299 6915 | Name of Well Technician (Last Name, First Name): Horvat, Peter

Well Technician's Licence No.: 3759 | Signature of Technician and/or Contractor | Date Submitted: 2014 06 27

Well owner's information package delivered: ☒ Yes ☐ No | Date Package Delivered: 2014 06 27 | Date Work Completed: 2014 06 19

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Audit No. Z 192726

JUL 31 2014 Received

Ministry's Copy

Google earth feet 300
meters 100

JUL 3 1 2014

E-7472
21926

Ontario Ministry of the Environment

Well Record for Well Cluster - Part 1 of 3

(Only for Multiple Test Holes or Dewatering Wells)

Regulation 903 Ontario Water Resources Act

Page 1 of 1

All measurements recorded in: ☐ Metric ☒ Imperial

Follow instructions on the front and back of this form. Print or Type

Well Tag No. of Deepest Well: *(Print Well Tag No.)* A176995

Well # on Drawing of Deepest Well: MW#8

Well Cluster Location Information

Address of Well Location (Street Number(s)/Name(s), RR, if available)	Lot(s)	Concession(s)	Geographic Township	County/District/Upper Tier Municipality
80 Thomas St.				

City, Town, Village or Hamlet	Province	GPS Unit Make	Model	Unit Mode of Operation
Mississauga	Ontario	Garmin	E-Trex	☒ Undifferentiated ☐ Averaged ☐ Differentiated, specify:

Mandatory Attachments/Additional Information

☒ Land Owner Consent Form must be attached.

☒ Detailed Drawing of All Well Locations must be attached.

I, the person constructing the well, will promptly submit to the Director, on request, any additional information in my custody or control related to any well in the well cluster that I have constructed.

Signature of Technician/Contractor — Date (yyyy/mm/dd): 2015/03/04

Well Details

Well # on Drawing	UTM Coordinates Zone	Easting	Northing	Hole Depth (m/ft)	Hole Diameter (cm/in)	Method of Construction	Casing Material; Diameter (cm/in)	Casing From	Casing To	Screen Interval From	Screen Interval To	Annular Space Material From	Annular Space Material To	Annular Space Material:	Overburden/Bedrock or Abandonment Filing Material Intervals (m/ft)	Static Water Level (m/ft)	Date of Completion (yyyy/mm/dd)
MW#1	17	603612	4825804	19'	8"	Rotary	2" PVC	9'	0'	19'	9'	19' 8'	8' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-19' grey silty clay	0'	2015/01/05
MW#2	17	603629	4825905	18'	8"	Rotary	2" PVC	8'	0'	18'	8'	9' 7'	7' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-18' grey silty clay	0'	2015/01/05
MW#3	17	603622	4825791	18'	8"	Rotary	2" PVC	8'	0'	18'	8'	18' 7'	7' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-18' grey silty clay	0'	2015/01/06
MW#4	17	603569	4825779	19'	8"	Rotary	2" PVC	9'	0'	19'	9'	19' 8'	8' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-19' grey silty clay	0'	2015/01/06
MW#5	17	603693	4825739	20'	8"	Rotary	2" PVC	10'	0'	20'	10'	20' 9'	9' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-20' grey silty clay	12'	2015/01/07
MW#6	17	603606	4825674	20'	8"	Rotary	2" PVC	10'	0'	20'	10'	20' 9'	9' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-20' grey silty clay	0'	2015/01/07
MW#7	17	603604	4825690	20'	8"	Rotary	2" PVC	10'	0'	20'	10'	20' 9'	9' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-20' grey silty clay	0'	2015/01/08
MW#8	17	603629	4825680	22'	8"	Rotary	2" PVC	12'	0'	22'	12'	22' 11'	11' 2'	Sand Bentonite	0'-8' sand 11/8'-12' brown silty clay 12'-22' grey silty clay	0'	2015/01/08

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
Profile Drilling Inc	6525 Northam Dr	Mississauga	ON

Postal Code	Bus. Telephone No.	Well Contractor's Licence No.	Business E-mail Address
L4V 1J2	4166506444	7215	mike@profiledrilling.com

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Signature of Well Technician	Date Submitted (yyyy/mm/dd)
Steve, Waller	3811		2015/03/30

Date First Well in Cluster Constructed or Abandoned (yyyy/mm/dd)	Date Last Well in Cluster Completed (yyyy/mm/dd)
2015/01/05	2015/01/08

Well Abandonment

Person Abandoning the Wells:

Name _____ (Print or Type) - See instruction 11 on the back of this form

Ministry Use Only

Date Received (yyyy/mm/dd)	Audit No.
APR 06 2015	C 27828

Comments:

1991E (2011/04)

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Ontario

Ministry of the Environment and Climate Change

Measurements recorded in: ☒ Metric ☐ Imperial

Tag#: A 223517 (Print Below)

A223517

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	NYX TONNERY LTD.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
201-1131A LESLIE STREET	TORONTO	ONTARIO		

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
208 Emby Drive	Toronto	4	5W

County/District/Municipality	City/Town/Village	Province	Postal Code
Peel	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	17	603747	4825961		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	FILL			0.0	2.1
BROWN	DENSE SILT			2.1	4.6
		FLUSHMOUNT CASING			

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0.0	0.3	CONCRETE	
0.3	1.2	BENTONITE	
1.2	4.6	SAND	
	4.6	EOH	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☒ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
			0.0	1.5

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	To
			1.5	4.6

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☒ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify* _____
☐ Other, *specify* _____

Water Details

Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☒ Untested ☐ Other, *specify*
4.6		
Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*
Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0.0	4.6	

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* _____

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping _____ hrs + _____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
SONIC SOIL SAMPLING INC.	7147

Business Address (Street Number/Name)	Municipality
668 MILLWAY AVENUE	YORK

Province	Postal Code	Business E-mail Address
ONTARIO	L4K 3V2	sonic@sonicsoil.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
9056600501	ARCHIBALD, ALAN

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
2881		2018/06/01

Comments:

Map attached

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		20180501

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Audit No. Z278772

Received JUN 05 2018

Ministry's Copy

C-7147
Z-278772

JUN - 5 2018

7312446

Ontario — Ministry of the Environment and Climate Change

Measurements recorded in: ☐ Metric ☐ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*: Tag#: A245592

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

REGION OF PEEL

Address of Well Location (Street Number/Name)	Township	Lot	Concession
Joymar Drive			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	610339	4826015		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Asphalt			0	6
Brown	Gravel			6	13
Brown	Gravel	Silty	Sand	13	15
Grey	Silty	Sand		15	40

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
16	0	Bentonite	

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☑ Other, specify: Auger

Well Use

☐ Public ☐ Commercial ☐ Not used ☐ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☑ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2"	Plastic	1/4	0	18

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2"	Plastic	10	18	28

Status of Well

☐ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ☐ Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Fresh	Untested	Other, specify
N/A	☐		☐	☐	
	☐		☐	☐	
	☐		☐	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	44	6

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

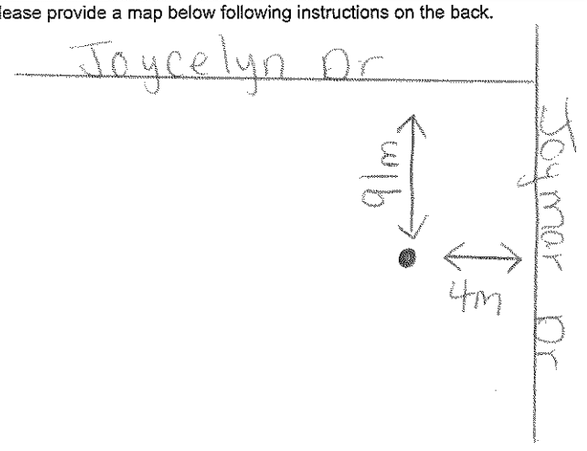
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Drilltech Drilling Ltd	7316

Business Address (Street Number/Name)	Municipality
120 Knapton Dr	Newmarket

Province	Postal Code	Business E-mail Address
ON	L3X 3B3	drilltech@drillingltd.com

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
9057110139	Desbiens Gilles

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3547		Jun 8 2018

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: Jun 8 2018

Date Work Completed: Jun 5 2018

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Audit No. Z284078

Received JUN 12 2018

0506E (2014/11) Ministry's Copy

Ontario — Ministry of the Environment and Climate Change

Measurements recorded in: ☐ Metric ☒ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*: A259532

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Nyx Capital Corp.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
201-1131A Leslie Street	Toronto	ON	M3C3L8	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
208 Emby Dr			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Mississauga	Ontario	L5M1H6

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	608757	4825967		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	fill	gravel; silt	loose	0'	3'
Brown	silt	clay, gravel	dense, packed	3'	20'
Gray	silt till		dense	20'	23'
Gray	sand, gravel	silt	wet	23'	25'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed *(m³/ft³)*
0'	1'	sand, concrete, casing	
1'	10'	bentonite	
10'	25'	sand	

Method of Construction

☐ Cable Tool ☐ Diamond
☒ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☒ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter *(cm/in)*	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness *(cm/in)*	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	sch. 40	0'	15'

Construction Record - Screen

Outside Diameter *(cm/in)*	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2"	PVC	10	15'	25'

Status of Well

☐ Water Supply
☐ Replacement Well
☒ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
23	☐ Fresh ☒ Untested	☐	
	☐ Fresh ☐ Untested	☐	
	☐ Fresh ☐ Untested	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter *(cm/in)*
0'	25'	9"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* _____

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

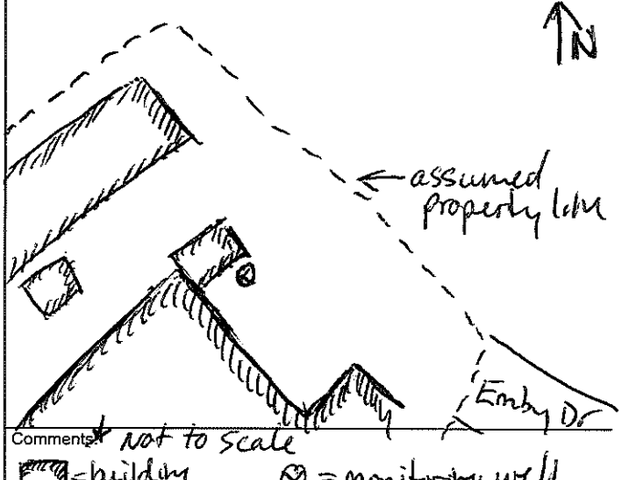
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time *(min)*	Draw Down Water Level *(m/ft)*	Recovery Time *(min)*	Recovery Water Level *(m/ft)*
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Profile Drilling Inc	7215

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
6525 Northam Dr	Mississauga	ON	L4V1J2	info@profiledrilling.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
416 650 6444	Slocki, Andrew	3197		2018 10 30

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No	YYYY MM DD	2018 10 29

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Audit No. Z302018

Received NOV 21 2018

0506E (2014/11)

Ministry's Copy

Notice of Collection of Personal Information

Personal information contained on this form is collected pursuant to sections 35-50 and 75(2) of the *Ontario Water Resources Act* and section 16.3 of the Wells Regulation. This information will be used for the purpose of maintaining a public record of wells in Ontario. This form and the information contained on the form will be stored in the Ministry's well record database and made publicly available. Questions about this collection should be directed to the Water Well Customer Service Representative at the Wells Help Desk, 125 Resources Road, Toronto Ontario M9P 3V6, at 1-888-396-9355 or wellshelpdesk@ontario.ca.

Fields marked with an asterisk (*) are mandatory.

Well Tag Number *
A 264659

Type *

☑ Construction ☐ Abandonment

Measurement recorded in: *

☑ Metric ☐ Imperial

1. Well Owner's Information

Last Name and First Name, or Organization is mandatory. *

Last Name	First Name
[redacted]	

Organization	Email Address
1672736 ONTARIO, INC. o/a DUNPAR DEVTS INC.	[redacted]

Current Address

Unit Number	Street Number *	Street Name *	City/Town/Village
	[redacted]		

Country	Province	Postal Code	Telephone Number
CANADA	ONTARIO	[redacted]	

2. Well Location

Address of Well Location

Unit Number	Street Number *	Street Name *	Township
	80	THOMAS ST.	

Lot	Concession	County/District/Municipality
		PEEL

City/Town	Province	Postal Code
MISSISSAUGA	Ontario	L5M 1Y9

UTM Coordinates	Zone *	Easting *	Northing *		Municipal Plan and Sublot Number
NAD 83	17	603661	4825659	Test UTM in Map	

Other
BH 301(MW)

3. Overburden and Bedrock Material *

Well Depth * 5.8 (m)

General Colour	Most Common Material	Other Materials	General Description	Depth From (m)	Depth To (m)
Brown	Silt	Clay	Fill	0	0.6
Brown	Silt	Clay	Hard	0.6	3.1

Grey	Silt	Clay	Hard	3.1	5.8

4. Annular Space *

Depth From (m)	Depth To (m)	Type of Sealant Used (Material and Type)	Volume Placed (cubic metres)
0	0.3	CONCRETE	0.01
0.3	2.2	BENTONITE	0.06

5. Method of Construction *

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☑ Boring ☐ Air percussion ☐ Diamond
☐ Jetting ☐ Driving ☐ Digging ☐ Rotary (Air) ☐ Augering ☐ Direct Push
☐ Other (specify) _____

6. Well Use *

☐ Public ☐ Industrial ☐ Cooling & Air Conditioning
☐ Domestic ☐ Commercial ☐ Not Used
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☐ Test Hole ☐ Dewatering
☐ Other (specify) _____

7. Status of Well *

☐ Water Supply ☐ Replacement Well ☐ Test Hole
☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole
☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality
☐ Abandoned, other (specify) _____
☐ Other (specify) _____

8. Construction Record - Casing * (use negative number(s) to indicate depth above ground surface)

Inside Diameter (cm)	Open Hole **or** Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness	Depth From (m)	Depth To (m)
5.1	Plastic	0.65	0	2.8

9. Construction Record - Screen

Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot Number	Depth From (m)	Depth To (m)
6.4	Plastic	10	2.8	5.8

10. Water Details

Water found at Depth (m) ☐ Gas | Kind of Water ☐ Fresh ☑ Untested ☐ Other (specify)

11. Hole Diameter

Depth From (m)	Depth To (m)	Diameter (cm)
0	5.8	21

12. Results of Well Yield Testing

☐ Pumping Discontinued

Explain _____

If flowing give rate

☐ Flowing _____ (L/min)

Draw down *

Time (min)	Static Level	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)														

Recovery *

Time (min)	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)													

After test of well yield, water was

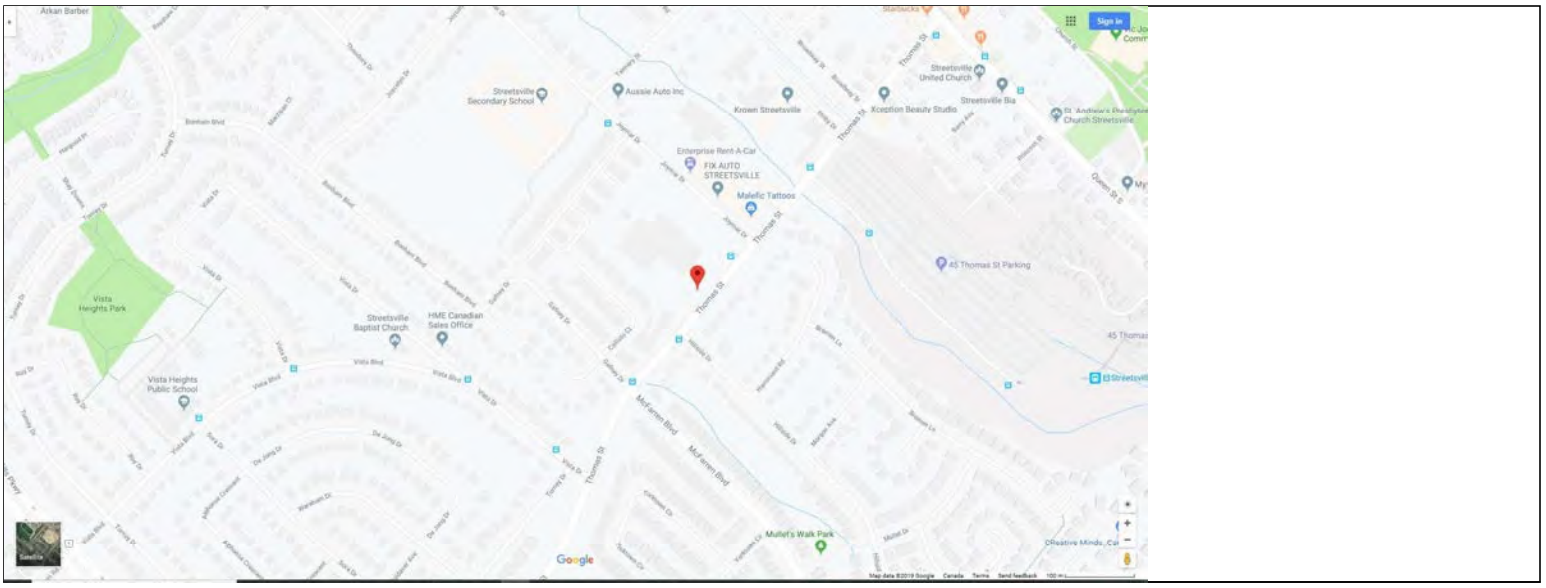
☐ Clear and sand free ☐ Other (specify)

Pump intake set at (m)	Pumping rate (L/min)	Duration of pumping hrs + min	Final water level end of pumping (m)	Disinfected? *
				☐ Yes ☑ No

Recommended pump depth (m)	Recommended pump rate (L/min)	Well production (L/min)

13. Map of Well Location *

Map 1. Please Click the map area below to import an image file to use as the map. ☐ Make map area bigger



14. Information

Well owner's information package delivered	Date Package Delivered (yyyy/mm/dd)	Date Work Completed (yyyy/mm/dd) *
☐ Yes ☐ No		2019/05/14

Comments

15. Well Contractor and Well Technician Information

Business Name of Well Contractor *	Well Contractor's License Number *
Geo-Environmental Drilling Inc.	6607

Business Address

Unit Number	Street Number	Street Name *
	1	Mansewood Court

City/Town/Village *	Province	Postal Code *
Halton Hills	Ontario	L7J 0A1

Business Telephone Number	Business Email Address
905-876-3388	dgunn@geo-environmentaldrilling.com

Last Name of Well Technician *	First Name of Well Technician *	Well Technician's License Number *
COLES	DAVE	3606

16. Declaration *

☑ I hereby confirm that I am the person who constructed the well and I hereby confirm that the information on the form is correct and accurate.

Last Name	First Name	Email Address
COLES	DAVE	romana@geo-environmentaldrilling.com

Signature	Date Submitted (yyyy/mm/dd)
Dave Coles Digitally signed by Dave Coles Date: 2019.05.30 13:08:29 -04'00'	2019/05/30

17. Ministry Use Only

Audit Number

4LUR H7TB

Notice of Collection of Personal Information

Personal information contained on this form is collected pursuant to sections 35-50 and 75(2) of the *Ontario Water Resources Act* and section 16.3 of the Wells Regulation. This information will be used for the purpose of maintaining a public record of wells in Ontario. This form and the information contained on the form will be stored in the Ministry's well record database and made publicly available. Questions about this collection should be directed to the Water Well Customer Service Representative at the Wells Help Desk, 125 Resources Road, Toronto Ontario M9P 3V6, at 1-888-396-9355 or wellshelpdesk@ontario.ca.

Fields marked with an asterisk (*) are mandatory.

Well Tag Number *
A 264705

Type *

☑ Construction ☐ Abandonment

Measurement recorded in: *

☑ Metric ☐ Imperial

1. Well Owner's Information

Last Name and First Name, or Organization is mandatory. *

Last Name	First Name
[redacted]	

Organization	Email Address
1672736 ONTARIO, INC.	[redacted]

Current Address

Unit Number	Street Number *	Street Name *	City/Town/Village
	[redacted]		

Country	Province	Postal Code	Telephone Number
CANADA	ONTARIO	[redacted]	

2. Well Location

Address of Well Location

Unit Number	Street Number *	Street Name *	Township
	80	THOMAS ST.	

Lot	Concession	County/District/Municipality
		PEEL

City/Town	Province	Postal Code
MISSISSAUGA	Ontario	L5M 1Y9

UTM Coordinates	Zone *	Easting *	Northing *		Municipal Plan and Sublot Number
NAD 83	17	603604	4825791	Test UTM in Map	

Other
BH 305(MW)

3. Overburden and Bedrock Material *

Well Depth * 5.6 (m)

General Colour	Most Common Material	Other Materials	General Description	Depth From (m)	Depth To (m)
Brown	Silt	Clay	Hard	0	2.5
Grey	Silt	Clay	Hard	2.5	5.6

4. Annular Space *

Depth From (m)	Depth To (m)	Type of Sealant Used (Material and Type)	Volume Placed (cubic metres)
0	0.9	BENTONITE	0.07

5. Method of Construction *

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☑ Boring ☐ Air percussion ☐ Diamond
☐ Jetting ☐ Driving ☐ Digging ☐ Rotary (Air) ☐ Augering ☐ Direct Push
☐ Other (specify) _____

6. Well Use *

☐ Public ☐ Industrial ☐ Cooling & Air Conditioning
☐ Domestic ☐ Commercial ☐ Not Used
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☐ Test Hole ☐ Dewatering
☐ Other (specify) _____

7. Status of Well *

☐ Water Supply ☐ Replacement Well ☐ Test Hole
☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole
☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality
☐ Abandoned, other (specify) _____
☐ Other (specify) _____

8. Construction Record - Casing * (use negative number(s) to indicate depth above ground surface)

Inside Diameter (cm)	Open Hole **or** Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness	Depth From (m)	Depth To (m)
5.1	Plastic	0.65	0	2.6

9. Construction Record - Screen

Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot Number	Depth From (m)	Depth To (m)
6.4	Plastic	10	2.6	5.6

10. Water Details

Water found at Depth (m) ☐ Gas Kind of Water ☐ Fresh ☑ Untested ☐ Other (specify)

11. Hole Diameter

Depth From (m)	Depth To (m)	Diameter (cm)
0	5.6	21

12. Results of Well Yield Testing

☐ Pumping Discontinued

Explain _____

If flowing give rate

☐ Flowing _____ (L/min)

Draw down *

Time (min)	Static Level	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)														

Recovery *

Time (min)	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)													

After test of well yield, water was

☐ Clear and sand free ☐ Other (specify)

Pump intake set at (m)	Pumping rate (L/min)	Duration of pumping hrs + min	Final water level end of pumping (m)	Disinfected? *
				☐ Yes ☑ No

Recommended pump depth (m)	Recommended pump rate (L/min)	Well production (L/min)

13. Map of Well Location *

Map 1. Please Click the map area below to import an image file to use as the map. ☐ Make map area bigger

14. Information

Well owner's information package delivered	Date Package Delivered (yyyy/mm/dd)	Date Work Completed (yyyy/mm/dd) *
☐ Yes ☐ No		2019/05/13

Comments

15. Well Contractor and Well Technician Information

Business Name of Well Contractor *	Well Contractor's License Number *
Geo-Environmental Drilling Inc.	6607

Business Address

Unit Number	Street Number	Street Name *
	1	Mansewood Court

City/Town/Village *	Province	Postal Code *
Halton Hills	Ontario	L7J 0A1

Business Telephone Number	Business Email Address
905-876-3388	dgunn@geo-environmentaldrilling.com

Last Name of Well Technician *	First Name of Well Technician *	Well Technician's License Number *
COLES	DAVE	3606

16. Declaration *

☑ I hereby confirm that I am the person who constructed the well and I hereby confirm that the information on the form is correct and accurate.

Last Name	First Name	Email Address
COLES	DAVE	romana@geo-environmentaldrilling.com

Signature	Date Submitted (yyyy/mm/dd)
Dave Coles Digitally signed by Dave Coles Date: 2019.05.30 12:19:45 -04'00'	2019/05/30

17. Ministry Use Only

Audit Number

AL6M ZTFU

Notice of Collection of Personal Information

Personal information contained on this form is collected pursuant to sections 35-50 and 75(2) of the *Ontario Water Resources Act* and section 16.3 of the Wells Regulation. This information will be used for the purpose of maintaining a public record of wells in Ontario. This form and the information contained on the form will be stored in the Ministry's well record database and made publicly available. Questions about this collection should be directed to the Water Well Customer Service Representative at the Wells Help Desk, 125 Resources Road, Toronto Ontario M9P 3V6, at 1-888-396-9355 or wellshelpdesk@ontario.ca.

Fields marked with an asterisk (*) are mandatory.

Well Tag Number *
A 264708

Type *

☑ Construction ☐ Abandonment

Measurement recorded in: *

☑ Metric ☐ Imperial

1. Well Owner's Information

Last Name and First Name, or Organization is mandatory. *

Last Name	First Name
[redacted]	

Organization	Email Address
1672736 ONTARIO, INC. o/a DUNPAR DEVTS. INC.	[redacted]

Current Address

Unit Number	Street Number *	Street Name *	City/Town/Village
	[redacted]		

Country	Province	Postal Code	Telephone Number
CANADA	ONTARIO	[redacted]	

2. Well Location

Address of Well Location

Unit Number	Street Number *	Street Name *	Township
	80	THOMAS ST.	

Lot	Concession	County/District/Municipality
		PEEL

City/Town	Province	Postal Code
MISSISSAUGA	Ontario	L5M 1Y9

UTM Coordinates	Zone *	Easting *	Northing *		Municipal Plan and Sublot Number
NAD 83	17	603694	4825736	Test UTM in Map	

Other
BH 302(MW)

3. Overburden and Bedrock Material *

Well Depth * 4.5 (m)

General Colour	Most Common Material	Other Materials	General Description	Depth From (m)	Depth To (m)
Grey	Silt	Topsoil	Soft	0	1.8
Brown	Silt	Clay	Hard	1.8	3.3

Grey	Silt	Clay	Hard	3.3	4.5

4. Annular Space *

Depth From (m)	Depth To (m)	Type of Sealant Used (Material and Type)	Volume Placed (cubic metres)
0	2.1	BENTONITE	0.07

5. Method of Construction *

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☑ Boring ☐ Air percussion ☐ Diamond
☐ Jetting ☐ Driving ☐ Digging ☐ Rotary (Air) ☐ Augering ☐ Direct Push
☐ Other (specify) _____

6. Well Use *

☐ Public ☐ Industrial ☐ Cooling & Air Conditioning
☐ Domestic ☐ Commercial ☐ Not Used
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☐ Test Hole ☐ Dewatering
☐ Other (specify) _____

7. Status of Well *

☐ Water Supply ☐ Replacement Well ☐ Test Hole
☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole
☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality
☐ Abandoned, other (specify) _____
☐ Other (specify) _____

8. Construction Record - Casing * (use negative number(s) to indicate depth above ground surface)

Inside Diameter (cm)	Open Hole **or** Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness	Depth From (m)	Depth To (m)
5.1	Plastic	0.65	0	2.4

9. Construction Record - Screen

Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot Number	Depth From (m)	Depth To (m)
6.4	Plastic	10	2.4	4.5

10. Water Details

Water found at Depth 1.8 (m) ☐ Gas | Kind of Water ☐ Fresh ☑ Untested ☐ Other (specify)

11. Hole Diameter

Depth From (m)	Depth To (m)	Diameter (cm)
0	4.5	21

12. Results of Well Yield Testing

☐ Pumping Discontinued

Explain _____

If flowing give rate

☐ Flowing _____ (L/min)

Draw down *

Time (min)	Static Level	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)														

Recovery *

Time (min)	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)													

After test of well yield, water was

☐ Clear and sand free ☐ Other (specify)

Pump intake set at (m)	Pumping rate (L/min)	Duration of pumping hrs + min	Final water level end of pumping (m)	Disinfected? *
				☐ Yes ☑ No

Recommended pump depth (m)	Recommended pump rate (L/min)	Well production (L/min)

13. Map of Well Location *

Map 1. Please Click the map area below to import an image file to use as the map. ☐ Make map area bigger

14. Information

Well owner's information package delivered	Date Package Delivered (yyyy/mm/dd)	Date Work Completed (yyyy/mm/dd) *
☐ Yes ☐ No		2019/05/14

Comments

15. Well Contractor and Well Technician Information

Business Name of Well Contractor *	Well Contractor's License Number *
Geo-Environmental Drilling Inc.	6607

Business Address

Unit Number	Street Number	Street Name *
	1	Mansewood Court

City/Town/Village *	Province	Postal Code *
Halton Hills	Ontario	L7J 0A1

Business Telephone Number	Business Email Address
905-876-3388	dgunn@geo-environmentaldrilling.com

Last Name of Well Technician *	First Name of Well Technician *	Well Technician's License Number *
COLES	DAVE	3606

16. Declaration *

☑ I hereby confirm that I am the person who constructed the well and I hereby confirm that the information on the form is correct and accurate.

Last Name	First Name	Email Address
COLES	DAVE	romana@geo-environmentaldrilling.com

Signature		Date Submitted (yyyy/mm/dd)
Dave Coles	Digitally signed by Dave Coles Date: 2019.05.30 12:44:16 -04'00'	2019/05/30

17. Ministry Use Only

Audit Number

N4VF JE4Q

Notice of Collection of Personal Information

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Fields marked with an asterisk (*) are mandatory.

Well Tag Number *
A 264589

Type *

☑ Construction ☐ Abandonment

Measurement recorded in: *

☑ Metric ☐ Imperial

1. Well Owner's Information

Last Name and First Name, or Organization is mandatory. *

Last Name	First Name
[redacted]	

Organization	Email Address
1672736 ONTARIO, INC.	[redacted]

Current Address

Unit Number	Street Number *	Street Name *	City/Town/Village
	[redacted]		

Country	Province	Postal Code	Telephone Number
CANADA	ONTARIO	[redacted]	

2. Well Location

Address of Well Location

Unit Number	Street Number *	Street Name *	Township
	80	THOMAS ST.	

Lot	Concession	County/District/Municipality
		PEEL

City/Town	Province	Postal Code
MISSISSAUGA	Ontario	L5M 1Y9

UTM Coordinates	Zone *	Easting *	Northing *		Municipal Plan and Sublot Number
NAD 83	17	603649	4825722	Test UTM in Map	

Other
BH 304(MW)

3. Overburden and Bedrock Material *

Well Depth * 4.5 (m)

General Colour	Most Common Material	Other Materials	General Description	Depth From (m)	Depth To (m)
Brown	Silt	Clay	Hard	0	3.1
Grey	Silt	Clay	Hard	3.1	4.5

4. Annular Space *

Depth From (m)	Depth To (m)	Type of Sealant Used (Material and Type)	Volume Placed (cubic metres)
0	0.9	BENTONITE	0.03

5. Method of Construction *

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☑ Boring ☐ Air percussion ☐ Diamond
☐ Jetting ☐ Driving ☐ Digging ☐ Rotary (Air) ☐ Augering ☐ Direct Push
☐ Other (specify) _____

6. Well Use *

☐ Public ☐ Industrial ☐ Cooling & Air Conditioning
☐ Domestic ☐ Commercial ☐ Not Used
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☐ Test Hole ☐ Dewatering
☐ Other (specify) _____

7. Status of Well *

☐ Water Supply ☐ Replacement Well ☐ Test Hole
☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole
☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality
☐ Abandoned, other (specify) _____
☐ Other (specify) _____

8. Construction Record - Casing * (use negative number(s) to indicate depth above ground surface)

Inside Diameter (cm)	Open Hole **or** Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness	Depth From (m)	Depth To (m)
5.1	Plastic	0.65	0	1.5

9. Construction Record - Screen

Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot Number	Depth From (m)	Depth To (m)
6.4	Plastic	10	1.5	4.5

10. Water Details

Water found at Depth (m) ☐ Gas | Kind of Water ☐ Fresh ☑ Untested ☐ Other (specify)

11. Hole Diameter

Depth From (m)	Depth To (m)	Diameter (cm)
0	4.5	21

12. Results of Well Yield Testing

☐ Pumping Discontinued

Explain _____

If flowing give rate

☐ Flowing _____ (L/min)

Draw down *

Time (min)	Static Level	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)														

Recovery *

Time (min)	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)													

After test of well yield, water was

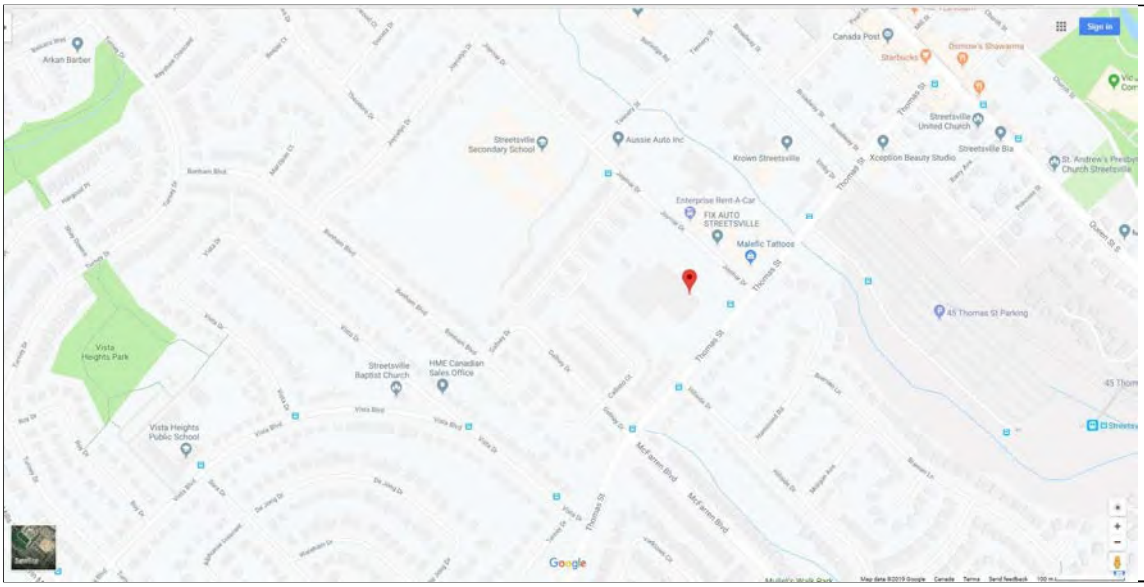
☐ Clear and sand free ☐ Other (specify)

Pump intake set at (m)	Pumping rate (L/min)	Duration of pumping hrs + min	Final water level end of pumping (m)	Disinfected? *
				☐ Yes ☑ No

Recommended pump depth (m)	Recommended pump rate (L/min)	Well production (L/min)

13. Map of Well Location *

Map 1. Please Click the map area below to import an image file to use as the map. ☐ Make map area bigger



14. Information

Well owner's information package delivered	Date Package Delivered (yyyy/mm/dd)	Date Work Completed (yyyy/mm/dd) *
☐ Yes ☐ No		2019/05/13

Comments

15. Well Contractor and Well Technician Information

Business Name of Well Contractor *	Well Contractor's License Number *
Geo-Environmental Drilling Inc.	6607

Business Address

Unit Number	Street Number	Street Name *
	1	Mansewood Court

City/Town/Village *	Province	Postal Code *
Halton Hills	Ontario	L7J 0A1

Business Telephone Number	Business Email Address
905-876-3388	dgunn@geo-environmentaldrilling.com

Last Name of Well Technician *	First Name of Well Technician *	Well Technician's License Number *
COLES	DAVE	3606

16. Declaration *

☑ I hereby confirm that I am the person who constructed the well and I hereby confirm that the information on the form is correct and accurate.

Last Name	First Name	Email Address
COLES	DAVE	romana@geo-environmentaldrilling.com

Signature	Date Submitted (yyyy/mm/dd)
Dave Coles Digitally signed by Dave Coles Date: 2019.05.30 11:34:16 -04'00'	2019/05/30

17. Ministry Use Only

Audit Number

O52L QOWC

Notice of Collection of Personal Information

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Fields marked with an asterisk (*) are mandatory.

Well Tag Number *
A 264704

Type *

☑ Construction ☐ Abandonment

Measurement recorded in: *

☑ Metric ☐ Imperial

1. Well Owner's Information

Last Name and First Name, or Organization is mandatory. *

Last Name	First Name
[redacted]	

Organization	Email Address
1672736 ONTARIO, INC. o/a DUNPAR DEVTS INC.	[redacted]

Current Address

Unit Number	Street Number *	Street Name *	City/Town/Village
	[redacted]		

Country	Province	Postal Code	Telephone Number
CANADA	ONTARIO	[redacted]	

2. Well Location

Address of Well Location

Unit Number	Street Number *	Street Name *	Township
	80	THOMAS ST.	

Lot	Concession	County/District/Municipality
		PEEL

City/Town	Province	Postal Code
MISSISSAUGA	Ontario	L5M 1Y9

UTM Coordinates	Zone *	Easting *	Northing *		Municipal Plan and Sublot Number
NAD 83	17	603670	4825728	Test UTM in Map	

Other
BH 303(MW)

3. Overburden and Bedrock Material *

Well Depth * 4.5 (m)

General Colour	Most Common Material	Other Materials	General Description	Depth From (m)	Depth To (m)
Brown	Silt	Clay	Hard	0	3.1
Grey	Silt	Clay	Hard	3.1	4.5

4. Annular Space *

Depth From (m)	Depth To (m)	Type of Sealant Used (Material and Type)	Volume Placed (cubic metres)
0	0.9	BENTONITE	0.03

5. Method of Construction *

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☑ Boring ☐ Air percussion ☐ Diamond
☐ Jetting ☐ Driving ☐ Digging ☐ Rotary (Air) ☐ Augering ☐ Direct Push
☐ Other (specify) _____

6. Well Use *

☐ Public ☐ Industrial ☐ Cooling & Air Conditioning
☐ Domestic ☐ Commercial ☐ Not Used
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☐ Test Hole ☐ Dewatering
☐ Other (specify) _____

7. Status of Well *

☐ Water Supply ☐ Replacement Well ☐ Test Hole
☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole
☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality
☐ Abandoned, other (specify) _____
☐ Other (specify) _____

8. Construction Record - Casing * (use negative number(s) to indicate depth above ground surface)

Inside Diameter (cm)	Open Hole **or** Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness	Depth From (m)	Depth To (m)
5.1	Plastic	0.65	0	1.5

9. Construction Record - Screen

Outside Diameter (cm)	Material (Plastic, Galvanized, Steel)	Slot Number	Depth From (m)	Depth To (m)
6.4	Plastic	10	1.5	4.5

10. Water Details

Water found at Depth (m) ☐ Gas | Kind of Water ☐ Fresh ☑ Untested ☐ Other (specify)

11. Hole Diameter

Depth From (m)	Depth To (m)	Diameter (cm)
0	4.5	21

12. Results of Well Yield Testing

☐ Pumping Discontinued

Explain _____

If flowing give rate

☐ Flowing _____ (L/min)

Draw down *

Time (min)	Static Level	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)														

Recovery *

Time (min)	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (m)													

After test of well yield, water was

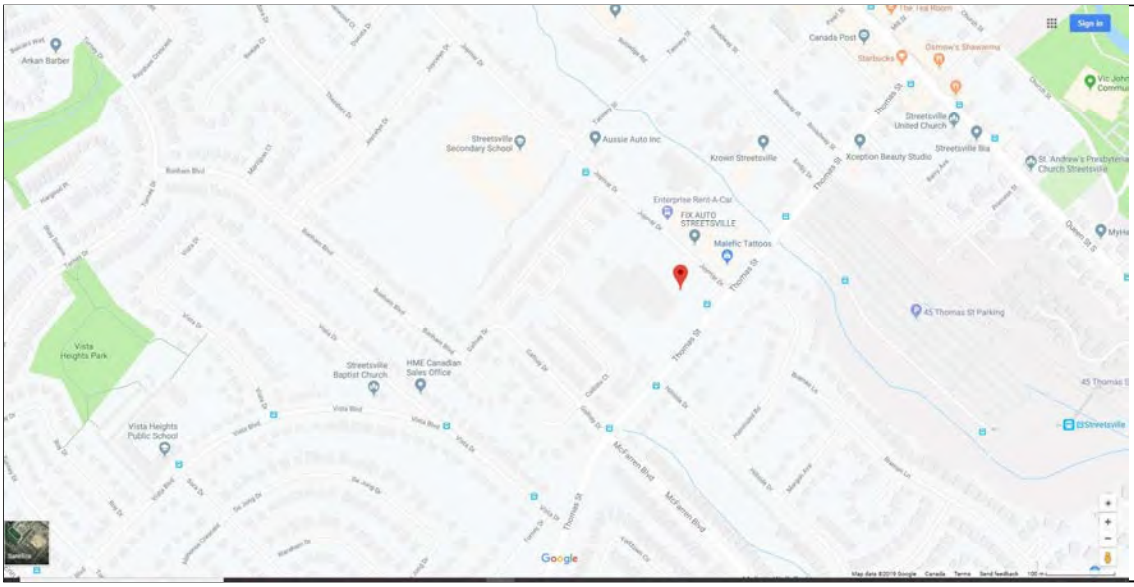
☐ Clear and sand free ☐ Other (specify)

Pump intake set at (m)	Pumping rate (L/min)	Duration of pumping hrs + min	Final water level end of pumping (m)	Disinfected? *
				☐ Yes ☑ No

Recommended pump depth (m)	Recommended pump rate (L/min)	Well production (L/min)

13. Map of Well Location *

Map 1. Please Click the map area below to import an image file to use as the map. ☐ Make map area bigger



14. Information

Well owner's information package delivered	Date Package Delivered (yyyy/mm/dd)	Date Work Completed (yyyy/mm/dd) *
☐ Yes ☐ No		2019/05/14

Comments

15. Well Contractor and Well Technician Information

Business Name of Well Contractor *	Well Contractor's License Number *
Geo-Environmental Drilling Inc.	6607

Business Address

Unit Number	Street Number	Street Name *
	1	Mansewood Court

City/Town/Village *	Province	Postal Code *
Halton Hills	Ontario	L7J 0A1

Business Telephone Number	Business Email Address
905-876-3388	dgunn@geo-environmentaldrilling.com

Last Name of Well Technician *	First Name of Well Technician *	Well Technician's License Number *
COLES	DAVE	3606

16. Declaration *

☑ I hereby confirm that I am the person who constructed the well and I hereby confirm that the information on the form is correct and accurate.

Last Name	First Name	Email Address
COLES	DAVE	romana@geo-environmentaldrilling.com

Signature	Date Submitted (yyyy/mm/dd)
Dave Coles Digitally signed by Dave Coles Date: 2019.05.30 12:56:22 -04'00'	2019/05/30

17. Ministry Use Only

Audit Number

XW8S YIP3

Ontario

Ministry of the Environment, Conservation and Parks

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A290527

26-066

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Fisher Environmental		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
15-400 Esna Park Dr.	Markham	ON	L3R3K2	9054757755

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
86 THOMAS ST			

County/District/Municipality	City/Town/Village	Province	Postal Code
	MISSISSAUGA	Ontario	L5M1Y8

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Subiot Number	Other
NAD 83	17	603622	4832560	1	

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	SILT		SILT	0	5
GREY	SILT	CLAY	SILTY CLAY	5	17

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	~~10~~ 5	BENTONITE	~~2.18~~ 0.9
~~10~~	~~17~~	SAND	~~1.26~~
5	17		2.16

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☒ Other, *specify* AUGERING

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☒ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2	PLASTIC	.188	0	7

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.375	PLASTIC	10	7	17

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☒ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*
☐ Gas	☐ Fresh ☐ Untested	☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
0	17	6

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

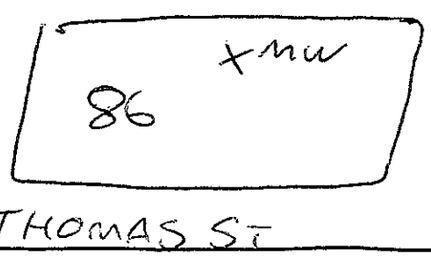
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: **Terra Firma Environmental Services Ltd.**
Well Contractor's Licence No.: 6946
84 Martin Ross Ave. Toronto, ON M3J 2L4
Bus #: 416.450.6244, E: info@terrafirmaservices.com
Well Tech & Licence #: Welch, David, #: 4129

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
		2020/03/05

Well owner's information package delivered: ☐ Yes ☐ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: Y Y Y Y M M D D

Ministry Use Only

Audit No. Z329865

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20-068

Ontario — Ministry of the Environment, Conservation and Parks

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A290500

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Fisher Environmental Ltd.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
15-400 Esna Park Dr.	Markham	ON	L3R3K2	9054757755

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
86 THOMAS ST			

County/District/Municipality	City/Town/Village	Province	Postal Code
	MISSISSAUGA	Ontario	L5M 1T3

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603637	4825657		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BROWN	SILT		SILTS	0	5
GREY	SILT	CLAY	SILTY CLAY	5	19

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
0	7	BENTONITE	1.26
7	19	SAND	2.16

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☑ Other, *specify* AUGERING

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☒ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
2	PLASTIC	.188	0	9

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☒ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2 3/8	PLASTIC	10	9	19

Water Details

Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*
Water found at Depth (m/ft) ☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	19	6

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

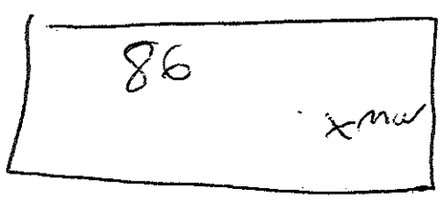
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: **Terra Firma Environmental Services Ltd.**
Well Contractor's Licence No.: Well Contractor Licence #: 6946
84 Martin Ross Ave. Toronto, ON M3J 2L4
Bus #: 416.450.6244, E: info@terrafirmaservices.com
Well Tech & Licence #: Welch, David, #: 4129

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
	David	2020/03/05

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered: Y Y Y Y M M D D

Date Work Completed: Y Y Y Y M M D D

Ministry Use Only

Audit No. Z329860

MAR 03 2020

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506E (2018/12)

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20-066

Ontario — Ministry of the Environment, Conservation and Parks

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A290528

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Fisher Environmental		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
15-400 Esna Park Dr	Markham	ON	L3R3K2	9054757755

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
86 THOMAS ST			

County/District/Municipality	City/Town/Village	Province	Postal Code
	MISSISSAUGA	Ontario	L5M1T8

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	603629	4815666		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
~~BRN~~					
BROWN	SILT		SILT	0	5
GREY	SILT	CLAY	SILTY CLAY	5	17

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed (m^3/ft^3)
~~0~~	~~10~~	BENTONITE	
~~10~~	17	SAND	
0	5	Bentonite	.19
5	17	Sand	2.16

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☒ Other, *specify* AUGERING

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☑ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter *(cm/in)*	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness *(cm/in)*	Depth (m/ft) From	Depth (m/ft) To
2	PLASTIC	.188	0	7

Construction Record - Screen

Outside Diameter *(cm/in)*	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.375	PLASTIC	10	7	17

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☒ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*

Hole Diameter

Depth (m/ft) From	To	Diameter *(cm/in)*
0	17	6

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

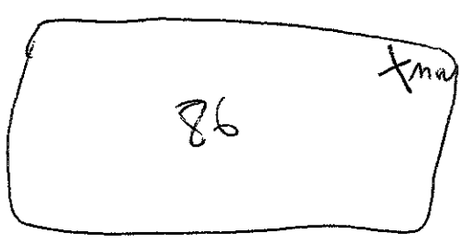
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

	Draw Down Time *(min)*	Draw Down Water Level *(m/ft)*	Recovery Time *(min)*	Recovery Water Level *(m/ft)*
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor — Well Contractor's Licence No.

Terra Firma Environmental Services Ltd.
Well Contractor Licence #: 6946
84 Martin Ross Ave. Toronto, ON M3J 2L4
Bus #: 416.450.6244, E: info@terrafirmaservices.com
Well Tech & Licence #: Welch, David, #: 4129

Business / Province / Bus. Tele

Well Technician's Licence No. | Signature of Technician and/or Contractor | Date Submitted (YYYY/MM/DD) 2020/03/05

Well owner's information package delivered ☐ Yes ☐ No

Date Package Delivered (YYYY/MM/DD)

Date Work Completed (YYYY/MM/DD)

Ministry Use Only
Audit No. Z329859
MAR 09 2020
Received

0506E (2018/12) **Ministry's Copy**

Ontario

Ministry of the Environment, Conservation and Parks

Well Record - Regulation 903

Ontario Water Resources Act

Notice of Collection of Personal Information

Personal information contained on this form is collected pursuant to sections 35-50 and 75(2) of the *Ontario Water Resources Act* and section 16.3 of the Wells Regulation. This information will be used for the purpose of maintaining a public record of wells in Ontario. This form and the information contained on the form will be stored in the Ministry's well record database and made publicly available. Questions about this collection should be directed to the Water Well Customer Service Representative at the Wells Help Desk, 125 Resources Road, Toronto Ontario M9P 3V6, at 1-888-396-9355 or wellshelpdesk@ontario.ca.

Fields marked with an asterisk (*) are mandatory.

Well Tag Number *
A 258492

Type *

☐ Construction ☑ Abandonment

Measurement recorded in: *

☐ Metric ☑ Imperial

1. Well Owner's Information

Last Name and First Name, or Organization is mandatory. *

Last Name	First Name

Organization	Email Address
Region of Peel	

Current Address

Unit Number	Street Number *	Street Name *	City/Town/Village
	.	10 Peel Centre Drive	

Country	Province	Postal Code	Telephone Number
Canada	Ontario		

2. Well Location

Address of Well Location

Unit Number	Street Number *	Street Name *	Township
	.	Hillslide Dr and Hammond Rd	

Lot	Concession	County/District/Municipality
		PEEL

City/Town	Province	Postal Code
	Ontario	

UTM Coordinates	Zone *	Easting *	Northing *		Municipal Plan and Sublot Number
NAD 83	17	603696	4825546	Test UTM in Map	

Other

3. Abandonment and Sealing

Well Depth (ft)

Provide information of well (e.g. construction date, original contractor). **Do not** enter private information

Original Owner

General Description	Depth From (ft)	Depth To (ft)

4. Annular Space

Depth From (ft)	Depth To (ft)	Type of Sealant Used (Material and Type)	Volume Placed (cubic feet)
0		Bentonite	

5. Method of Construction

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☐ Boring ☐ Air percussion ☐ Diamond
☐ Jetting ☐ Driving ☐ Digging ☐ Rotary (Air) ☑ Augering ☐ Direct Push
☐ Other (specify) _____

6. Well Use

☐ Public ☐ Industrial ☐ Cooling & Air Conditioning
☐ Domestic ☐ Commercial ☐ Not Used
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☐ Test Hole ☐ Dewatering
☐ Other (specify) _____

7. Status of Well

☐ Water Supply ☐ Replacement Well ☐ Test Hole
☐ Recharge Well ☐ Dewatering Well ☑ Observation and/or Monitoring Hole
☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality
☐ Abandoned, other (specify) _____
☐ Other (specify) _____

8. Construction Record - Casing (use negative number(s) to indicate depth above ground surface)

Inside Diameter (in)	Open Hole **or** Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness	Depth From (ft)	Depth To (ft)
2	Plastic	0.25	0	

9. Construction Record - Screen

Outside Diameter (in)	Material (Plastic, Galvanized, Steel)	Slot Number	Depth From (ft)	Depth To (ft)
2.25	Plastic	0.1		

10. Water Details

Water found at Depth (ft)	☐ Gas	Kind of water ☐ Fresh	☑ Untested	☐ Other

11. Hole Diameter

Depth From (ft)	Depth To (ft)	Diameter (in)
0	15	6

12. Results of Well Yield Testing

☐ Pumping Discontinued

Explain _____

If flowing give rate

☐ Flowing _____ (GPM)

Draw down

Time (min)	Static Level	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (ft)														

Recovery

Time (min)	1	2	3	4	5	10	15	20	25	30	40	50	60
Water Level (ft)													

After test of well yield, water was

☐ Clear and sand free ☐ Other (specify)

Pump intake set at (ft)	Pumping rate (GPM)	Duration of pumping hrs + min	Final water level end of pumping (ft)	Disinfected? ☐ Yes ☑ No

Recommended pump depth (ft)	Recommended pump rate (GPM)	Well production (GPM)

13. Map of Well Location *

Map 1. Please Click the map area below to import an image file to use as the map. ☑ Make map area bigger

14. Information

Well owner's information package delivered	Date Package Delivered (yyyy/mm/dd)	Date Work Completed (yyyy/mm/dd) *
☑ Yes ☐ No	2021/12/23	2021/12/23

Comments

15. Well Contractor and Well Technician Information

Business Name of Well Contractor *	Well Contractor's License Number *
Drilltech Drilling Ltd.	7360

Business Address

Unit Number	Street Number	Street Name *
	1344	Kerrisdale Blvd.

City/Town/Village *	Province	Postal Code *
Newmarket	Ontario	L3Y 8V6

Business Telephone Number	Business Email Address
905-717-1397	drilltech@drillingltd.com

Last Name of Well Technician *	First Name of Well Technician *	Well Technician's License Number *
Desbiens	Gilles	3547

16. Declaration *

☑ I hereby confirm that I am the person who constructed the well and I hereby confirm that the information on the form is correct and accurate.

Last Name	First Name	Email Address
Desbiens	Gilles	drilltech@drillingltd.com

Signature	Date Submitted (yyyy/mm/dd)
Gilles Desbiens Digitally signed by Gilles Desbiens Date: 2022.01.21 10:26:03 -05'00'	2022/01/21

17. Ministry Use Only

Audit Number

Z76V 6D6K

APPENDIX C

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW-101

PROJECT: GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION

CLIENT: De Zen Realty Company Ltd.

PROJECT LOCATION: 66 THOMAS STREET, MISSISSAUGA, ONTARIO

DATUM: Geodetic

BH LOCATION: See Drawing 1 N 4825920.035 E 603602.904

DRILLING DATA

Method: Solid Stem Auger

Diameter: 150 mm

Date: May-18-2023

REF. NO.: SP23-01177-00

ENCL NO.: 2

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	SAMPLES: NUMBER	TYPE	BLOWS 0.3 m "N"	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
155.9												
0.0 / 155.5	**GRANULAR FILL:** sand and gravel, 460 mm		1	SS	64							36 43 (22)
0.5 / 155.1	**FILL:** clayey silt, trace to some gravel, some sand, trace cobbles, brown, moist											
0.8	trace cobbles, very stiff		2	SS	26		155					9 31 41 19
	CLAYEY SILT TILL: some sand to sandy, trace to some gravel, brown, moist, hard											
	hard		3	SS	41		154					
153.6												
2.3	**SANDY SILT TILL:** trace clay, trace gravel, grey, very moist, dense		4	SS	34							1 20 71 8
						▽	153					
	trace cobbles, moist, very dense		5	SS	62		W. L. 152.9 m May 30, 2023					
151.3							152					
4.6	**INFERRED BEDROCK: GEORGIAN BAY FORMATION** Highly weathered (W4), grey		6	SS	50/ 50mm		151					
149.7			7	SS	50/ 125mm		150					
6.2	**END OF BOREHOLE:**											

1. Borehole was open and dry upon completion of drilling.
2. Auger refusal at 4.6 mbgs.
3. Monitoring well installed at the BH/MW-101 with screening from 3.05 to 6.1 mbgs.
4. Groundwater level mesurements:

Date	Depth (mbgs)
May 30, 2023	3.00

GROUNDWATER ELEVATIONS

Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: $+^3$, $\times^3$: Numbers refer to Sensitivity; ○ ε_f=3% Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01177-00.GPJ SPCL.GDT 23-6-13

LOG OF BOREHOLE BH/MW-102

PROJECT: GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION
CLIENT: De Zen Realty Company Ltd.
PROJECT LOCATION: 66 THOMAS STREET, MISSISSAUGA, ONTARIO
DATUM: Geodetic
BH LOCATION: See Drawing 1 N 4825928.806 E 603533.82

DRILLING DATA
Method: Solid Stem Auger
Diameter: 150 mm
Date: May-18-2023

REF. NO.: SP23-01177-00
ENCL NO.: 3

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS "N" 0.3 m	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
157.7												
157.6	**ASPHALT:** 50 mm											
157.4	**GRANULAR FILL:** sand and gravel, 255 mm		1	SS	9							
0.3	**CLAYEY SILT:** some sand, trace to some gravel, brown, very moist, stiff						157					
1			2	SS	12							
156.2												
1.5	**CLAYEY SILT TILL:** some sand, trace gravel, brown, very moist, stiff		3	SS	13		156					1 18 57 24
2												
155.4												
2.3	**SANDY SILT TILL:** some clay, trace to some gravel, trace cobbles, greyish brown, moist, dense		4	SS	39							8 30 42 20
3							155					
	trace cobbles and boulders, very dense		5	SS	50/ 75mm							
								W. L. 154.1 m May 30, 2023				
4												
153.1												
4.6	**RESIDUAL SOIL/ HIGHLY WEATHERED SHALE BEDROCK:** grey, moist, very dense		6	SS	50/ 75mm		153					
5												
6							152					
151.6												
151.5	**INFERRED BEDROCK: GEORGIAN BAY FORMATION** Highly weathered (W4), grey		7	SS	50/ 100mm							
6.2	**END OF BOREHOLE:**											

1. Borehole was open and dry upon completion of drilling.
2. Auger Refusal at 6.1 mbgs.
3. Monitoring well installed at the BH/MW-102 with screening from 3.05 to 6.1 mbgs.
4. Groundwater level mesurements:

Date	Depth (mbgs)
May 30, 2023	3.54

GROUNDWATER ELEVATIONS
Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01177-00.GPJ SPCL.GDT 23-6-13

SIRATI & PARTNERS

LOG OF BOREHOLE BH/MW-103

PROJECT: GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION

CLIENT: De Zen Realty Company Ltd.

PROJECT LOCATION: 66 THOMAS STREET, MISSISSAUGA, ONTARIO

DATUM: Geodetic

BH LOCATION: See Drawing 1 N 4825752.335 E 603741.782

DRILLING DATA

Method: Hollow Stem Auger Rock Coring

Diameter: 200 mm

Date: May-23-2023

REF. NO.: SP23-01177-00

ENCL NO.: 4

(m) ELEV / DEPTH	DESCRIPTION	NUMBER	TYPE	BLOWS 0.3 m "N"	ELEVATION	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
153.9						
153.7 0.2	**ASPHALT:** 150mm					
153.5 0.4	**GRANULAR FILL:** sand and gravel, 255mm	1	SS	27		
	FILL: clayey silt, some sand, trace gravel, dark brown, very moist, very stiff	2	SS	8	153	4 19 52 25
1	stiff					
	moist to very moist, firm	3	SS	5		
2					152	
	trace cobbles, moist, hard	4	SS	36		
150.8 3					151	
3.1	**SANDY SILT TILL:** some clay, trace cobbles, trace gravel, grey, moist, dense	5	SS	42		8 30 44 18
4		6	SS	40	150	
149.1	very dense	7	SS	50/ 50mm		
5 4.8	**INFERRED BEDROCK: GEORGIAN BAY FORMATION** Highly weathered (W4), grey				149	
148.4						
5.5	Rock coring started at 5.54m	8	SS	50/ 50mm		
6	**RUN 1:** Highly weathered (W4) to Moderately weathered (W3), grey TCR: 87.5% SCR: 77.7% RQD: 72.2%	1	CORE		148	
147.3 6.6						
7	**RUN 2:** Moderately weathered (W3) to Slightly (W2), grey TCR: 100% SCR: 76.4% RQD: 43.7%	2	CORE		147	
145.9 8						
8.0	**RUN 3:** Moderately weathered (W3) to Slightly (W2), grey TCR: 100% SCR: 64.3% RQD: 16.7%	3	CORE		146	
9						
144.4					145	
9.5	**END OF BOREHOLE:**					

1. Borehole was open upon completion of drilling.
2. Auger refusal at 4.8 mbgs.
3. Monitoring well installed at the BH/MW-103 with screening from 6.1 to 9.1 mbgs.
4. Groundwater level mesurements:

Date	Depth (mbgs)
May 30, 2023	1.97

W. L. 151.9 m May 30, 2023

DYNAMIC CONE PENETRATION RESISTANCE PLOT: 20 40 60 80 100

SHEAR STRENGTH (kPa): ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE; 20 40 60 80 100

PLASTIC LIMIT w_P | NATURAL MOISTURE CONTENT w | LIQUID LIMIT w_L

WATER CONTENT (%): 10 20 30

POCKET PEN. (Cu) (kPa)

NATURAL UNIT WT (kN/m³)

GROUNDWATER ELEVATIONS

Measurement 1st 2nd 3rd 4th

GRAPH NOTES: $+^3$, $\times^3$: Numbers refer to Sensitivity; ○ $^{\varepsilon}$=3% Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01177-00.GPJ SPCL.GDT 23-6-13

LOG OF BOREHOLE BH/MW-104

PROJECT: GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION

CLIENT: De Zen Realty Company Ltd.

PROJECT LOCATION: 66 THOMAS STREET, MISSISSAUGA, ONTARIO

DATUM: Geodetic

BH LOCATION: See Drawing 1 N 4825780.562 E 603763.349

DRILLING DATA

Method: Solid Stem Auger

Diameter: 150 mm

Date: May-18-2023

REF. NO.: SP23-01177-00

ENCL NO.: 5

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS "N" 0.3 m	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
153.8												
153.7 / 0.1	**ASPHALT:** 125 mm											
153.6 / 0.3	**GRANULAR FILL:** sand and gravel, 150 mm		1	SS	31							
	FILL: clayey silt, some sand, trace gravel, trace construction debris, brown, moist, hard						153					
1	grey, very moist, stiff		2	SS	11							
	firm		3	SS	4		152					
2						▽		W. L. 151.9 m May 30, 2023				
	clayey silt, sandy, some gravel, soft		4	SS	2							11 31 39 19
3 150.8							151					
3.1	**CLAYEY SILT TILL:** some sand, trace to some gravel, trace cobbles, grey, moist to very moist, hard		5	SS	50/ 125mm							
4							150					
149.3												
4.6	**INFERRED BEDROCK: GEORGIAN BAY FORMATION**		6	SS	50/ 150mm							
5 148.8	Highly weathered (W4), grey						149					
5.0	**END OF BOREHOLE:**											

1. Borehole was open upon completion of drilling.
2. Auger refusal at 4.6 mbgs.
3. Water level was encountered at 3.05 mbgs upon completion of drilling.
4. Monitoring well installed at the BH/MW-104 with screening from 1.98 to 5.03 mbgs.
5. Groundwater level mesurements:

Date	Depth (mbgs)
May 30, 2023	1.92

GROUNDWATER ELEVATIONS

Measurement 1st ▽ 2nd ▼ 3rd ▼ 4th ▼

GRAPH NOTES: + 3, × 3: Numbers refer to Sensitivity; ○ ε=3% Strain at Failure

SPCL SOIL LOG /DRAFT SP23-01177-00.GPJ SPCL.GDT 23-6-13

LOG OF BOREHOLE BH/MW-107

PROJECT: GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION
CLIENT: De Zen Realty Company Ltd.
PROJECT LOCATION: 66 THOMAS STREET, MISSISSAUGA, ONTARIO
DATUM: Geodetic
BH LOCATION: See Drawing 1 N 4825887.157 E 603603.014

DRILLING DATA
Method: Hollow Stem Auger Rock Coring
Diameter: 200 mm
Date: May-19-2023

REF. NO.: SP23-01177-00
ENCL NO.: 6

(m) ELEV / DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	BLOWS "N" 0.3 m	GROUND WATER CONDITIONS	ELEVATION	DYNAMIC CONE PENETRATION RESISTANCE PLOT (20 40 60 80 100) / SHEAR STRENGTH (kPa) ○ UNCONFINED ● QUICK TRIAXIAL + FIELD VANE & Sensitivity × LAB VANE (20 40 60 80 100)	PLASTIC LIMIT w_P / NATURAL MOISTURE CONTENT w / LIQUID LIMIT w_L — WATER CONTENT (%) (10 20 30)	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m³)	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
156.4												
0.0 / 155.9	**GRANULAR FILL:** sand and gravel, 455 mm		1	SS	36		156					54 32 (14)
0.5 / 154.9	**FILL:** clayey silt, some sand, trace cobbles, trace gravel, trace construction debris, brown, very moist, hard		2	SS	20		155					1 17 47 35
1.5 / 153.1	**CLAYEY SILT TILL:** some sand, trace gravel, brown, moist, very stiff hard		3	SS	30		154					
			4	SS	50/ 50mm							
			5	SS	44		153					13 25 52 10
3.3 / 151.8	**SANDY SILT TILL:** some gravel, trace to some clay, trace cobbles, grey, moist, dense trace cobbles and boulders, very dense		6	SS	50/ 50mm	W. L. 152.7 m May 30, 2023	152					
4.6 / 149.3	**INFERRED BEDROCK: GEORGIAN BAY FORMATION** Highly weathered (W4), grey		7	SS	50/ 125mm		151					
			8	SS	50/ 100mm		150					
			9	SS	50/ 100mm							
7.1 / 148.4	Rock coring started at 7.1m **RUN 1:** Highly weathered (W4) to Moderately (W3), grey TCR: 100% SCR: 48.6% RQD: 13.5%		1	CORE			149					
8.0	**RUN 2:** Moderately weathered (W3) to Slightly (W2), grey TCR: 70% SCR: 80.9% RQD: 50%		2	CORE			148					
146.8							147					
9.6	**END OF BOREHOLE:** 1. Borehole was open upon completion of drilling. 2. Auger refusal at 4.6 mbgs. 3. Monitoring well installed at the BH/MW-107 with screening from 6.1 to 9.1 mbgs. 4. Groundwater level mesurements: Date / Depth (mbgs) May 30, 2023 / 3.64											

SPCL SOIL LOG /DRAFT SP23-01177-00.GPJ SPCL.GDT 23-6-13

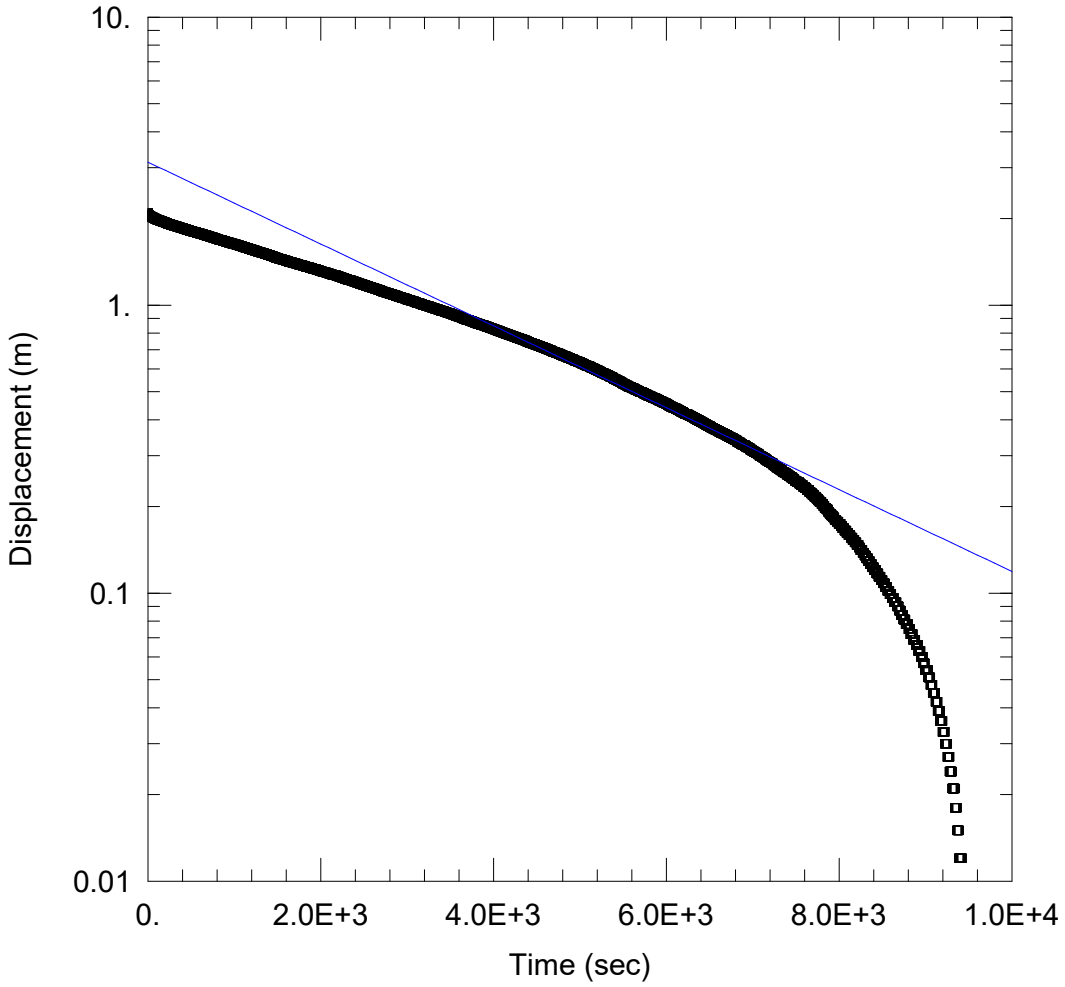
GROUNDWATER ELEVATIONS
Measurement 1st 2nd 3rd 4th

GRAPH NOTES
$+^{3}$, $\times^{3}$: Numbers refer to Sensitivity
○ ε_f=3% Strain at Failure

APPENDIX D

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions



WELL TEST ANALYSIS

Data Set: Z:\...\BH MW23-101.aqt
Date: 06/16/23 Time: 16:17:55

PROJECT INFORMATION

Company: SIRATI & PARTNERS
Client: De Zen Realty Company Limited.
Project: SP23-1177-00
Location: 66 Thomas St., Mississauga
Test Well: BH/MW23-101
Test Date: 16-JUN-2023

AQUIFER DATA

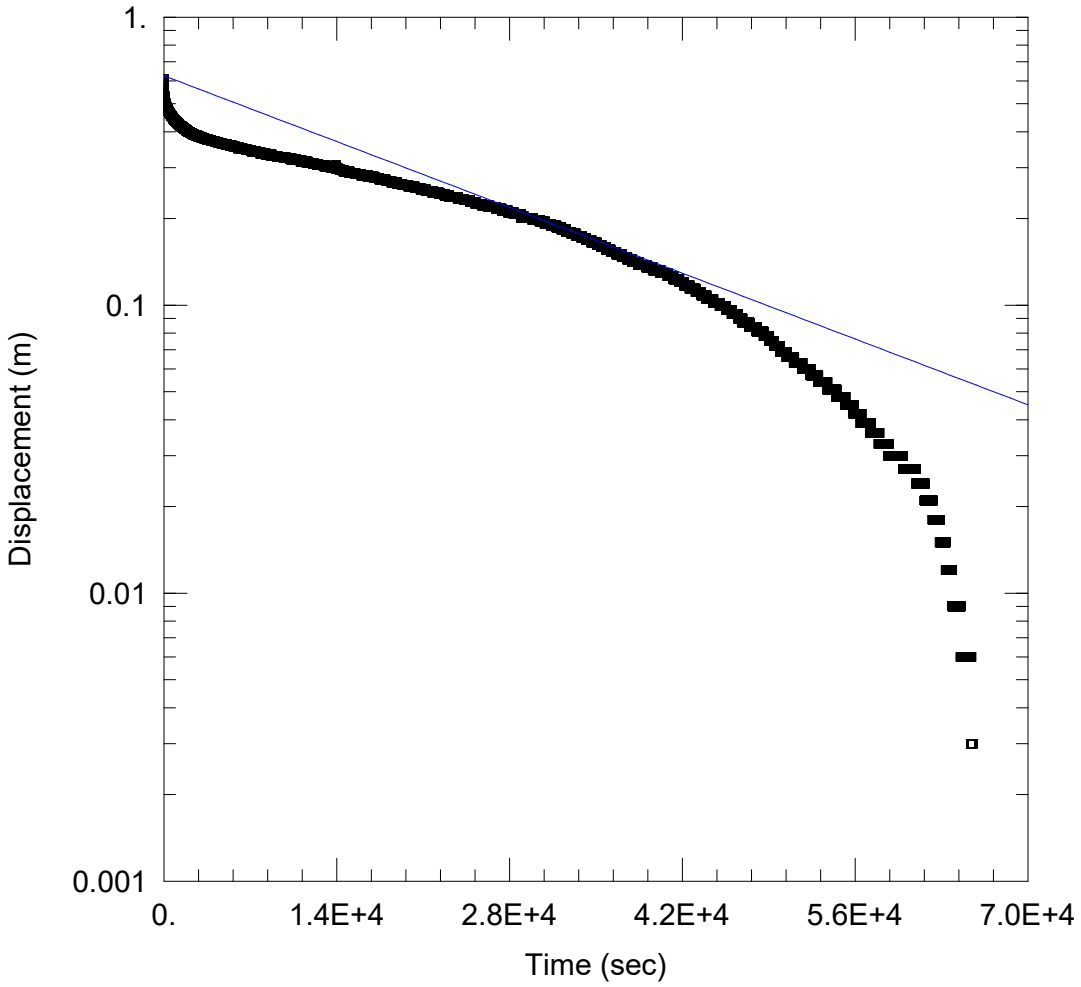
Saturated Thickness: 3.09 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW23-101)

Initial Displacement: 2.091 m
Total Well Penetration Depth: 6.1 m
Casing Radius: 0.0508 m
Static Water Column Height: 3.09 m
Screen Length: 3.05 m
Well Radius: 0.0508 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 6.627E-7 m/sec
y0 = 3.135 m



RISING HEAD

Data Set: Z:\...\BH MW23-102.aqt
Date: 07/07/23 Time: 14:59:08

PROJECT INFORMATION

Company: SIRATI & PARTNERS
Client: De Zen Realty Company Limited.
Project: SP23-1177-00
Location: 66 Thomas St., Mississauga
Test Well: BH/MW23-102
Test Date: 07-JULY-2023

AQUIFER DATA

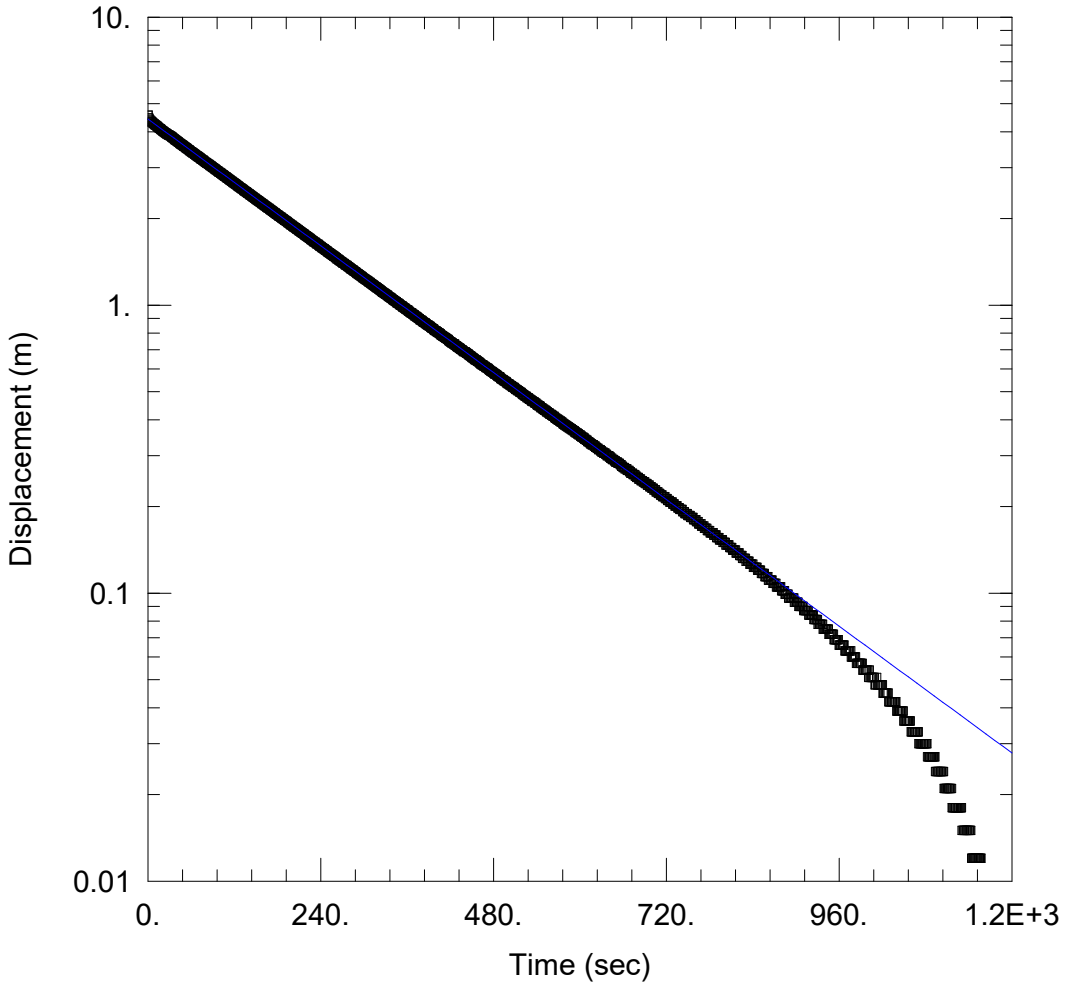
Saturated Thickness: 2.51 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW23-102)

Initial Displacement: 0.609 m Static Water Column Height: 2.51 m
Total Well Penetration Depth: 6.1 m Screen Length: 3.05 m
Casing Radius: 0.0508 m Well Radius: 0.0508 m
Water level was below the top of screen.

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev
K = 1.024E-7 m/sec y0 = 0.6256 m



RISING HEAD

Data Set: Z:\...\BH MW23-103.aqt
Date: 06/06/23 Time: 11:48:21

PROJECT INFORMATION

Company: SIRATI & PARTNERS
Client: De Zen Realty Company Limited.
Project: SP23-1177-00
Location: 66 Thomas St., Mississauga
Test Well: BH/MW23-103
Test Date: 02-JUN-2023

AQUIFER DATA

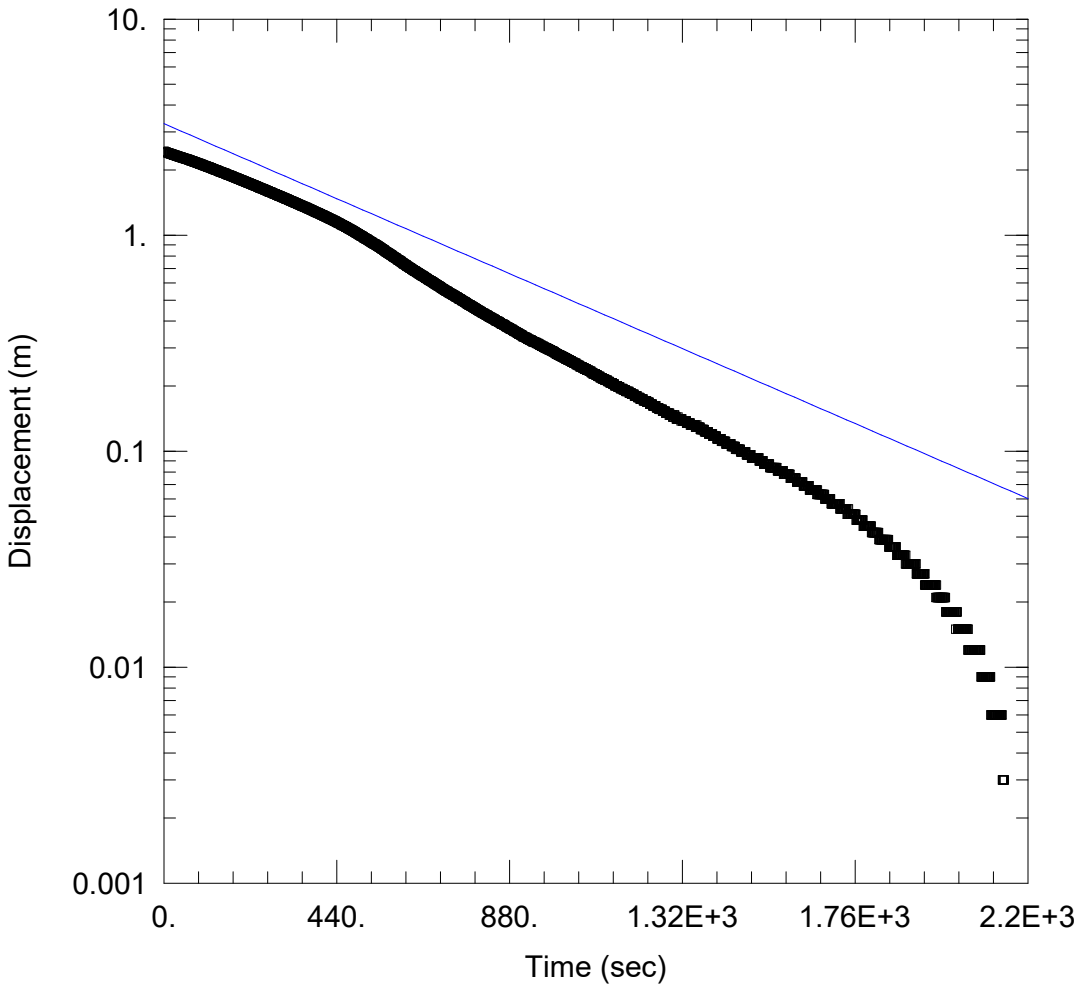
Saturated Thickness: 7.12 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW23-103)

Initial Displacement: 4.566 m
Total Well Penetration Depth: 9.1 m
Casing Radius: 0.0508 m
Static Water Column Height: 7.12 m
Screen Length: 3. m
Well Radius: 0.0508 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 8.669E-6 m/sec
y0 = 4.427 m



RISING HEAD

Data Set: Z:\...\BH MW23-104.aqt
Date: 06/06/23 Time: 12:19:51

PROJECT INFORMATION

Company: SIRATI & PARTNERS
Client: De Zen Realty Company Limited.
Project: SP23-1177-00
Location: 66 Thomas St., Mississauga
Test Well: BH/MW23-104
Test Date: 02-JUN-2023

AQUIFER DATA

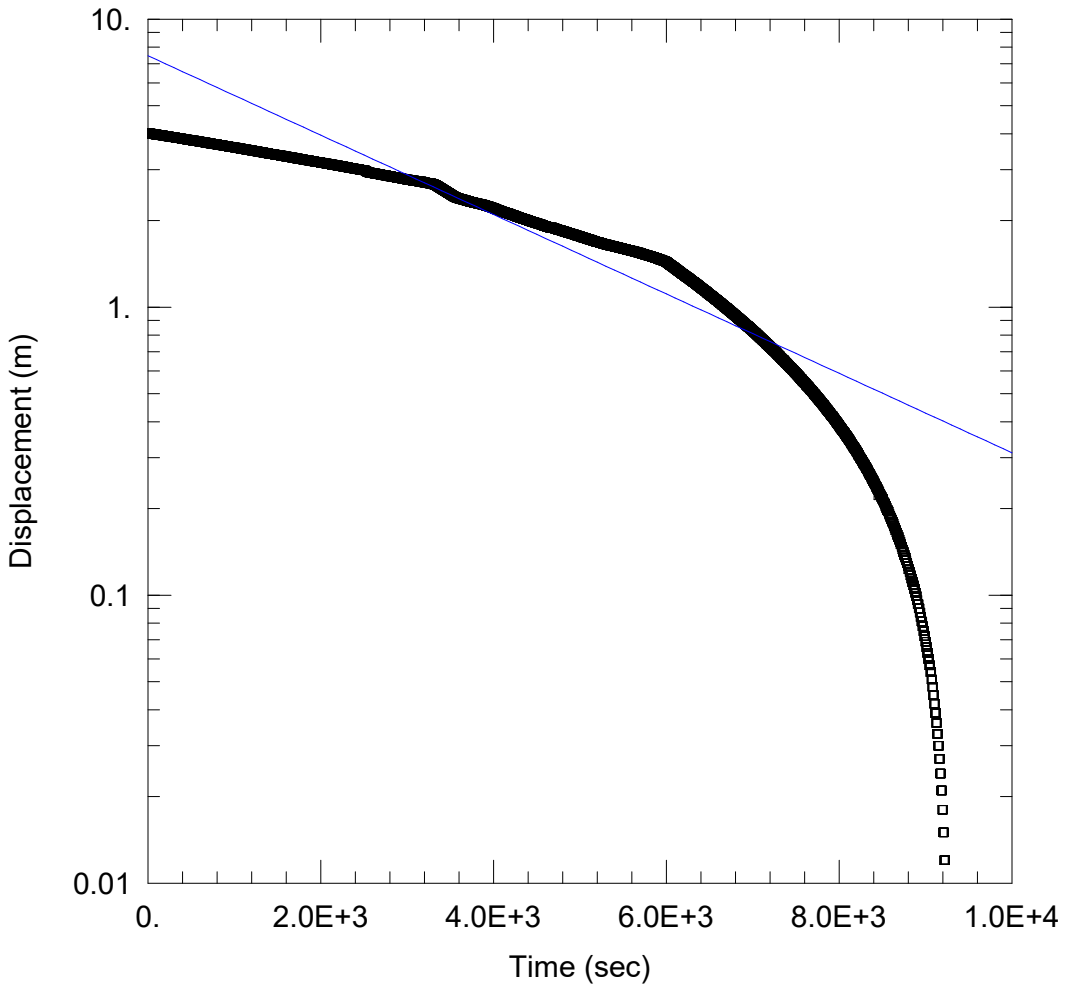
Saturated Thickness: 3.1 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW23-104)

Initial Displacement: 2.442 m
Total Well Penetration Depth: 5.03 m
Casing Radius: 0.0508 m
Static Water Column Height: 3.1 m
Screen Length: 3.05 m
Well Radius: 0.508 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 1.915E-6 m/sec
y0 = 3.28 m



RISING HEAD

Data Set: Z:\...\BH MW23-107.aqt
Date: 06/06/23 Time: 13:28:05

PROJECT INFORMATION

Company: SIRATI & PARTNERS
Client: De Zen Realty Company Limited.
Project: SP23-1177-00
Location: 66 Thomas St., Mississauga
Test Well: BH/MW23-107
Test Date: 02-JUN-2023

AQUIFER DATA

Saturated Thickness: 5.46 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (BH/MW23-107)

Initial Displacement: 4.026 m
Total Well Penetration Depth: 9.1 m
Casing Radius: 0.0508 m
Static Water Column Height: 5.46 m
Screen Length: 3. m
Well Radius: 0.0508 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Hvorslev
K = 6.514E-7 m/sec
y0 = 7.46 m

APPENDIX E

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD
160 KONRAD CRESCENT UNIT 4
MARKHAM, ON L3R 9T9
(905) 833-1582
ATTENTION TO: Hiva Elhami
PROJECT: SP23-1177-00
AGAT WORK ORDER: 23T031855
MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer
DATE REPORTED: Jul 21, 2023
PAGES (INCLUDING COVER): 20
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

E. Coli (MI-Agar)

DATE RECEIVED: 2023-06-02 **DATE REPORTED: 2023-07-21**

				SAMPLE DESCRIPTION:	BH/MW23-104	BH/MW23-107
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-06-02	2023-06-02 12:00
Parameter	**Unit**	**G / S**	**RDL**		**5036893**	**5036925**
Escherichia coli	CFU/100mL	200			0	0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Storm By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5036893-5036925 Escherichia coli RDL = 100 CFU/100mL.
RDL > 1 indicates dilutions of the sample.

The sample was diluted prior to filtration due to the presence of sediments. Presence of sediments was observed upon receipt.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Fecal Coliforms in Water

DATE RECEIVED: 2023-06-02 **DATE REPORTED: 2023-07-21**

				SAMPLE DESCRIPTION:	BH/MW23-104	BH/MW23-107
				SAMPLE TYPE:	Water	Water
				DATE SAMPLED:	2023-06-02	2023-06-02 12:00
Parameter	Unit	G / S	RDL		5036893	5036925
Fecal Coliform	CFU/100mL	0			0	0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Storm By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5036893-5036925 Fecal Coliforms RDL = 100 CFU/100mL
The sample was diluted prior to filtration due to the presence of sediments.
RDL > 1 indicates dilutions of the sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Peel Region Sanitary - Organics

DATE RECEIVED: 2023-06-02

DATE REPORTED: 2023-07-21

					SAMPLE DESCRIPTION:		BH/MW23-107
					SAMPLE TYPE:		Water
					DATE SAMPLED:		2023-06-02 12:00
Parameter	Unit	G / S: A	G / S: B	RDL	5036893	RDL	5036925
Oil and Grease (animal/vegetable) in water	mg/L	150		0.5	3.35[<A]	0.5	1.0[<A]
Oil and Grease (mineral) in water	mg/L	15		0.5	<0.5[<A]	0.5	<0.5[<A]
Methylene Chloride	mg/L	2	0.0052	0.0012	<0.0012[<B]	0.0006	<0.0006[<B]
Methyl Ethyl Ketone	mg/L	8.0		0.0036	<0.0036[<A]	0.0018	<0.0018[<A]
cis-1,2-Dichloroethylene	mg/L	4	0.0056	0.0008	<0.0008[<B]	0.0004	<0.0004[<B]
Chloroform	mg/L	0.04	0.002	0.0008	<0.0008[<B]	0.0004	<0.0004[<B]
Benzene	mg/L	0.01	0.002	0.0008	0.420[>A]	0.0004	<0.0004[<B]
Trichloroethylene	mg/L	0.4	0.008	0.0008	0.0010[<B]	0.0004	<0.0004[<B]
Toluene	mg/L	0.27	0.002	0.0008	0.403[>A]	0.0004	<0.0004[<B]
Tetrachloroethene	mg/L	1	0.0044	0.0008	<0.0008[<B]	0.0004	<0.0004[<B]
trans-1,3-Dichloropropene	mg/L	0.14	0.0056	0.0012	<0.0012[<B]	0.0006	<0.0006[<B]
Ethylbenzene	mg/L	0.16	0.002	0.0004	0.183[>A]	0.0002	<0.0002[<B]
1,1,2,2-Tetrachloroethane	mg/L	1.4	0.017	0.0004	<0.0004[<B]	0.0002	<0.0002[<B]
Styrene	mg/L	0.2		0.0004	<0.0004[<A]	0.0002	<0.0002[<A]
1,2-Dichlorobenzene	mg/L	0.05	0.0056	0.0004	<0.0004[<B]	0.0002	<0.0002[<B]
1,4-Dichlorobenzene	mg/L	0.08	0.0068	0.0004	<0.0004[<B]	0.0002	<0.0002[<B]
m & p-Xylene	mg/L			0.0008	0.331	0.0004	<0.0004
o-Xylene	mg/L			0.0004	0.177	0.0002	<0.0002
Xylenes (Total)	mg/L	1.4	0.0044	0.0001	0.508[B-A]	0.0001	<0.0001[<B]
PCBs	mg/L	0.001	0.0004	0.0002	<0.0002[<B]	0.0002	<0.0002[<B]
Di-n-butyl phthalate	mg/L	0.08	0.015	0.0005	<0.0005[<B]	0.0005	<0.0005[<B]
Bis(2-Ethylhexyl)phthalate	mg/L	0.012	0.0088	0.0005	<0.0005[<B]	0.0005	<0.0005[<B]

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Peel Region Sanitary - Organics

DATE RECEIVED: 2023-06-02

DATE REPORTED: 2023-07-21

		SAMPLE DESCRIPTION:	BH/MW23-104		BH/MW23-107
		SAMPLE TYPE:	Water		Water
		DATE SAMPLED:	2023-06-02		2023-06-02 12:00
Surrogate	Unit	Acceptable Limits	5036893		5036925
Toluene-d8	% Recovery	50-140	106	2	96
4-Bromofluorobenzene	% Recovery	50-140	97	2	84
Decachlorobiphenyl	%	50-140	72	1	89
2,4,6-Tribromophenol	%	50-140	79	1	105
2-Fluorophenol	%	50-140	85	1	85
Chrysene-d12	%	50-140	85	1	84
phenol-d6 surrogate	%	50-140	84	1	79

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Peel Sanitary By-Law 53-2010, B Refers to Peel Storm By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5036893 Dilution factor=4
The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Oil and Grease animal/vegetable is a calculated parameter. The calculated value is the difference between Total O&G and Mineral O&G.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.

5036925 Dilution factor=2
The sample was diluted because it was foamy. The reporting detection limit has been corrected for the dilution factor used.
Oil and Grease animal/vegetable is a calculated parameter. The calculated value is the difference between Total O&G and Mineral O&G.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Dissolved Metals in Water (mg/L)

DATE RECEIVED: 2023-06-02

DATE REPORTED: 2023-07-21

		SAMPLE DESCRIPTION:		BH/MW23-104	BH/MW23-107
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2023-06-02	2023-06-02 12:00
Parameter	Unit	G / S	RDL	5036893	5036925
Dissolved Aluminum	mg/L		0.004	0.016	0.008
Dissolved Antimony	mg/L		0.001	<0.001	<0.001
Dissolved Arsenic	mg/L		0.001	0.009	0.001
Dissolved Barium	mg/L		0.002	1.14	0.133
Dissolved Beryllium	mg/L		0.0005	<0.0005	<0.0005
Dissolved Bismuth	mg/L		0.002	<0.002	<0.002
Dissolved Boron	mg/L		0.010	1.02	5.63
Dissolved Cadmium	mg/L		0.0001	<0.0001	<0.0001
Dissolved Chromium	mg/L		0.002	<0.002	<0.002
Dissolved Cobalt	mg/L		0.0005	0.0028	0.0018
Dissolved Copper	mg/L		0.001	0.002	<0.001
Dissolved Iron	mg/L		0.010	13.9	0.035
Dissolved Lead	mg/L		0.0005	<0.0005	<0.0005
Dissolved Manganese	mg/L		0.002	7.47	0.266
Dissolved Molybdenum	mg/L		0.002	<0.002	0.010
Dissolved Nickel	mg/L		0.001	0.012	0.002
Dissolved Phosphorus	mg/L		0.05	0.07	<0.05
Dissolved Selenium	mg/L		0.001	<0.001	0.002
Dissolved Silver	mg/L		0.0001	<0.0001	<0.0001
Dissolved Silicon	mg/L		0.05	8.38	4.59
Dissolved Strontium	mg/L		0.005	5.63	7.78
Dissolved Thallium	mg/L		0.0003	<0.0003	<0.0003
Dissolved Tin	mg/L		0.002	<0.002	<0.002
Dissolved Titanium	mg/L		0.002	0.003	<0.002
Dissolved Uranium	mg/L		0.0005	0.0007	0.0010
Dissolved Vanadium	mg/L		0.002	<0.002	<0.002
Dissolved Zinc	mg/L		0.005	0.369	<0.005
Dissolved Zirconium	mg/L		0.004	<0.004	<0.004

Certified By: Iris Verástegui

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Certificate of Analysis

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Dissolved Metals in Water (mg/L)

DATE RECEIVED: 2023-06-02

DATE REPORTED: 2023-07-21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5036893-5036925 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

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AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Peel Sanitary Sewer Use By-Law - Inorganics

DATE RECEIVED: 2023-06-02

DATE REPORTED: 2023-07-21

					SAMPLE DESCRIPTION:		BH/MW23-107
					SAMPLE TYPE:		Water
					DATE SAMPLED:		2023-06-02 12:00
Parameter	Unit	G / S: A	G / S: B	RDL	5036893	RDL	5036925
pH	pH Units	5.5-10	6.0-9.0	NA	7.10	NA	7.83
CBOD (5)	mg/L	300	15	2	32[B-A]	2	<2[<B]
Total Suspended Solids	mg/L	350	15	10	9840[>A]	10	28200[>A]
Fluoride	mg/L	10		0.13	<0.13[<A]	0.05	<0.05[<A]
Sulphate	mg/L	1500		0.95	7.24[<A]	0.38	803[<A]
Cyanide, SAD	mg/L	2	0.02	0.002	0.008[<B]	0.002	<0.002[<B]
Phenols	mg/L	1.0	0.008	0.004	0.870[B-A]	0.002	0.045[B-A]
Total Phosphorus	mg/L	10	0.4	0.06	2.15[B-A]	0.02	0.48[B-A]
Total Kjeldahl Nitrogen	mg/L	100	1	0.10	9.82[B-A]	0.10	2.04[B-A]
Total Aluminum	mg/L	50		0.50	285[>A]	0.50	474[>A]
Total Antimony	mg/L	5		0.040	<0.040[<A]	0.100	<0.100[<A]
Total Arsenic	mg/L	1	0.02	0.030	0.171[B-A]	0.075	0.337[B-A]
Total Cadmium	mg/L	0.7	0.008	0.020	<0.020[<A]	0.050	<0.050[<A]
Total Chromium	mg/L	5	0.08	0.030	0.450[B-A]	0.075	1.05[B-A]
Total Cobalt	mg/L	5		0.040	0.267[<A]	0.100	0.533[<A]
Total Copper	mg/L	3	0.05	0.020	0.459[B-A]	0.050	1.83[B-A]
Total Lead	mg/L	3	0.120	0.040	0.096[<B]	0.100	0.271[B-A]
Total Manganese	mg/L	5	0.05	0.040	23.0[>A]	0.100	26.3[>A]
Total Mercury	mg/L	0.01	0.0004	0.0002	<0.0002[<B]	0.0002	0.0004[B]
Total Molybdenum	mg/L	5		0.040	<0.040[<A]	0.100	<0.100[<A]
Total Nickel	mg/L	3	0.08	0.030	0.546[B-A]	0.075	1.26[B-A]
Total Selenium	mg/L	1	0.02	0.004	0.045[B-A]	0.010	0.106[B-A]
Total Silver	mg/L	5	0.12	0.020	<0.020[<B]	0.050	<0.050[<B]
Total Tin	mg/L	5		0.050	<0.050[<A]	0.125	<0.125[<A]
Total Titanium	mg/L	5		0.020	1.10[<A]	0.050	1.92[<A]
Total Zinc	mg/L	3	0.04	0.040	2.10[B-A]	0.100	2.91[B-A]

Certified By: Iris Verástegui

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Certificate of Analysis

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Peel Sanitary Sewer Use By-Law - Inorganics

DATE RECEIVED: 2023-06-02 **DATE REPORTED: 2023-07-21**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Peel Sanitary By-Law 53-2010, B Refers to Peel Storm By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5036893-5036925 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

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Exceedance Summary

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

ATTENTION TO: Hiva Elhami

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5036893	BH/MW23-104	ON Peel SM	Peel Region Sanitary - Organics	Benzene	mg/L	0.002	0.420
5036893	BH/MW23-104	ON Peel SM	Peel Region Sanitary - Organics	Ethylbenzene	mg/L	0.002	0.183
5036893	BH/MW23-104	ON Peel SM	Peel Region Sanitary - Organics	Toluene	mg/L	0.002	0.403
5036893	BH/MW23-104	ON Peel SM	Peel Region Sanitary - Organics	Xylenes (Total)	mg/L	0.0044	0.508
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	CBOD (5)	mg/L	15	32
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Phenols	mg/L	0.008	0.870
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Arsenic	mg/L	0.02	0.171
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Chromium	mg/L	0.08	0.450
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Copper	mg/L	0.05	0.459
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Kjeldahl Nitrogen	mg/L	1	9.82
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Manganese	mg/L	0.05	23.0
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Nickel	mg/L	0.08	0.546
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Phosphorus	mg/L	0.4	2.15
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Selenium	mg/L	0.02	0.045
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Suspended Solids	mg/L	15	9840
5036893	BH/MW23-104	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Zinc	mg/L	0.04	2.10
5036893	BH/MW23-104	ON Peel SN	Peel Region Sanitary - Organics	Benzene	mg/L	0.01	0.420
5036893	BH/MW23-104	ON Peel SN	Peel Region Sanitary - Organics	Ethylbenzene	mg/L	0.16	0.183
5036893	BH/MW23-104	ON Peel SN	Peel Region Sanitary - Organics	Toluene	mg/L	0.27	0.403
5036893	BH/MW23-104	ON Peel SN	Peel Sanitary Sewer Use By-Law - Inorganics	Total Aluminum	mg/L	50	285
5036893	BH/MW23-104	ON Peel SN	Peel Sanitary Sewer Use By-Law - Inorganics	Total Manganese	mg/L	5	23.0
5036893	BH/MW23-104	ON Peel SN	Peel Sanitary Sewer Use By-Law - Inorganics	Total Suspended Solids	mg/L	350	9840
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Phenols	mg/L	0.008	0.045
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Arsenic	mg/L	0.02	0.337
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Chromium	mg/L	0.08	1.05
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Copper	mg/L	0.05	1.83
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Kjeldahl Nitrogen	mg/L	1	2.04
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Lead	mg/L	0.120	0.271
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Manganese	mg/L	0.05	26.3
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Nickel	mg/L	0.08	1.26
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Phosphorus	mg/L	0.4	0.48
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Selenium	mg/L	0.02	0.106
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Suspended Solids	mg/L	15	28200
5036925	BH/MW23-107	ON Peel SM	Peel Sanitary Sewer Use By-Law - Inorganics	Total Zinc	mg/L	0.04	2.91
5036925	BH/MW23-107	ON Peel SN	Peel Sanitary Sewer Use By-Law - Inorganics	Total Aluminum	mg/L	50	474
5036925	BH/MW23-107	ON Peel SN	Peel Sanitary Sewer Use By-Law - Inorganics	Total Manganese	mg/L	5	26.3
5036925	BH/MW23-107	ON Peel SN	Peel Sanitary Sewer Use By-Law - Inorganics	Total Suspended Solids	mg/L	350	28200

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Microbiology Analysis

RPT Date: Jul 21, 2023			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Fecal Coliforms in Water															
Fecal Coliform	5036893	5036893	0	0	NA										
Comments: NA - % RPD Not Applicable															
E. Coli (MI-Agar)															
Escherichia coli	5036893	5036893	0	0	NA										
Comments: NA - % RPD Not Applicable.															

Certified By:

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CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Trace Organics Analysis

RPT Date: Jul 21, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Peel Region Sanitary - Organics															
Oil and Grease (animal/vegetable) in water	5029315		< 0.5	< 0.5	NA	< 0.5	86%	70%	130%	91%	70%	130%	111%	70%	130%
Oil and Grease (mineral) in water	5029315		< 0.5	< 0.5	NA	< 0.5	90%	70%	130%	87%	70%	130%	80%	70%	130%
Methylene Chloride	5037343		<0.0003	<0.0003	NA	< 0.0003	87%	50%	140%	86%	60%	130%	78%	50%	140%
Methyl Ethyl Ketone	5037343		<0.0009	<0.0009	NA	< 0.0009	92%	50%	140%	100%	50%	140%	80%	50%	140%
cis-1,2-Dichloroethylene	5037343		<0.0002	<0.0002	NA	< 0.0002	117%	50%	140%	107%	60%	130%	102%	50%	140%
Chloroform	5037343		<0.0002	<0.0002	NA	< 0.0002	116%	50%	140%	107%	60%	130%	103%	50%	140%
Benzene	5037343		<0.0002	<0.0002	NA	< 0.0002	117%	50%	140%	110%	60%	130%	108%	50%	140%
Trichloroethylene	5037343		<0.0002	<0.0002	NA	< 0.0002	117%	50%	140%	103%	60%	130%	101%	50%	140%
Toluene	5037343		<0.0002	<0.0002	NA	< 0.0002	116%	50%	140%	103%	60%	130%	109%	50%	140%
Tetrachloroethene	5037343		<0.0002	<0.0002	NA	< 0.0002	115%	50%	140%	97%	60%	130%	109%	50%	140%
trans-1,3-Dichloropropene	5037343		<0.0003	<0.0003	NA	< 0.0003	106%	50%	140%	80%	60%	130%	117%	50%	140%
Ethylbenzene	5037343		<0.0001	<0.0001	NA	< 0.0001	114%	50%	140%	83%	60%	130%	116%	50%	140%
1,1,2,2-Tetrachloroethane	5037343		<0.0001	<0.0001	NA	< 0.0001	83%	50%	140%	83%	60%	130%	85%	50%	140%
Styrene	5037343		<0.0001	<0.0001	NA	< 0.0001	107%	50%	140%	94%	60%	130%	113%	50%	140%
1,2-Dichlorobenzene	5037343		<0.0001	<0.0001	NA	< 0.0001	101%	50%	140%	106%	60%	130%	105%	50%	140%
1,4-Dichlorobenzene	5037343		<0.0001	<0.0001	NA	< 0.0001	111%	50%	140%	116%	60%	130%	118%	50%	140%
m & p-Xylene	5037343		<0.0002	<0.0002	NA	< 0.0002	101%	50%	140%	109%	60%	130%	107%	50%	140%
o-Xylene	5037343		<0.0001	<0.0001	NA	< 0.0001	109%	50%	140%	118%	60%	130%	106%	50%	140%
PCBs	5047145		< 0.0002	< 0.0002	NA	< 0.0002	104%	50%	140%	106%	50%	140%	102%	50%	140%
Di-n-butyl phthalate	5011959		< 0.0005	< 0.0005	NA	< 0.0005	85%	50%	140%	106%	50%	140%	85%	50%	140%
Bis(2-Ethylhexyl)phthalate	5011959		< 0.0005	< 0.0005	NA	< 0.0005	79%	50%	140%	85%	50%	140%	79%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

AGAT Laboratories

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Water Analysis

RPT Date: Jul 21, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Peel Sanitary Sewer Use By-Law - Inorganics															
pH	5036059		7.30	7.32	0.3%	NA	99%	90%	110%						
CBOD (5)	5036893	5036893	32	34	6.1%	< 2	99%	75%	125%						
Total Suspended Solids	5036893	5036893	9840	9890	0.5%	< 10	94%	80%	120%						
Fluoride	5037848		<0.05	<0.05	NA	< 0.05	98%	70%	130%	100%	80%	120%	104%	70%	130%
Sulphate	5037848		229	226	1.3%	< 0.10	101%	70%	130%	102%	80%	120%	NA	70%	130%
Cyanide, SAD	5032355		<0.002	<0.002	NA	< 0.002	93%	70%	130%	96%	80%	120%	90%	70%	130%
Phenols	5034440		0.006	0.006	NA	< 0.002	102%	90%	110%	110%	90%	110%	85%	80%	120%
Total Phosphorus	5053503		0.02	<0.02	NA	< 0.02	101%	70%	130%	96%	80%	120%	98%	70%	130%
Total Kjeldahl Nitrogen	5036893	5036893	9.82	9.86	0.4%	< 0.10	101%	70%	130%	97%	80%	120%	NA	70%	130%
Total Aluminum	5034665		0.653	0.580	11.8%	< 0.010	89%	70%	130%	94%	80%	120%	85%	70%	130%
Total Antimony	5034665		<0.020	<0.020	NA	< 0.020	104%	70%	130%	103%	80%	120%	109%	70%	130%
Total Arsenic	5034665		<0.015	<0.015	NA	< 0.015	98%	70%	130%	103%	80%	120%	103%	70%	130%
Total Cadmium	5034665		<0.010	<0.010	NA	< 0.010	97%	70%	130%	101%	80%	120%	104%	70%	130%
Total Chromium	5034665		<0.015	<0.015	NA	< 0.015	96%	70%	130%	105%	80%	120%	101%	70%	130%
Total Cobalt	5034665		<0.020	<0.020	NA	< 0.020	98%	70%	130%	104%	80%	120%	101%	70%	130%
Total Copper	5034665		<0.010	<0.010	NA	< 0.010	101%	70%	130%	101%	80%	120%	99%	70%	130%
Total Lead	5034665		<0.020	<0.020	NA	< 0.020	99%	70%	130%	92%	80%	120%	93%	70%	130%
Total Manganese	5034665		0.149	0.140	6.2%	< 0.020	99%	70%	130%	110%	80%	120%	103%	70%	130%
Total Mercury	5043415		<0.0002	<0.0002	NA	< 0.0002	99%	70%	130%	98%	80%	120%	91%	70%	130%
Total Molybdenum	5034665		<0.020	<0.020	NA	< 0.020	101%	70%	130%	107%	80%	120%	106%	70%	130%
Total Nickel	5034665		<0.015	<0.015	NA	< 0.015	97%	70%	130%	103%	80%	120%	98%	70%	130%
Total Selenium	5034665		<0.002	<0.002	NA	< 0.002	100%	70%	130%	98%	80%	120%	97%	70%	130%
Total Silver	5034665		<0.010	<0.010	NA	< 0.010	98%	70%	130%	100%	80%	120%	98%	70%	130%
Total Tin	5034665		<0.025	<0.025	NA	< 0.025	108%	70%	130%	111%	80%	120%	110%	70%	130%
Total Titanium	5034665		0.031	0.030	NA	< 0.010	99%	70%	130%	108%	80%	120%	106%	70%	130%
Total Zinc	5034665		<0.020	0.127	NA	< 0.020	101%	70%	130%	105%	80%	120%	101%	70%	130%
Dissolved Metals in Water (mg/L)															
Dissolved Aluminum	5030681		0.005	0.004	NA	< 0.004	103%	70%	130%	108%	80%	120%	114%	70%	130%
Dissolved Antimony	5030681		<0.001	<0.001	NA	< 0.001	105%	70%	130%	106%	80%	120%	110%	70%	130%
Dissolved Arsenic	5030681		<0.001	<0.001	NA	< 0.001	95%	70%	130%	104%	80%	120%	109%	70%	130%
Dissolved Barium	5030681		0.114	0.113	0.9%	< 0.002	108%	70%	130%	109%	80%	120%	114%	70%	130%
Dissolved Beryllium	5030681		<0.0005	<0.0005	NA	< 0.0005	105%	70%	130%	114%	80%	120%	111%	70%	130%
Dissolved Bismuth	5030681		<0.002	<0.002	NA	< 0.002	93%	70%	130%	98%	80%	120%	96%	70%	130%
Dissolved Boron	5030681		0.115	0.117	1.7%	< 0.010	108%	70%	130%	119%	80%	120%	118%	70%	130%
Dissolved Cadmium	5030681		<0.0001	<0.0001	NA	< 0.0001	90%	70%	130%	88%	80%	120%	116%	70%	130%
Dissolved Chromium	5030681		<0.002	<0.002	NA	< 0.002	93%	70%	130%	95%	80%	120%	112%	70%	130%
Dissolved Cobalt	5030681		<0.0005	<0.0005	NA	< 0.0005	96%	70%	130%	94%	80%	120%	112%	70%	130%
Dissolved Copper	5030681		0.002	0.001	NA	< 0.001	94%	70%	130%	93%	80%	120%	103%	70%	130%

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Quality Assurance

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

Water Analysis (Continued)

RPT Date: Jul 21, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Iron	5030681		0.013	0.016	NA	< 0.010	97%	70%	130%	96%	80%	120%	113%	70%	130%
Dissolved Lead	5030681		<0.0005	<0.0005	NA	< 0.0005	97%	70%	130%	88%	80%	120%	87%	70%	130%
Dissolved Manganese	5030681		0.003	0.003	NA	< 0.002	96%	70%	130%	91%	80%	120%	108%	70%	130%
Dissolved Molybdenum	5030681		<0.002	<0.002	NA	< 0.002	94%	70%	130%	97%	80%	120%	112%	70%	130%
Dissolved Nickel	5030681		0.005	0.005	0.0%	< 0.001	94%	70%	130%	91%	80%	120%	108%	70%	130%
Dissolved Phosphorus	5030681		0.06	<0.05	NA	< 0.05	108%	70%	130%	117%	80%	120%	107%	70%	130%
Dissolved Selenium	5030681		0.004	0.005	NA	< 0.001	94%	70%	130%	98%	80%	120%	101%	70%	130%
Dissolved Silver	5030681		<0.0001	<0.0001	NA	< 0.0001	104%	70%	130%	103%	80%	120%	101%	70%	130%
Dissolved Silicon	5030681		5.11	5.29	3.5%	< 0.05	99%	70%	130%	102%	80%	120%	100%	70%	130%
Dissolved Strontium	5030681		0.547	0.535	2.2%	< 0.005	98%	70%	130%	96%	80%	120%	100%	70%	130%
Dissolved Thallium	5030681		<0.0003	<0.0003	NA	< 0.0003	98%	70%	130%	95%	80%	120%	95%	70%	130%
Dissolved Tin	5030681		<0.002	<0.002	NA	< 0.002	103%	70%	130%	105%	80%	120%	105%	70%	130%
Dissolved Titanium	5030681		<0.002	<0.002	NA	< 0.002	93%	70%	130%	99%	80%	120%	97%	70%	130%
Dissolved Uranium	5030681		0.0014	0.0015	NA	< 0.0005	98%	70%	130%	109%	80%	120%	117%	70%	130%
Dissolved Vanadium	5030681		<0.002	<0.002	NA	< 0.002	97%	70%	130%	96%	80%	120%	116%	70%	130%
Dissolved Zinc	5030681		0.007	0.006	NA	< 0.005	94%	70%	130%	100%	80%	120%	112%	70%	130%
Dissolved Zirconium	5030681		<0.004	<0.004	NA	< 0.004	94%	70%	130%	96%	80%	120%	110%	70%	130%

Comments: NA signifies Not Applicable.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.
Matrix spike: Spike level < native concentration. Matrix spike acceptance limits do not apply.

Certified By: Iris Verástegui

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Method Summary

CLIENT NAME: SIRATI & PARTNERS CONSULTANTS LTD

AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

SAMPLED BY:Hiva Elhami

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Fecal Coliform	MIC-93-7000	SM 9222 D	MF/INCUBATOR

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PROJECT: SP23-1177-00 | **ATTENTION TO: Hiva Elhami**

SAMPLING SITE:66 Thomas St., Mississauga | **SAMPLED BY:Hiva Elhami**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Oil and Grease (animal/vegetable) in water	VOL-91-5011	EPA SW-846 3510C & SM5520	BALANCE
Oil and Grease (mineral) in water	VOL-91-5011	EPA SW-846 3510C & SM 5520	BALANCE
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis-1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans-1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	CALCULATION
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
PCBs	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW846 3510C & 8082A	GC/ECD
Di-n-butyl phthalate	ORG-91-5114	modified from EPA SW-846 3510C & 8270E	GC/MS
Bis(2-Ethylhexyl)phthalate	ORG-91-5114	modified from EPA SW-846 3510C & 8270E	GC/MS
2,4,6-Tribromophenol	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS
2-Fluorophenol	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
phenol-d6 surrogate	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS

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PROJECT: SP23-1177-00 | **ATTENTION TO: Hiva Elhami**

SAMPLING SITE:66 Thomas St., Mississauga | **SAMPLED BY:Hiva Elhami**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Aluminum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Bismuth	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Iron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Phosphorus	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silicon	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Strontium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Tin	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Titanium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

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Method Summary

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AGAT WORK ORDER: 23T031855

PROJECT: SP23-1177-00

ATTENTION TO: Hiva Elhami

SAMPLING SITE:66 Thomas St., Mississauga

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Dissolved Zirconium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
CBOD (5)	INOR-93-6006	Modified from SM 5210 B	DO METER
Total Suspended Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Cyanide, SAD	INOR-93-6051	modified from MOECC E3015; SM 4500-CN- A, B, & C	SEGMENTED FLOW ANALYSIS
Phenols	INOR-93-6072	modified from SM 5530 D	LACHAT FIA
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Sirati and Partners
Contact: Hiva Elhami
Address: 160 Konrad Cres., Markham, ON L3R 9T9
Phone: 905 940 1582 Fax: 905 940 2440
Reports to be sent to:
1. Email: Hiva@Sirati.ca
2. Email: Behzad@Sirati.ca

Project Information:

Project: SP23-1177-00
Site Location: 66 Thomas St., Mississauga
Sampled By: Hiva Elhami
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address: Hiva@Sirati.ca
Email: Firuze@Sirati.ca

Regulatory Requirements:

(Please check all applicable boxes)

☐ Regulation 153/04
Table ____ *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Regulation 406
Table ____ *Indicate One*
☐ Regulation 558
☐ CCME

☑ Sewer Use ☐ Sanitary ☐ Storm
Region of Peel *Region*
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
____ *Indicate One*

Is this submission for a Record of Site Condition? ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Laboratory Use Only

Work Order #: 23T031855
Cooler Quantity: 2 large
Arrival Temperatures: 20.2 | 20.0 | 19.4 | 19.3 | 19.4 | 20.0
Custody Seal Intact: ☐ Yes ☐ No ☑ N/A
Notes: melted ice

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Sewer use By-law	Potentially Hazardous or High Concentration (Y/N)
1. BH/MW23-104	June 02, 2023	AM PM	2	GW	Metal and Mercury	Y			✓									✓	
2. BH/MW23-107	June 02, 2023	PM AM PM	2	GW	are Filtered	Y			✓									✓	
3.		AM PM																	
4.		AM PM																	
5.		AM PM																	
6.		AM PM																	
7.		AM PM																	
8.		AM PM																	
9.		AM PM																	
10.		AM PM																	
11.		AM PM																	

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Hiva Elhami	June 02, 2023	P.M.	T Pm	Jun 2	4:50pm
					Page ____ of ____
					N°: T - 144397

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

APPENDIX F

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

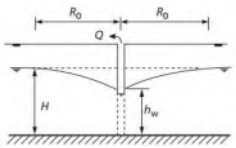
Short Term Dewatering Calculations for "95 Joymar Drive, Mississauga, ON."

Groundwater Dewatering Calculation (Q1)

Highest Water Level Elevation (m)	Target Water Level Elevation (m)
154.33	143.7

						Eq. 7.1	Eq. 7.2	Average	Zone of Influence from the Center of Excavation	Zone of Influence from the Edge of Excavation	No safety factor	safety factor of 2.0
	H (m)	**h (m)**	**k (m/s)**	**a (m)**	**b (m)**	re (m)	re (m)	re (m)	Ro (m)	R (m)	**Q1 (L/day)**	**Q1 (L/day)**
	11.63	1	9.30E-07	47.68	274.4	64.55	102.57	83.56	114	31	**108,093**	**216,186**

Fully penetrating well, unconfined aquifer, circular source at distance R_0 (Dupuit–Forcheimer equation)



$$Q = \frac{\pi k\left(H^2 - h_w^2\right)}{\ln\left[R_0 / r_e\right]} \qquad (7.5)$$

k = soil permeability;
H = initial water table level in aquifer;
h_w = lowered water level in equivalent well;
r_e = equivalent radius of well;
R_0 = radius of influence.

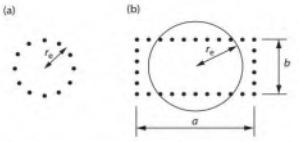


Figure 7.5 Equivalent radius of arrays of wells. (a) Circular system of radius r_e. (b) Rectangular system.

plan dimensions a by b, the equivalent radius can be estimated by assuming a well of equal perimeter

$$r_e = \frac{(a+b)}{\pi} \qquad (7.1)$$

or equal area

$$r_e = \sqrt{\frac{ab}{\pi}} \qquad (7.2)$$

2) Stormwater runoff as per 20 mm per day

Precipitation	Site Area	Q2
m/day	m2	L/day
0.02	13083.14	261662.8

Total Dewatering Volume Q = Q1 + Q2

Q= **477,849** L/day

Long Term Dewatering Calculations for; "95 Joymar Drive, Mississauga, Ontario".

Site Conditions:

Highest water level (mAMSL) =	154.33
Average sub-drainage level (mAMSL) =	144.7
height of wall drain or drawdown (m)=	9.63
length of wall drain (m) =	649.69
underground level area (m2) =	13083.14

A) Side flow/perimeter drainage

Basic Darcy Law method Q = K i A

Kh	hydraulic conductivity (horizontal)	9.30E-07	m/sec	
h	drawdown	9.63	m	
R	zone of influence	28	m	
	R=3000*h*SQRT(K)			
i=h/R	drainage gradient	0.35	m/m	
A	seepage area	6256.515	m2	
				With a Safety Factor of 1.5
Q = K i A	drainage volume	0.002011	m^3/sec	0.003016782 m^3/sec
	from perimeter side	173,767	L/day	260,650 L/day

APPENDIX G

SIRATI & PARTNERS

Geotechnical Hydrogeological & Environmental Solutions

Date	PET	P	P-PET	Soil Moisture	AET	PET-AET	Snow Storage	Surplus	ROtotal
Jan-58	11.6	25.7	2.4	152.4	11.6	0	11.1	0	13.3
Feb-58	10.3	25.4	-0.8	151.8	10.1	0.2	26.8	0	6.7
Mar-58	23.1	15.2	2.3	154.1	23.1	0	15.8	0	3.8
Apr-58	38.1	23.4	-7.9	148.1	36.2	1.8	7.9	0	2.8
May-58	54.8	30.5	-17.9	134.8	50.2	4.7	0	0	2.3
Jun-58	74	43.2	-32.9	112.6	63.2	10.7	0	0	2.6
Jul-58	99.8	64.3	-38.8	90.8	82.9	16.9	0	0	3.4
Aug-58	86.7	94.2	2.8	93.6	86.7	0	0	0	4.8
Sep-58	56.1	95	34.2	127.7	56.1	0	0	0	4.8
Oct-58	33.9	90	51.6	179.4	33.9	0	0	0	4.5
Nov-58	20.5	81.5	56.9	200	20.5	0	0	36.3	22.2
Dec-58	10.3	13.7	3.2	200	10.3	0	0	3.2	10.9
Jan-59	10.5	69	18.3	200	10.5	0	39.1	18.3	15.6
Feb-59	10.7	79.5	25.4	200	10.7	0	81.4	25.4	21.1
Mar-59	19.3	74.4	63.4	200	19.3	0	70.5	63.4	44.2
Apr-59	35.8	73.2	69	200	35.8	0	35.3	69	59
May-59	59.8	36.1	-7.9	192.1	59.8	0	17.6	0	29.5
Jun-59	90.2	11.9	-70.1	124.8	87.5	2.8	8.8	0	14.4
Jul-59	110.9	20.6	-82.6	73.3	79.9	31.1	0	0	7.9
Aug-59	109	45.7	-65.6	49.2	67.5	41.6	0	0	5.7
Sep-59	67.5	49.3	-20.7	44.1	51.9	15.6	0	0	4.2
Oct-59	34.5	85.1	46.3	90.4	34.5	0	0	0	5.1
Nov-59	17.9	52.1	31.7	122.1	17.9	0	0	0	3
Dec-59	13.9	70.4	41.8	163.9	13.9	0	12.1	0	2.8
Jan-60	12.2	65.3	30.3	194.2	12.2	0	33.3	0	1.8
Feb-60	13	55.6	30.5	200	13	0	43.9	24.7	13.9
Mar-60	15.9	29.7	9.6	200	15.9	0	47.5	9.6	11.7
Apr-60	34.9	76.7	61.7	200	34.9	0	23.7	61.7	40.2
May-60	57.3	134.1	82	200	57.3	0	11.9	82	65.9
Jun-60	83.2	74.2	-6.8	193.2	83.2	0	5.9	0	33.3
Jul-60	93.3	104.4	11.9	200	93.3	0	0	5	22.5
Aug-60	91.7	35.8	-57.7	142.3	91.7	0	0	0	10.4
Sep-60	65.9	4.1	-62	98.2	48	17.9	0	0	4.5
Oct-60	35.4	61	22.6	120.8	35.4	0	0	0	5.2
Nov-60	21.3	57.4	33.2	154	21.3	0	0	0	4
Dec-60	11	20.1	-0.1	154	11	0	8.7	0	1
Jan-61	10	33	2.9	156.9	10	0	28.3	0	0.7
Feb-61	13.7	80.3	49.7	200	13.7	0	42.8	6.5	5.8
Mar-61	21.6	69.6	54.3	200	21.6	0	33.7	54.3	31.7
Apr-61	32	97	77	200	32	0	16.9	77	57.8
May-61	53.8	72.4	23.4	200	53.8	0	8.4	23.4	41.8
Jun-61	77.7	128.5	52.8	200	77.7	0	0	52.8	51.9
Jul-61	101.7	77.2	-28.4	171.6	101.7	0	0	0	26.6
Aug-61	92.8	48.5	-46.7	131.5	86.2	6.6	0	0	13.8

Sep-61	70.9	42.7	-30.4	111.5	60.5	10.4	0	0	7.8
Oct-61	39.3	10.7	-29.2	95.3	26.4	12.9	0	0	3.4
Nov-61	20.4	55.1	32	127.2	20.4	0	0	0	4.2
Dec-61	13.3	40.9	17.3	144.5	13.3	0	9	0	2.1
Jan-62	10.5	51.3	12.8	157.3	10.5	0	36.2	0	1.2
Feb-62	10.9	74.9	25.3	182.6	10.9	0	73.6	0	1.4
Mar-62	21.9	10.2	17	199.6	21.9	0	44.5	0	0.5
Apr-62	35.8	32.3	17.2	200	35.8	0	22.3	16.8	10
May-62	66.9	28.2	-29	171	66.9	0	11.1	0	5.6
Jun-62	90.8	74.4	-14.5	158.6	88.7	2.1	5.6	0	5.8
Jul-62	99.2	91.9	-6.4	153.6	97.9	1.3	0	0	5.6
Aug-62	92.8	39.6	-55.2	111.2	80	12.8	0	0	2.5
Sep-62	53.7	159	97.4	200	53.7	0	0	8.6	12.5
Oct-62	36.5	68.3	28.4	200	36.5	0	0	28.4	19.9
Nov-62	18.9	64.3	42.2	200	18.9	0	0	42.2	32.5
Dec-62	11.9	63	28.3	200	11.9	0	21.1	28.3	30.5
Jan-63	9.7	16.3	-2.2	197.8	9.7	0	29.7	0	14.6
Feb-63	10	12.7	-3.3	194.5	10	0	35.5	0	7.3
Mar-63	22.3	67.8	51.4	200	22.3	0	26.8	46	29.4
Apr-63	35.5	54.4	29.5	200	35.5	0	13.4	29.5	30.8
May-63	54.2	69.6	18.6	200	54.2	0	6.7	18.6	26.8
Jun-63	89.1	19.3	-64.1	135.9	89.1	0	0	0	12.6
Jul-63	104.9	56.6	-51.1	101.2	88.5	16.4	0	0	8.7
Aug-63	81.5	59.2	-25.2	88.4	69	12.5	0	0	5.9
Sep-63	53	26.4	-27.9	76	37.4	15.6	0	0	2.8
Oct-63	41.9	15.5	-27.1	65.7	25	16.8	0	0	1.5
Nov-63	22.4	60.7	35.3	101	22.4	0	0	0	3.4
Dec-63	10.2	59	15.9	116.9	10.2	0	31.9	0	1.2
Jan-64	13	58.4	36	152.9	13	0	39.6	0	1.8
Feb-64	12.4	26.7	12.3	165.2	12.4	0	41	0	0.7
Mar-64	21.3	89.4	69.3	200	21.3	0	36.2	34.5	20.8
Apr-64	34	64.5	45.3	200	34	0	18.1	45.3	34.5
May-64	64.8	42.7	-15.2	184.8	64.8	0	9	0	17.8
Jun-64	81.2	32.5	-41.3	146.6	78.1	3.1	0	0	9.5
Jul-64	112.3	113.8	-4.2	143.6	111.2	1.1	0	0	9.6
Aug-64	78	145	59.7	200	78	0	0	3.3	10.8
Sep-64	57.5	10.7	-47.3	152.7	57.5	0	0	0	2.3
Oct-64	31.7	38.9	5.3	158	31.7	0	0	0	2.8
Nov-64	20.6	48	25	183	20.6	0	0	0	2.8
Dec-64	12.9	55.1	26.6	200	12.9	0	13.9	9.6	6.8
Jan-65	10.5	93.7	31.6	200	10.5	0	63.9	31.6	19.8
Feb-65	11.7	78.2	40	200	11.7	0	88.9	40	30.7
Mar-65	19.2	42.4	41.6	200	19.2	0	69.1	41.6	36.8
Apr-65	32	67.8	66.9	200	32	0	34.5	66.9	54.6
May-65	62.1	18.5	-27.2	172.8	62.1	0	17.3	0	26.5
Jun-65	82.2	42.7	-33	144.2	77.7	4.5	8.6	0	14.9
Jul-65	92.7	98.3	9.3	153.6	92.7	0	0	0	11.3

Aug-65	84	77	-10.9	145.2	81.5	2.5	0	0	7
Sep-65	57.5	63.2	2.6	147.8	57.5	0	0	0	4.8
Oct-65	31.7	97.8	61.2	200	31.7	0	0	9	10.2
Nov-65	19.5	71.1	48	200	19.5	0	0	48	30.2
Dec-65	15	53.3	36.1	200	15	0	0	36.1	33.6
Jan-66	10.5	61	15.4	200	10.5	0	34.1	15.4	24.4
Feb-66	12.7	44.7	22.4	200	12.7	0	42.5	22.4	24
Mar-66	22.5	57.9	46.4	200	22.5	0	29	46.4	37.1
Apr-66	34	34	12.8	200	34	0	14.5	12.8	25.4
May-66	51.9	48	1	200	51.9	0	7.3	1	14.8
Jun-66	90.8	54.6	-31.7	168.3	90.8	0	0	0	8.9
Jul-66	109.6	17.5	-92.9	90.1	94.9	14.7	0	0	4
Aug-66	91.1	59.9	-34.2	74.7	72.3	18.8	0	0	4.5
Sep-66	56.8	64	4	78.8	56.8	0	0	0	4
Oct-66	32.5	17.8	-15.5	72.6	23	9.4	0	0	1.3
Nov-66	20.4	129.8	102.9	175.5	20.4	0	0	0	6.7
Dec-66	12.9	89.2	51	200	12.9	0	22.5	26.6	16.2
Jan-67	13.9	56.9	36.1	200	13.9	0	27.5	36.1	26.6
Feb-67	10.5	57.9	13.2	200	10.5	0	60.9	13.2	19.7
Mar-67	19.8	25.4	21	200	19.8	0	44.6	21	20.9
Apr-67	34.9	66.8	50.9	200	34.9	0	22.3	50.9	38.8
May-67	49.4	60.7	19.5	200	49.4	0	11.1	19.5	30.5
Jun-67	94.8	143.8	47.4	200	94.8	0	5.6	47.4	44.6
Jul-67	99.2	73.7	-23.6	176.4	99.2	0	0	0	22.4
Aug-67	88.9	40.9	-50	132.3	83	5.9	0	0	11.4
Sep-67	57.5	62.2	1.6	133.9	57.5	0	0	0	7.8
Oct-67	34.3	56.4	19.3	153.2	34.3	0	0	0	5.2
Nov-67	17.7	47.2	27.3	180.4	17.7	0	0	0	3.4
Dec-67	14.1	74.9	46	200	14.1	0	12	26.4	16.6
Jan-68	10.2	100.6	30	200	10.2	0	70.9	30	23.4
Feb-68	10.6	35.6	12.3	200	10.6	0	83.2	12.3	17.6
Mar-68	22.3	48.5	54.8	200	22.3	0	52.6	54.8	38
Apr-68	38.5	26.7	13.1	200	38.5	0	26.3	13.1	25.9
May-68	54.2	95.8	50	200	54.2	0	13.1	50	42.1
Jun-68	78.2	74.7	-0.7	199.3	78.2	0	6.6	0	22.4
Jul-68	98.6	50.3	-44.2	155.2	98.5	0.2	0	0	11.8
Aug-68	86.7	163.6	68.7	200	86.7	0	0	23.9	24.8
Sep-68	65.4	79.5	10.1	200	65.4	0	0	10.1	17.3
Oct-68	37.2	43.4	4	200	37.2	0	0	4	10.9
Nov-68	19.9	83.3	59.2	200	19.9	0	0	59.2	38.1
Dec-68	12.2	88.1	45.9	200	12.2	0	27.6	45.9	42.4
Jan-69	11.9	55.6	27.1	200	11.9	0	42.9	27.1	34.8
Feb-69	13.4	15.5	8.9	200	13.4	0	35.6	8.9	21.6
Mar-69	20	30.2	16.3	200	20	0	28.4	16.3	19.8
Apr-69	36.9	70.6	44.4	200	36.9	0	14.2	44.4	35.1
May-69	58	71.6	17.1	200	58	0	7.1	17.1	27.9
Jun-69	77.7	44.5	-28.4	171.6	77.7	0	0	0	14.4

Jul-69	110.3	85.6	-28.9	146.8	106.1	4.1	0	0	10.4
Aug-69	99.4	27.7	-73.1	93.2	79.9	19.4	0	0	4.4
Sep-69	61.5	14.2	-48	70.8	35.9	25.6	0	0	2.2
Oct-69	34.5	58.2	20.8	91.6	34.5	0	0	0	3.7
Nov-69	20	72.4	48.8	140.3	20	0	0	0	4
Dec-69	11.6	57.9	23.7	164.1	11.6	0	21.1	0	1.7
Jan-70	9.4	28.4	-0.2	163.9	9.3	0	40	0	0.4
Feb-70	11.7	26.9	9.7	173.6	11.7	0	45	0	0.6
Mar-70	20.3	50.8	36.3	200	20.3	0	37.3	9.9	6.8
Apr-70	37.4	82.6	59.8	200	37.4	0	18.7	59.8	36.5
May-70	58.4	55.9	4.1	200	58.4	0	9.3	4.1	21
Jun-70	88	37.1	-43.4	156.6	88	0	0	0	11
Jul-70	104.9	86.4	-22.8	138.7	100	5	0	0	8.9
Aug-70	100	96.3	-8.5	132.8	97.4	2.6	0	0	7.1
Sep-70	60	51.6	-11	125.5	56.3	3.7	0	0	3.7
Oct-70	37.7	80	38.3	163.8	37.7	0	0	0	4.6
Nov-70	22.2	45.7	21.2	185	22.2	0	0	0	2.6
Dec-70	12.2	81.8	41.7	200	12.2	0	25.6	26.7	15.8
Jan-71	10.2	32.8	5.8	200	10.2	0	42	5.8	10.1
Feb-71	13.2	81.8	51.1	200	13.2	0	57.3	51.1	32.6
Mar-71	19.4	42.2	31.7	200	19.4	0	46.9	31.7	32.5
Apr-71	33.8	27.9	16.1	200	33.8	0	23.5	16.1	25
May-71	56.9	23.1	-23.2	176.8	56.9	0	11.7	0	12.9
Jun-71	88.6	59.2	-26.5	153.4	85.5	3.1	5.9	0	8.9
Jul-71	103	59.4	-40.7	122.2	93.5	9.5	0	0	5.9
Aug-71	87.8	90.2	-2.1	120.9	87	0.8	0	0	6
Sep-71	66.3	38.1	-30.1	102.7	54.4	11.9	0	0	2.6
Oct-71	41.9	52.6	8.1	110.8	41.9	0	0	0	3
Nov-71	19.5	41.4	19.8	130.6	19.5	0	0	0	2.3
Dec-71	14.6	95.5	64.9	195.6	14.6	0	12.2	0	3.9
Jan-72	11.9	46	17.5	200	11.9	0	27.8	13	7.6
Feb-72	11.6	76.7	30.8	200	11.6	0	60.7	30.8	20.1
Mar-72	18.4	95.8	66.9	200	18.4	0	68.2	66.9	45.7
Apr-72	31.2	59.2	59.2	200	31.2	0	34.1	59.2	53.9
May-72	60.6	48.8	2.9	200	60.6	0	17.1	2.9	29.4
Jun-72	75.8	87.1	15.4	200	75.8	0	8.5	15.4	25.5
Jul-72	103.6	65	-33.3	166.7	103.6	0	0	0	13.8
Aug-72	88.9	121.2	26.3	192.9	88.9	0	0	0	11.4
Sep-72	61.1	91.7	26	200	61.1	0	0	18.9	16.7
Oct-72	30.5	86.6	51.8	200	30.5	0	0	51.8	36.3
Nov-72	18.5	73.9	51.7	200	18.5	0	0	51.7	45.5
Dec-72	13.2	111.5	69.4	200	13.2	0	25.2	69.4	59.3
Jan-73	12.8	41.4	21.6	200	12.8	0	31.1	21.6	39.8
Feb-73	11.4	50.3	17.8	200	11.4	0	51.3	17.8	29.1
Mar-73	26	116.1	109.9	200	26	0	25.6	109.9	74.9
Apr-73	35.8	59.9	34	200	35.8	0	12.8	34	54.5
May-73	54.5	96	43.1	200	54.5	0	6.4	43.1	52.1

Jun-73	89.7	64.8	-21.7	178.3	89.7	0	0	0	26.9
Jul-73	110.3	35.1	-76.9	109.7	101.9	8.3	0	0	13.6
Aug-73	106.4	27.4	-80.3	65.7	70.1	36.3	0	0	7.3
Sep-73	61.1	59.4	-4.7	64.1	58	3.2	0	0	5.9
Oct-73	38.6	135.1	89.7	153.8	38.6	0	0	0	8.2
Nov-73	20.4	92.5	67.5	200	20.4	0	0	21.3	16
Dec-73	12.5	88.1	47.9	200	12.5	0	25.1	47.9	32.3
Jan-74	12.2	68.1	35.3	200	12.2	0	44.1	35.3	34.2
Feb-74	10.8	53.8	16.9	200	10.8	0	69.4	16.9	25.5
Mar-74	20.9	56.6	52	200	20.9	0	50.9	52	40.5
Apr-74	36.9	92.2	76.2	200	36.9	0	25.5	76.2	61.9
May-74	54.5	157.2	107.6	200	54.5	0	12.7	107.6	90.3
Jun-74	81.2	132.3	50.9	200	81.2	0	6.4	50.9	73.2
Jul-74	101.7	23.9	-72.6	127.4	101.7	0	0	0	34.5
Aug-74	97.5	62.5	-38.2	103.1	83.7	13.9	0	0	19.8
Sep-74	53.3	37.8	-17.4	94.1	44.9	8.4	0	0	10.2
Oct-74	30.3	26.2	-5.4	91.5	27.4	2.9	0	0	5.5
Nov-74	19.9	59.2	36.3	127.9	19.9	0	0	0	5
Dec-74	14.8	41.1	24.6	152.5	14.8	0	0	0	2.7
Jan-75	13.6	49.5	22.2	174.7	13.6	0	12.2	0	2.1
Feb-75	13.9	71.6	39.7	200	13.9	0	27.9	14.4	9.6
Mar-75	19.7	77	48.8	200	19.7	0	33.8	48.8	30.8
Apr-75	30.4	73.2	56	200	30.4	0	16.9	56	45.7
May-75	69.4	67.8	3.4	200	69.4	0	8.4	3.4	26.1
Jun-75	92.5	73.2	-14.5	185.5	92.5	0	0	0	15
Jul-75	108.2	64.8	-46.7	142.2	104.8	3.4	0	0	8.9
Aug-75	90.5	114.8	18.5	160.7	90.5	0	0	0	8.6
Sep-75	51.1	69.6	15	175.8	51.1	0	0	0	4.9
Oct-75	35.4	31.8	-5.2	171.2	34.8	0.6	0	0	2.3
Nov-75	23.1	48	22.5	193.7	23.1	0	0	0	2.8
Dec-75	11.9	92.2	46.4	200	11.9	0	31.5	40.1	22.7
Jan-76	9.4	61.7	9.3	200	9.4	0	73.9	9.3	15.4
Feb-76	14.4	48.5	45.4	200	14.4	0	61	45.4	31.7
Mar-76	21.3	107.2	92.1	200	21.3	0	50.6	92.1	65.3
Apr-76	38.8	71.1	54.1	200	38.8	0	25.3	54.1	61.1
May-76	54.5	89.4	43.1	200	54.5	0	12.7	43.1	54.8
Jun-76	93.6	90.9	-1	199	93.6	0	6.3	0	29.7
Jul-76	90.4	111.5	21.8	200	90.4	0	0	20.9	28.6
Aug-76	86.2	34.5	-53.4	146.6	86.2	0	0	0	13.2
Sep-76	52.4	97	39.8	186.4	52.4	0	0	0	10.6
Oct-76	28	42.7	12.6	199	28	0	0	0	5
Nov-76	15.9	11.9	-4.5	194.5	15.9	0	0	0	1.9
Dec-76	9.7	46	7.9	200	9.7	0	27.7	2.4	2.6
Jan-77	8	35.3	-8	192	8	0	63	0	1
Feb-77	11.6	25	13	200	11.6	0	63	4.9	3.4
Mar-77	23.4	76.8	74.2	200	23.4	0	38.7	74.2	42
Apr-77	35.5	80.1	59.9	200	35.5	0	19.3	59.9	53.2

May-77	64.4	17.5	-38.1	161.9	64.4	0	9.7	0	25.5
Jun-77	79.7	88.3	13.9	175.7	79.7	0	0	0	16.7
Jul-77	99.2	124.8	19.3	195.1	99.2	0	0	0	12.4
Aug-77	80.5	103.9	18.2	200	80.5	0	0	13.3	14.9
Sep-77	58.2	177.3	110.3	200	58.2	0	0	110.3	68.9
Oct-77	32.7	53.3	18	200	32.7	0	0	18	41.6
Nov-77	21.4	114.2	87.1	200	21.4	0	0	87.1	68.7
Dec-77	12.9	153.2	96.9	200	12.9	0	38.6	96.9	84.8
Jan-78	10.2	100	33.7	200	10.2	0	93.3	33.7	58.3
Feb-78	10.3	20	7.3	200	10.3	0	95.4	7.3	32.3
Mar-78	19	50.4	48.6	200	19	0	76.6	48.6	42
Apr-78	33.8	67.4	68.5	200	33.8	0	38.3	68.5	57.8
May-78	62.1	63.2	17.1	200	62.1	0	19.2	17.1	38.9
Jun-78	82.7	20.9	-53.3	146.7	82.7	0	9.6	0	18.9
Jul-78	103.6	56.5	-40.4	117.1	92.9	10.8	0	0	11.8
Aug-78	92.2	77.9	-18.2	106.4	84.7	7.6	0	0	8.4
Sep-78	60	142.4	75.3	181.7	60	0	0	0	9.4
Oct-78	34.1	38.1	2.1	183.8	34.1	0	0	0	3
Nov-78	20	58.9	35.9	200	20	0	0	19.7	13.4
Dec-78	13.9	57.5	31.6	200	13.9	0	9.9	31.6	23.1
Jan-79	10.7	103.1	37.4	200	10.7	0	63	37.4	31
Feb-79	9.1	31.5	-1.7	198.3	9.1	0	87	0	14.8
Mar-79	23.5	50.2	61.5	200	23.5	0	49.9	59.7	39.4
Apr-79	34.9	113.8	98.2	200	34.9	0	24.9	98.2	73.4
May-79	56.2	59.6	12.9	200	56.2	0	12.5	12.9	43.2
Jun-79	82.2	43.9	-34.3	165.7	82.2	0	6.2	0	22.3
Jul-79	110.3	79.4	-28.6	142	105.4	4.9	0	0	14
Aug-79	87.2	48.7	-41	112.9	75.4	11.9	0	0	7.5
Sep-79	59.3	39.6	-21.6	100.7	49.8	9.4	0	0	4.5
Oct-79	33.3	67.3	30.7	131.4	33.3	0	0	0	4.6
Nov-79	21	80	55	186.4	21	0	0	0	4.6
Dec-79	15	138.5	103.1	200	15	0	14.8	89.4	50.7
Jan-80	12.2	40.2	16.1	200	12.2	0	25.6	16.1	31.6
Feb-80	10.9	23.4	2.4	200	10.9	0	35.3	2.4	16.9
Mar-80	20	96.1	67.6	200	20	0	40.4	67.6	45.5
Apr-80	36	115.1	93.5	200	36	0	20.2	93.5	73.5
May-80	66.5	45.3	-13.3	186.7	66.5	0	10.1	0	36.2
Jun-80	74.4	82.3	8.8	195.5	74.4	0	5	0	21.1
Jul-80	105.6	82.4	-22.2	173.7	105.1	0.5	0	0	12.6
Aug-80	102.5	54.1	-51.1	129.3	95.8	6.7	0	0	6.9
Sep-80	59.3	41	-20.3	116.2	52.1	7.2	0	0	4.2
Oct-80	30.1	76.9	42.9	159.1	30.1	0	0	0	4.9
Nov-80	18	42.3	22.2	181.3	18	0	0	0	2.6
Dec-80	10.6	54.9	16.8	198.1	10.6	0	26.4	0	1.4
Jan-81	9.1	16	-3.8	194.3	9	0	37	0	0.3
Feb-81	14.2	83.4	57.3	200	14.2	0	46.4	51.6	28.5
Mar-81	21.7	17.4	11.8	200	21.7	0	29.5	11.8	19.6

Apr-81	36.4	48.2	24.1	200	36.4	0	14.7	24.1	23.9
May-81	58.7	72.3	17.3	200	58.7	0	7.4	17.3	23
Jun-81	82.7	53.8	-24.2	175.8	82.7	0	0	0	12.4
Jul-81	108.9	74.9	-37.7	142.6	104.3	4.6	0	0	8.6
Aug-81	94.6	143.3	41.6	184.2	94.6	0	0	0	9.6
Sep-81	56.8	99.9	38.2	200	56.8	0	0	22.3	17.4
Oct-81	29.8	112	76.6	200	29.8	0	0	76.6	50.1
Nov-81	20.1	47.9	25.4	200	20.1	0	0	25.4	37.3
Dec-81	13.6	47	22.6	200	13.6	0	9.2	22.6	30.4
Jan-82	9.1	77.7	7.7	200	9.1	0	69.6	7.7	18.8
Feb-82	11.4	28.8	14.8	200	11.4	0	71.6	14.8	17.1
Mar-82	20	66.6	57.5	200	20	0	58.2	57.5	39.4
Apr-82	32.4	42.7	37.3	200	32.4	0	29.1	37.3	39.3
May-82	63.2	58.4	6.8	200	63.2	0	14.6	6.8	24.9
Jun-82	75.4	143.4	68.1	200	75.4	0	7.3	68.1	52.2
Jul-82	104.3	32	-66.6	133.4	104.3	0	0	0	24.1
Aug-82	78	115.2	31.4	164.8	78	0	0	0	17
Sep-82	54	121.6	61.5	200	54	0	0	26.3	24.9
Oct-82	35.6	40.2	2.6	200	35.6	0	0	2.6	12.7
Nov-82	20.6	100.6	74.9	200	20.6	0	0	74.9	47.8
Dec-82	16.1	68.1	49	200	16.1	0	0	49	49
Jan-83	12.9	30.2	7.4	200	12.9	0	9	7.4	27.5
Feb-83	14.3	46	21.9	200	14.3	0	17.4	21.9	25.7
Mar-83	23.1	75.4	51.9	200	23.1	0	14.4	51.9	41.4
Apr-83	35.1	88.6	56.3	200	35.1	0	7.2	56.3	51.6
May-83	53.8	104.8	52.9	200	53.8	0	0	52.9	55.3
Jun-83	94.8	30.9	-65.5	134.5	94.8	0	0	0	26.6
Jul-83	113.7	15.2	-99.3	67.8	81.2	32.5	0	0	13.3
Aug-83	104.4	77.3	-31	57.3	83.9	20.5	0	0	10.1
Sep-83	63.8	38.7	-27.1	49.5	44.5	19.3	0	0	5.1
Oct-83	35.6	86.7	46.7	96.3	35.6	0	0	0	5.9
Nov-83	20.4	93.6	68.5	164.8	20.4	0	0	0	5.5
Dec-83	10.9	90.9	37.9	200	10.9	0	40.1	2.7	3.7
Jan-84	9.8	42.5	8.6	200	9.8	0	63.7	8.6	5.7
Feb-84	15.5	68.8	62.8	200	15.5	0	51.6	62.8	36.5
Mar-84	17.6	58.4	34.8	200	17.6	0	56	34.8	36
Apr-84	36.9	61.3	49.3	200	36.9	0	28	49.3	44.9
May-84	53.8	102.8	57.8	200	53.8	0	14	57.8	55
Jun-84	90.2	53.8	-32.1	167.9	90.2	0	7	0	27.6
Jul-84	95.6	50.8	-40.3	134	89.1	6.5	0	0	15
Aug-84	102.5	42.4	-62.2	92.3	82	20.5	0	0	8.4
Sep-84	55	75.9	17.1	109.4	55	0	0	0	6.9
Oct-84	37.9	22.6	-16.4	100.4	30.5	7.4	0	0	2.7
Nov-84	20.1	66.6	43.1	143.6	20.1	0	0	0	4.1
Dec-84	15.8	60.2	41.8	185.3	15.8	0	0	0	3
Jan-85	10.3	57.2	12.5	197.8	10.3	0	33.5	0	1.1
Feb-85	12.7	83.8	45.6	200	12.7	0	56.9	43.5	23.9

Mar-85	23.1	89.3	81.9	200	23.1	0	37.3	81.9	55.8
Apr-85	36.9	32.8	12.9	200	36.9	0	18.6	12.9	34
May-85	64	75	16.5	200	64	0	9.3	16.5	28.2
Jun-85	77.7	49	-21.9	178.1	77.7	0	0	0	14.7
Jul-85	98.6	50	-51.1	132.6	93	5.6	0	0	8.6
Aug-85	93.4	117.5	18.2	150.8	93.4	0	0	0	8.9
Sep-85	67.1	78.6	7.6	158.4	67.1	0	0	0	5.5
Oct-85	36.3	73.3	33.3	191.8	36.3	0	0	0	4.4
Nov-85	20.4	176.4	147.2	200	20.4	0	0	138.9	78.7
Dec-85	12.2	33.5	9.9	200	12.2	0	10.5	9.9	40.8
Jan-86	11.9	28.1	6.8	200	11.9	0	19.3	6.8	24
Feb-86	12.1	57.8	23.6	200	12.1	0	40	23.6	24.8
Mar-86	22.1	68.2	53.4	200	22.1	0	29.9	53.4	41.3
Apr-86	38.5	58.3	31.8	200	38.5	0	15	31.8	38
May-86	66.5	63.3	1.1	200	66.5	0	7.5	1.1	21.3
Jun-86	81.7	80.2	2	200	81.7	0	0	2	14.1
Jul-86	104.9	98.5	-11.3	188.7	104.9	0	0	0	9.9
Aug-86	87.2	164.7	69.2	200	87.2	0	0	57.9	39.7
Sep-86	54.7	215.6	150.1	200	54.7	0	0	150.1	101.6
Oct-86	34.7	55.7	18.2	200	34.7	0	0	18.2	57.3
Nov-86	18.9	51.1	29.6	200	18.9	0	0	29.6	44.6
Dec-86	14.8	96	66.1	200	14.8	0	11.2	66.1	57.9
Jan-87	13	54	26.9	200	13	0	23.7	26.9	42.1
Feb-87	12.8	17.1	3.5	200	12.8	0	24.1	3.5	22.4
Mar-87	24.7	43	27.2	200	24.7	0	13.1	27.2	26.7
Apr-87	41.8	47.3	9.7	200	41.8	0	6.5	9.7	19.5
May-87	67.7	73.3	8.5	200	67.7	0	0	8.5	16.5
Jun-87	100.2	63.5	-39.9	160.1	100.2	0	0	0	9.6
Jul-87	118	92.6	-30.1	136	112	6	0	0	7.8
Aug-87	91.7	67	-28	117	82.7	9	0	0	5
Sep-87	61.5	84.3	18.6	135.5	61.5	0	0	0	5
Oct-87	31.5	45.5	11.8	147.3	31.5	0	0	0	2.7
Nov-87	20.3	92.8	67.9	200	20.3	0	0	15.2	12.4
Dec-87	15.3	61.9	44	200	15.3	0	0	44	28.5
Jan-88	12.2	32	7.2	200	12.2	0	11.9	7.2	17.3
Feb-88	12.1	52	18.5	200	12.1	0	32.2	18.5	18.6
Mar-88	21.7	30.1	16.9	200	21.7	0	22.5	16.9	18.4
Apr-88	35.5	61.3	33.9	200	35.5	0	11.2	33.9	28.6
May-88	65.6	40	-22	178	65.6	0	5.6	0	14.8
Jun-88	92.5	13.9	-73.7	112.4	84.4	8.1	0	0	7.1
Jul-88	124.8	98.5	-31.2	94.9	111.1	13.7	0	0	8.1
Aug-88	103.1	55.2	-50.7	70.8	76.5	26.6	0	0	4.4
Sep-88	57.5	80.6	19.1	89.9	57.5	0	0	0	4.8
Oct-88	31.3	98	61.8	151.8	31.3	0	0	0	5.3
Nov-88	20.8	68.9	44.7	196.4	20.8	0	0	0	3.6
Dec-88	13	31.1	9.6	200	13	0	7.4	6.1	4.2
Jan-89	14	29.8	10.9	200	14	0	11.3	10.9	8

Feb-89	11.6	26.2	3.4	200	11.6	0	21.9	3.4	5.7
Mar-89	19.3	42.2	19.5	200	19.3	0	23.9	19.5	13.8
Apr-89	33.6	33.4	10.1	200	33.6	0	11.9	10.1	12.9
May-89	60.6	83.3	24.5	200	60.6	0	6	24.5	22
Jun-89	88.6	91	3.9	200	88.6	0	0	3.9	15.4
Jul-89	117.3	23.2	-95.3	104.7	117.3	0	0	0	6.6
Aug-89	90.5	38	-54.4	76.2	64.6	25.9	0	0	4.6
Sep-89	60	59	-4	74.7	57.6	2.4	0	0	4.3
Oct-89	34.7	89.4	50.2	124.9	34.7	0	0	0	5.1
Nov-89	18.2	87	64.4	189.3	18.2	0	0	0	4.7
Dec-89	8.9	34	-0.5	188.9	8.8	0	25.4	0	0.5
Jan-90	15.3	35.5	24	200	15.3	0	20.2	12.9	7.9
Feb-90	13.9	83.9	50.8	200	13.9	0	36.8	50.8	31.2
Mar-90	22.1	22.2	12.4	200	22.1	0	23.6	12.4	21.4
Apr-90	37.1	53.2	25.2	200	37.1	0	11.8	25.2	25.5
May-90	57.3	99	42.7	200	57.3	0	5.9	42.7	37.7
Jun-90	84.3	64.4	-17.2	182.8	84.3	0	0	0	19.6
Jul-90	104.3	64.1	-43.4	143.2	100.5	3.7	0	0	11.4
Aug-90	96.9	83.4	-17.7	130.5	91.9	5	0	0	8.3
Sep-90	57.5	41.1	-18.4	118.5	51.1	6.4	0	0	4.1
Oct-90	34.5	94.3	55.1	173.5	34.5	0	0	0	5.7
Nov-90	20.6	49.8	26.7	200	20.6	0	0	0.2	3.1
Dec-90	14.6	114.5	80.8	200	14.6	0	14.6	80.8	45.2
Jan-91	11.8	36.5	12.3	200	11.8	0	26.1	12.3	27.4
Feb-91	14.5	21	9.7	200	14.5	0	22.2	9.7	18.8
Mar-91	23.8	133.2	108.1	200	23.8	0	17.3	108.1	69.2
Apr-91	38.8	120	83.9	200	38.8	0	8.7	83.9	79.5
May-91	72	60.2	-6.2	193.8	72	0	0	0	39.8
Jun-91	101.5	46.4	-57.4	138.2	99.7	1.8	0	0	20.7
Jul-91	111.6	73	-42.3	109	98.6	13.1	0	0	12.8
Aug-91	98.8	75.2	-27.3	94.1	86.3	12.4	0	0	8.4
Sep-91	59.3	78.4	15.2	109.3	59.3	0	0	0	6.2
Oct-91	35	52.4	14.8	124.1	35	0	0	0	3.8
Nov-91	18.8	61.7	39.8	163.9	18.8	0	0	0	3.7
Dec-91	13.4	53.2	26.9	190.8	13.4	0	11.1	0	2.1
Jan-92	12.5	38.4	15	200	12.5	0	20.9	5.8	4.1
Feb-92	13.2	41	18.9	200	13.2	0	28.6	18.9	12.1
Mar-92	20	26.2	10.6	200	20	0	23.2	10.6	11.7
Apr-92	33.8	93	66.1	200	33.8	0	11.6	66.1	43.1
May-92	60.2	73.6	15.5	200	60.2	0	5.8	15.5	30.7
Jun-92	79.7	33.6	-42	158	79.7	0	0	0	15.2
Jul-92	92.1	99	1.9	160	92.1	0	0	0	11.7
Aug-92	81	129.6	42.1	200	81	0	0	2.1	10.9
Sep-92	55.7	101	40.2	200	55.7	0	0	40.2	27.4
Oct-92	31.3	67.6	32.9	200	31.3	0	0	32.9	31
Nov-92	19.3	115	90	200	19.3	0	0	90	64.6
Dec-92	14.4	67.4	40.8	200	14.4	0	9.7	40.8	52.4

Jan-93	12.9	96.2	53.9	200	12.9	0	36.4	53.9	54.6
Feb-93	10.7	41.6	10.1	200	10.7	0	56.6	10.1	31.6
Mar-93	19.2	37.4	27.2	200	19.2	0	46.4	27.2	30.3
Apr-93	34.9	76.8	61.3	200	34.9	0	23.2	61.3	49
May-93	58.4	50.2	0.9	200	58.4	0	11.6	0.9	25.6
Jun-93	82.2	121.5	39	200	82.2	0	5.8	39	37.1
Jul-93	108.2	96.2	-11	189	108.2	0	0	0	20.3
Aug-93	99.4	31	-69.9	122.9	95.5	3.9	0	0	9.3
Sep-93	52.7	73.2	16.9	139.8	52.7	0	0	0	7.5
Oct-93	30.9	80.3	45.4	185.2	30.9	0	0	0	6
Nov-93	19.5	73	49.8	200	19.5	0	0	35	22.1
Dec-93	13.3	27.2	13	200	13.3	0	0	13	16.7
Jan-94	8	59.5	-8	192	8	0	59.5	0	7.9
Feb-94	10.4	29.2	7.1	199.1	10.4	0	70.9	0	4.3
Mar-94	20.9	46.2	44	200	20.9	0	50.3	43.1	25.3
Apr-94	36.2	78.1	63.1	200	36.2	0	25.2	63.1	47.2
May-94	56.6	93.8	45.1	200	56.6	0	12.6	45.1	48.9
Jun-94	85.3	31.8	-48.8	151.2	85.3	0	6.3	0	23.7
Jul-94	108.2	42	-62	104.3	93.1	15.1	0	0	13.2
Aug-94	85.1	47.8	-39.7	83.6	66.1	19	0	0	7.9
Sep-94	59.3	60.6	-1.7	82.9	58.3	1	0	0	5.8
Oct-94	35.4	21.4	-15.1	76.6	26.6	8.8	0	0	2.5
Nov-94	22.1	82.8	56.6	133.2	22.1	0	0	0	4.8
Dec-94	13.3	35	13	146.2	13.3	0	7.5	0	1.5
	597	844	210	2245	572	24	192	234	272

DETAILED WATER BALANCE CALCULATIONS

95 Joymar Drive, Mississauga, Ontario

1 Climate Information

Precipitation	844	mm/a
Actual Evapotranspiration	572	mm/a
Water Surplus	272	mm/a

2 Infiltration Rates

Table 2 Approach - Infiltration factors

Topography: rolling land	0.2
Soil Type: Open sandy loam	0.4
Cover: Cultivated Land	0.1
Total	**0.7**

Infiltration (0.7 x 272)	190	mm/a
Run-off (272-150)	82	mm/a

Table 3 Approach - Typical Recharge Rates

Coarse Sand and Gravel	>250	mm/a
Fine to medium sand	200-250	mm/a
Silty sand to sandy silt	150-200	mm/a
Silt	125-150	mm/a
Clayey Silt	100- 125	mm/a
Clay	<100	mm/a

Site development area is underlain predominantly by sandy soil underlain by shale bedrock at the depth of 3.1 to 3.3 mbgs

Based on the above, the recharge rate is typically 150-250 mm/a

3 Pre-Development Property Statistics

	ha	m2
Paved Area	1.723024	17230.24
Roof Area	0.767014	7670.14
Landscape Area	0.287526	2,875.26
Total	**2.777564**	**27,775.64**

4 Post-Development Property Statistics

	ha	m2
Paved Area	0.413918	4,139.18
Roof Area	0.736625	7,366.25
Landscape Area	1.627021	16,270.21
Total Land Area	**2.777564**	**27,775.64**

5. Annual Pre-Development Water Balance

Land Use		Area (m^2)	Precipitation (m^3)	Evapotranspiration (m3)	Infiltration (m^3)	Run-off (m^3)
Impervious Areas	Paved Area	17230.24	14542	1454	0	13088
	Building/Roof Area	7670.14	6474	647	0	5826
Pervious Areas	Landscape Area	2,875	2,427	1,645	547	235
		27,776	**23,443**	**3,746**	**547**	**19,149**

Assuming no infiltration occurring in paved and roof areas, and 10% of precipitation to be evaporated from paved and roof areas.

6. Annual Post-Development Water Balance

Land Use		Area (m^2)	Precipitation (m^3)	Evapotranspiration (m3)	Infiltration (m^3)	Run-off (m^3)
Impervious Areas	Paved Area	4139	3,493	349	0	3,144
	Building/Roof Area	7,366	6,217	622	0	5,595
Pervious Areas	Landscape Area	16270	13,732	9,307	3,098	1,328
		27,776	**23,443**	**10,278**	**3,098**	**10,067**

Assuming no infiltration occurring in paved and roof areas, 10% of precipitation to be evaporated from paved and general roof areas.

7. Comparision of Pre- and Post -Development

	Precipitation (m^3)	Evapotranspiration (m3)	Infiltration (m^3)	Run-off (m^3)
Pre-Development	**23,443**	**3,746**	**547**	**19,149**
Post-Development	**23,443**	**10,278**	**3,098**	**10,067**
Change in Volume		**6,531**	**2550**	**-9,082**
Change in %			**466**	**-47**