



HAZELVIEW INVESTMENTS

HYDROLOGICAL REVIEW

**PROPOSED MIXED-USE DEVELOPMENT
1590 AND 1650 DUNDAS STREET EAST
MISSISSAUGA, ONTARIO**

REPORT

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CA20-149

Terrapex Environmental Ltd.
90 Scarsdale Road
Toronto, Ontario, M3B 2R7
Telephone: (416) 245-0011
Website: www.terrapex.com

DISTRIBUTION:

Hazelview Investments

PROJECT #CA20-149

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1.0 BACKGROUND

Terrapex Environmental Ltd. (**Terrapex**) was retained by Hazelview Investments (Hazelview) in support of the proposed mixed-use development located at 1590 and 1650 Dundas Street East in Mississauga, Ontario (referred to herein as the “Site”). This review herein is intended to address existing Site-specific subsurface conditions, in accordance with the Toronto Region Conservation Authority (TRCA) and the City of Mississauga.

A joint hydrogeological and geotechnical drilling investigation was carried out by Terrapex. The fieldwork for the joint drilling program consisted of advancing thirteen (13) boreholes in December of 2020 (BH100-series designations), and a further three (3) boreholes in August and September of 2021 (BH200-series designations). Specific to the hydrogeological work program, Terrapex installed nine wells in total for the two investigations. The remaining boreholes were drilled to support geotechnical assessments that were concurrently undertaken at the Site and are reported under separate cover. The hydrological network of monitoring wells at the Site were comprised of the newly installed monitoring wells.

This report presents the results of the initial investigation released in draft in February 2021, and the subsequent investigation released in draft in October 2021, and is intended for the guidance of the client and the design architects or engineers only. It is assumed that the design will be in accordance with the applicable building codes and standards.

2.0 LOCATION AND SETTING

2.1 LOCATION AND PROPERTY DIMENSIONS

The Site is located on the south side of Dundas Street East; approximately 600 m east of Dixie Road in Mississauga. For the purposes of this report Dundas Street east is oriented in an east-west direction and Mattawa Avenue is oriented in a north-south direction. The Site consists of two rectangular parcels of land separated by Mattawa Avenue. The parcel located on the west side of Mattawa Avenue (the West Parcel) has municipal address of 1590 Dundas Street East, measuring approximately 3.6 hectares (36360.2 m²) with approximate dimensions of 417 m by 87.2 m. The parcel located on the east side of Mattawa Avenue (the East Parcel) has municipal address of 1650 Dundas Street East, measuring approximately 3.7 hectares (37632 m²) with approximate dimensions of 392 m by 96 m. The general location is mapped on **Figure 1**.

2.2 PRESENT LAND USE

The northern sections of the two Parcels are developed with large 2-storey commercial buildings and a smaller restaurant building. The remaining area of the Site is paved with asphaltic concrete and used for parking. Land in the Site vicinity within approximately 500 m is urbanized with mixed usage (commercial/industrial/residential properties). **Figures 2 and 3** show the Site in its local context. The situation of the Site can be summarized by cardinal direction as follows:

- **South:** large buildings for commercial and industrial purposes further, and with Queensway East beyond;
- **East:** residential single detached dwellings, commercial properties further East;
- **North:** commercial properties along Dundas Street East, residential single detached dwellings further North; and,
- **West:** Little Etobicoke Creek, with commercial properties further West.

2.3 PROPOSED DEVELOPMENT

Based on available design drawings (Bousfields Inc, October 2020; SvN Architects, 18June2021; 27July2022), the proposed development consists of demolishing the existing buildings on Site and constructing new buildings. Based on the information provided, it is understood that Block A and Block C will be constructed over three levels of underground, Block E will be constructed over two levels of underground, Block F will be constructed over one level of underground, and Block G will be constructed over one level of underground. The southern approximately 100 m long section of the West Parcel will be developed as a park.

The following summarizes the understood parking foundation information:

Area	Proposed Levels of Underground	Anticipated Parking Foundation Slabs Depths	Anticipated Foundation Depth
Block A and Block C	P3	10 mbg / 105 masl	12 mbg / 101 masl
Block E	P2	6 mbg / 111.1 masl	7.5 mbg / 109.6 masl
Block F and Block G	P1	4 mbg / 113.1 masl	5.5 mbg / 111.6

The design concept plan for the parking garage structure is provided in **Appendix I** (SvN; *Site Plan – Typical U/G Parking Plan*, 27 July 2022).

2.4 SITE TOPOGRAPHY

General relief in the Site vicinity is characterized with a general slope grading down to the south from 120 masl at the northern property line to 115 masl at the southern portion of the Site (Google Earth, accessed February 2021). According to the investigation survey done on boreholes and monitoring wells on Site, the maximum elevation of the paved area is approximately 119.78 masl at MW111 (northeastern portion of the Site), and the lowest elevation is approximately 115.47 masl at BH104 (southwestern portion of the Site). The average ground elevation at the borehole locations is 117.1 masl.

2.5 DRAINAGE

No watercourses, ponds, or other surface water features are located on the Site. Little Etobicoke Creek (a tributary of Etobicoke Creek) is located 30 m west of the proposed development. It runs parallel with the western Site boundary and continues southerly direction discharging into Etobicoke Creek and ultimately to Lake Ontario. Within the Site itself, local roads and adjacent properties manage stormwater through catch basins and the piped municipal storm sewer system.

2.6 REGIONAL GEOLOGY

A review of available mapping indicates that the subject property is located in a region with sand plains (MRD228, 2019). These soils are characterized as clay to silt-textured till derived from glaciolacustrine deposits or shale (MRD128, 2017).

The bedrock beneath the described overburden is reported to be composed of shale, limestone, dolostone, and siltstone of the Georgian Bay Formation (MRD126, 2018). Bedrock was encountered at all borehole locations, with the exception of BH103.

Regional soil descriptions generally correspond with the subsurface soils encountered at the Site, as summarized in the borehole logs provided in **Appendix II**.

2.7 SENSITIVE ECOLOGICAL RECEIVERS

Designated sensitive ecological areas such as Areas of Natural and Scientific Interest (ANSI), Environmentally Significant Areas (ESA's), and wetland areas are absent within 500 m of the Site (MNR, 2021). Wooded areas are noted along Little Etobicoke Creek and at various locations within 500 m of the Site (MNR, 2020).

Little Etobicoke Creek, located 30m west of the proposed new development on Site is mapped as a Regulated Area by the Toronto and Region Conservation Authority (TRCA).

A search was conducted for the Site on the Source Water Protection Information Atlas ArcGIS platform (MECP, 2021). The eastern and western parcels at the Site are situated on a highly vulnerable aquifer with score of 6. In addition, the western parcel is situated in an intake protection zone with level 3. An event based spill is noted at the western parcel of a pipeline fuel/oil origin (SPIA).

2.8 GROUNDWATER SUPPLY WELLS

The surrounding vicinity is urbanized, and therefore provided with piped municipal supplies sourced from Lake Ontario. A water well record search was conducted within a 500 m radius of the Site (**Figure 2** and **Figure 3**). The search identified 155 water well records, and 10 on-Site well records for monitoring and test holes advanced in 2012, 2017, and 2018. Of the off-Site records on the database, one record (4905538) was for a domestic water-supply well, constructed in 1978 which is located 35m east of the eastern parcel at the Site (location is presented on **Figure 2**). The remaining well records were for monitoring observation wells, test holes or abandoned wells. The Site and surrounding areas are serviced with municipally supplied water, therefore the domestic supply well found in this search is unlikely to be used for domestic potable purposes.

A search was conducted in February 2021 for the Site and surrounding 500 m vicinity on the Permit to Take Water map (MECP, last updated January 2020) for any active permit to take water wells. The search identified no active permits to take water within the search radius.

3.0 FIELDWORK

3.1 DRILLING INVESTIGATION AND MONITORING WELL CONSTRUCTION

A joint hydrogeological and geotechnical drilling investigation was carried out by Terrapex between December 15 and 23, 2020. The fieldwork for this project was carried out under the supervision of an experienced Terrapex technician who laid out the positions of the boreholes in the field; arranged locates of buried services; effected the drilling, sampling and *in situ* testing; observed groundwater conditions; and prepared field borehole log sheets.

The fieldwork for the joint drilling program consisted of advancing thirteen (13) boreholes, given 100-series borehole/monitoring well designations. Standard Penetration Testing (SPT N-values) and sampling were carried out at regular depth intervals in the boreholes using conventional nominal 35 mm internal diameter split spoon sampling equipment. Bedrock was encountered on Site and subsequently cored using HQ coring equipment.

The fieldwork for the hydrological investigation consisted of installing monitoring wells at six (6) of the borehole locations. The hydrological network of monitoring well at the site are comprised of monitoring wells MW101, MW102, MW107 constructed on the west parcel, and monitoring wells MW111, MW112, and MW113 constructed on the east parcel at the Site. These were installed as part of drilling operations carried out in December of 2020. An additional three (3) monitoring wells were later constructed in Block A and Block C, as part of drilling operations carried out in August and September of 2021. The remaining boreholes at the Site were advanced as part of the geotechnical investigation.

Borehole logs, including the construction details of the groundwater monitoring wells (GWMWs) are provided in **Appendix II**. It should be noted that the boundaries of soil types indicated on the borehole logs are inferred from non-continuous soil sampling and observations made during drilling. These boundaries are intended to reflect transition zones for the purpose of geotechnical design, and therefore, should not be construed as exact planes of geological change. Further, conditions will vary between and beyond the boreholes.

3.2 PREVIOUS INVESTIGATIONS AT THE SITE

Pinchin conducted a Phase II Environmental Site Assessment at the Site in 2018. In a report titled *"Phase II Environmental Site Assessment, 0 Loreland Avenue, 1680 Mattawa Avenue, 1580, 1590, 1650 Dundas Street East, Mississauga, Ontario"* six (6) boreholes were advanced to depths ranging between 5 to 8.5 mbg at the southern portion of the Site. Monitoring wells were installed at three of the borehole locations but they were not used in this hydrogeological investigation.

3.3 SURVEYING

Terrapex established the ground surface elevations, and UTM coordinates for the wells in the hydrological network and for the 100 series wells installed by Terrapex, using a Topcon Hiper V GNSS Receiver. A summary of well construction specifications and screening details are provided in **Table 1**. The locations of the GWMWs and boreholes are provided in **Figure 4**.

4.0 SITE CHARACTERIZATION

4.1 WATER LEVEL MONITORING

Groundwater piezometric head measurements were measured manually for wells within the hydrological well network (MW101, MW102, MW107, MW111, MW112, and MW113) over the course of three bi-weekly monitoring events from December 22, 2020, to January 21, 2021. An additional monitoring event was completed on March 30, 2021, to observe anticipated seasonal high-water levels in the spring. Further monitoring was carried out at locations MW201 through MW203 over the course of three bi-weekly monitoring events from September 14, 2021, through October 1, 2021. The recorded water levels reflect the groundwater conditions on the dates they were measured and are provided in **Table 2**.

As shown in **Table 2**, monitoring wells MW101, MW102, MW111, and MW113 were screened in the overburden material. Groundwater levels for wells screened in overburden materials (MW101, MW102, and MW113) ranged between 3.01 mbg and 6.06 mbg; groundwater elevations in these wells ranged between 111.21 masl and 112.88 masl. MW111, also screened in overburden, was found dry during all monitored events.

As shown in **Table 2**, monitoring wells MW107, MW112, MW201, MW202, and MW203 were screened in shale bedrock. Groundwater levels for wells screened in shale bedrock ranged between 1.19 mbg and 5.30 mbg; groundwater elevations in these wells ranged between 112.00 masl to 114.80 masl.

It should be noted that groundwater levels are subject to seasonal fluctuations. A higher groundwater level condition will likely develop in the spring and following significant rainfall events.

4.2 SUBSURFACE SOIL CONDITIONS

The subsurface stratigraphy is generally comprised of surficial fill material underlain by sandy silt till and clayey silt till, a shale/till complex, and then Shale bedrock. Shale bedrock was encountered at all the borehole locations with the exception of borehole BH103, and was found to be between 3 and 7.5 mbgs

The soil stratigraphy encountered during drilling and groundwater monitoring well construction operations is summarized in the Geotechnical Report, under separate cover (Terrapex, 2021). The encountered conditions as identified in the geotechnical report are summarized in **Table 3**.

The above stratigraphic description is a generalization. Variations could occur in thickness, depth, presence and texture of units. Constructors and dewatering contractors should review the nearest borehole records for specific locations, and if necessary, drill to confirm conditions if critical to their activities.

4.3 HYDRAULIC TESTING

To estimate the hydraulic conductivity (K) of the soil materials and bedrock adjacent to the screened intervals at the tested monitoring wells, single well response tests were carried out at locations MW101, MW102, MW111, and MW112 on January 8, and 21, 2021. The tests were

carried out by rapidly removing (at locations MW102, MW112, and MW201) or adding (at locations MW101 and MW111) a volume of water from the well and monitoring the subsequent water level recovery to previous conditions. Automated water level loggers (Solinst Levelloggers) were used to collect the recharging water levels during the response tests for all test locations. The Bouwer and Rice (1976) method was applied to falling/rising head test data, using the unconfined solution. The data were analysed using the AQTESOLV™ (v. 4.50) modelling program. *In-situ* testing was comprised of assessing hydraulic conductivities in the overburden materials at three locations, and in bedrock at one location.

The resultant hydraulic conductivities are summarized in **Table 4**. Estimated hydraulic conductivities for wells screened in overburden materials ranged from 4.87×10^{-11} m/s to 2.71×10^{-8} m/s. Estimated hydraulic conductivities for wells screened in bedrock materials ranged from 1.04×10^{-8} m/s to 4.06×10^{-8} m/s. The analytical hydraulic conductivity reports and grain size analysis are provided in **Appendix IV**.

A theoretical hydraulic conductivity was estimated based on the results of the grain size analyses presented in **Appendix IV**. The coefficient of permeability (k value) of the till units is calculated (using Hazen's Formula) to be 1.9×10^{-7} m/s. This higher hydraulic conductivity estimated by the Hazen method, is interpreted to be due to the lack of consideration for soil compaction in Hazen methods. Overall, these hydraulic conductivity values are consistent with the expected hydraulic conductivities of the encountered soils, and are indicative of relatively impermeable conditions (Bear, 1972; Freeze and Cherry, 1979).

The geometric mean of the *in-situ* hydraulic conductivity estimates for the overburden was calculated to be 1.7×10^{-9} . Whereas the geometric mean of the *in-situ* hydraulic conductivity estimates for the bedrock material was calculated to be 2.04×10^{-8} m/s. To provide the most conservative estimate, the faster of the two geometric means (2.04×10^{-8} m/s) has been used for the purposes of calculating the dewatering estimates in **Section 4.5**.

4.4 INTERPRETED GROUNDWATER FLOW DIRECTION AND VELOCITY

Horizontal Hydraulic Gradient and Flow Direction

Groundwater flow directions and magnitudes were estimated using manual piezometric head measurements for wells screened in overburden, measured on March 30, 2020. The piezometric elevations at well locations MW101, MW102, and MW113 show that there is a horizontal gradient of approximately 2×10^{-3} (no units), flowing in a heading of 271.8 degrees (~SW) at a velocity of up to 4.6×10^{-4} cm/day.

Groundwater flow directions and magnitudes were estimated using manual piezometric head measurements for wells screened in bedrock materials measured on September 16, 2021. The piezometric elevations at well locations MW201, MW202, and MW203 show that there is a horizontal gradient of approximately 4.7×10^{-3} (no units), flowing in a heading of 279 degrees (~SW) at a velocity of up to 1.6×10^{-3} cm/day.

Overall, groundwater appears to be flowing from the southeast toward the southwest, both in overburden and bedrock. In fact, based on the similarities in groundwater elevations in both

bedrock and overburden, there is a presumed hydraulic connection between the two. As indicated above, flow appears to be slightly faster in the bedrock than in the overburden. It should be noted, that whereas flow direction in overburden is controlled by effective porosity, local variations in topography and soil type --- flow within bedrock is control by general fracture patterns.

Vertical Hydraulic Gradient and Flow Direction

The highest measured groundwater levels in the overburden at locations MW101 and MW102 reached an elevation of 112.81 masl, whereas the highest measured groundwater levels in the bedrock at locations MW107 and MW112 reached an elevation of 114.35 masl. These measurements indicate that groundwater in the bedrock was approximately 1.5 metres higher than in local overburden materials. As such, groundwater trends appear indicative of an upward vertical gradient, demonstrating that the Site does not function as a groundwater recharge area, and that the neighbouring water channel may have groundwater base flow associated with it.

5.0 DEWATERING ESTIMATES

5.1 TEMPORARY DEWATERING ESTIMATES

The Ministry of the Environment, Conservation and Parks (MECP) requires a Permit to Take Water (PTTW) or an Environmental Activity and Sector Registry (EASR) for groundwater takings exceeding 50,000 litres per day (L/day). For the purpose of construction, a PTTW is required for dewatering extraction rates that exceed 400,000 L/day. An EASR is required for a rate between 50,000 and 400,000 L/day. Long term water takings in excess of 50,000 L/day are regulated by the Ministry of Environment, Conservation and Parks (MECP).

Based on the geotechnical report, the shoring design system “may be comprised of soldier piles and timber lagging” (Terrapex, 2021). For the purposes of our hydrogeological investigation, dewatering estimates were predicated based on soldier pile and lagging construction of excavation walls.

Block A and Block C (~15,000 m²)

Provided drawings (SvN, 27 July 2022) indicate that the proposed underground footprint of the P3 Block A and Block C area is approximately 15,000 m². Based on an excavation depth of approximately 12 m, dewatering operations will advance through overburden materials and bedrock materials for an overall drawdown of approximately 8.5 metres. The highest measured groundwater levels in the overburden at locations MW101 and MW102 reached an elevation of 112.81 masl, whereas the highest measured groundwater levels in the bedrock at locations MW201, MW202, and MW203 was reported to be 114.81 masl.

Using the conservative hydraulic conductivity of 2.04×10^{-8} m/s for both overburden and bedrock, calculations predict the quantity of groundwater seepage into the proposed Block A and Block C footprint to be approximately **115,575 L/day**. In order to account for a relatively large precipitation event of 25 mm entering the excavation below buildings during construction, an additional **375,000 L/day** is expected. Such rain events are anticipated to recur four to five times per year. The combined anticipated amount to be managed from excavated area below the buildings (in the new parking structure) is approximately **490,572 L/day**. Prior to amendments to the Permit to Take Water (PTTW) process, made effective on July 1, 2021, this volume would require a Category 3 PTTW. At this time, however, this estimated volume would require the registration of an EASR.

Block E (~11,200 m²)

The hydraulic conductivities derived from neighbouring soils were used to estimate a worst-case scenario for temporary construction dewatering rates, using an excavation size approximately equivalent to 140 m x 80 m, and approximate foundation depth of 109.6 masl (two levels of underground). The following summarized the assumptions made as part of the dewatering calculations:

Excavation Footprint:

140 m x 80 m

Target dewatering elevation:	(109.6 – 1) = 108.6 masl (two levels of underground)
Hydraulic conductivity:	2.04×10^{-8} m/s
Highest measured groundwater elevation:	112.88 masl
Required Drawdown:	(112.88 – 108.6) = 4.28 metres

Table A summarizes the anticipated steady state dewatering rate estimates.

Block F and Block G (~20,000 m²)

The hydraulic conductivities derived from neighbouring soils were used to estimate a worst-case scenario for temporary construction dewatering rates, using an excavation size approximately equivalent to 250 m x 80 m, and approximate foundation depth of 109.6 masl (one level of underground). The following summarized the assumptions made as part of the dewatering calculations:

Excavation Footprint:	140 m x 80 m
Target dewatering elevation:	(111.6 – 1) = 110.6 masl (one level of underground)
Hydraulic conductivity:	2.04×10^{-8} m/s
Highest measured groundwater elevation:	112.88 masl
Required Drawdown:	(112.88 – 110.6) = 2.28 metres

Table A summarizes the anticipated steady state dewatering rate estimates.

Table A. Summary of Estimated Dewatering Volumes for Concept Development

		(A)	(B)	(C)		
Excavation Concept	Dimensions ¹	Estimated Dewatering Volume	Incident Precipitation ²	Total Dewatering Volume (A+B)	Design Dewatering Volume (A x 2) + B	Zone of Influence (ZOI)
		(L/day)	(L/day)	(L/day)	(L/day)	(m radius)
Block A and Block C	Three levels of underground (~15,000 m ²)	54,020	376,875	430,900	484,920	5
Block E	Two levels of underground (~11,200 m ²)	40,910	280,000	320,910	361,820	2
Block F and Block G	One level of underground (~20,000 m ²)	77,480	500,000	577,480	654,960	1

¹ SvN Architects, 18June2021; 27July2022

² Based on a 100-year storm, with a precipitation of 25 mm

Based on the worst-case assumptions provided above and applying a Factor of Safety of 2.0 to estimated dewatering volumes, steady state temporary dewatering volumes are estimated to range from 48,492 L/day to 654,960 L/day. As shown in **Table A** and **Table 8**, much of the anticipated volume is due to precipitation from a 100-year storm, having a precipitation of 25mm. Further to this, permitting does not take these precipitation volumes into consideration, as of July 1, 2021.

Groundwater in bedrock

As indicated above, groundwater flow within bedrock follows continuous fracture paths and the availability of water, as opposed to soil effective porosity, which is often attributed to isometric flow distribution. As such, groundwater flow within bedrock can be highly variable within a short distance. To compensate for this uncertainty, the dewatering volumes for P3 - Block A and Block C are given a Factor of Safety of 2.0.

RQD is an estimate of fracturing within the rock, and lower values indicate a greater amount of fracturing. A review of subsurface bedrock conditions reported in the borehole logs indicates that Rock Quality Designation (RQD) values reported at locations MW201 and MW203 generally increase with depth from 68% to 100%. RQD values reported for bedrock materials at location MW202 are not as competent and range from 24% to 89%. Screened bedrock elevations used in the estimate of hydraulic conductivity above captured zones of RQD ranging from 40% to 100%.

Based on this review, the horizons having RQDs of 24% through 40% were not available for hydraulic testing, and it is possible that there are horizons within the bedrock that may conduct greater and faster volumes of groundwater.

It is further noted that the groundwater encountered in the bedrock elevations appears pressurized. Groundwater within the bedrock had a piezometric level approximately 1.5 m to 1.8 m above the bedrock surface on September 14, 2021.

5.2 DEWATERING ZONE OF INFLUENCE (ZOI)

The radius of influence is the distance range beyond which the drawdown on groundwater caused by dewatering is not expected to be detectable. The radius of influence is commonly estimated using the formula of Sichart and Kryieleis (Powers et al, 2007).

As shown in **Table A**, the maximum radius of influence predicted ranges is 5 metres from the perimeter of the proposed dewatering operations.

No off-site ecologically sensitive receivers, private water supply wells, or buildings exist within the radius of influence that could be negatively affected by dewatering.

5.3 PERMANENT DEWATERING ESTIMATES

The following permanent dewatering estimates are based on conservative assumptions that predict relatively high rates that are less likely but remain possible. The geometric mean of the hydraulic conductivities (2.04×10^{-8} m/s) was used, whereas lower hydraulic conductivity conditions are possible at the Site.

Table B. Summary of Steady State Foundation Drainage Rate Estimates

Parking Structure Area	Post-Construction Drainage Rate	Post-Construction Drainage Rate (FOS Applied)	Anticipated Discharge Permitting Requirements for Permanent Foundation Drainage
	(L/d)	(L/d)	
Block A and Block C	54,020	~108,040	PTTW (assuming no waterproofing)
Block E	40,910	~81,820	PTTW (assuming no waterproofing)
Block F and Block G	77,480	~154,960	PTTW (assuming no waterproofing)

No Permitting, < 50,000 L/day

As shown in **Table B** and **Table 9**, based on the worst-case assumptions provided above, using a Factor of Safety of 2.0 to estimated dewatering volumes, steady state permanent dewatering

volumes are estimated to range from 81,820 L/day to 154,960 L/day.

5.4 ANTICIPATED PERMITTING

Water takings in excess of 50,000 L/day are regulated by the Ministry of Environment, Conservation and Parks (MECP). Certain construction dewatering activities up to 400,000 L/day may qualify for a self-registration process under the Environmental Activity Sector Registry (“EASR”). A Category 3 PTTW is required where the proposed water taking is greater than 400,000 L/day.

The volumes summarized in **Table A** and **Table 8** indicate that a Permit to Take Water (PTTW) will likely not be required for the concept excavation dimensions, and that an Environmental Activity and Sector Registry (EASR) will be sufficient for temporary dewatering needs.

Approval will have to be obtained from the City of Mississauga and the Regional Municipality of Peel before discharging to municipal storm sewer, and from the Regional Municipality of Peel before discharging to the sanitary sewer.

6.0 ANALYTICAL HYDROCHEMICAL ANALYSES

Analytical laboratory investigations were carried out to characterize the hydrochemical conditions of the groundwater at the Site for the purposes of temporary dewatering and long-term foundation drainage operations. One representative non-filtered groundwater sample was collected from each of the parcels on site. Samples were collected from MW107 and MW112 on January 21, 2020, using a Spectra Field-Pro Peristaltic Pump, and were sent to AGAT Laboratories (AGAT) for testing. AGAT is certified by the Standards Council of Canada (SCC) and the Canadian Association for Laboratory Accreditation (CALA). AGAT completed analysis for the suite of parameters specified under the City of Mississauga by-law 259-05 for discharge to storm sewer and to the Regional Municipality of Peel by-law number 53-2010 for discharge to sanitary sewer and storm sewer.

Table C below summarizes the tested parameters identified as not meeting the municipal sewer use by-laws. This summary table is also included in the **Tables Section** as **Table 10**. Laboratory analysis for the remaining tested parameters (including those parameters which met the standards) are presented in **Table 11**. The laboratory certificates of analysis are provided in **Appendix V**.

Table C: Summary of Tested Parameters Identified as Not Meeting Applicable Sanitary and Storm Sewer By-Law Criteria

Parameter	Units	Sanitary Sewers By-law Criteria ¹	Storm Sewers By-law Criteria ²	Storm Sewers By-law Criteria ³	MW107 21-Jan-21	MW112 21-Jan-21
Total Suspended Solids (TSS)	mg/L	350	15	15	<10	17
Aluminum	mg/L	50	-	1	0.031	1.220
Manganese (Mn)	mg/L	5	0.05	0.05	0.238	0.040
Total Kjeldahl Nitrogen (TKN)	mg/L	100	1	1	3.09	2.17

¹ Regional Municipality of Peel Sanitary Sewer Discharge, By-law 53-2010

² Regional Municipality of Peel Storm Sewer Discharge, By-law 53-2010

³ City of Mississauga Storm Sewer Discharge, By-law 259-05

As summarized in **Table C** above, the groundwater within both parcels meets the Sanitary discharge criteria. The sample (MW107) obtained from the western parcel exceeds the Peel and Mississauga storm sewer discharge criteria for manganese and total kjeldahl nitrogen (TKN). The sample (MW112) obtained from the eastern parcel exceeds the Peel and Mississauga storm sewer discharge criteria for total suspended solids (TSS), aluminium, and TKN.

Laboratory testing of the same locations using filtration proved effective in treating for all parameters at both parcels on Site, with the exception of manganese in sample MW107 (western parcel) which demonstrated that manganese is in the dissolved form in groundwater, and will require chemical treatment and/or measures deemed appropriate by dewatering contractors/water treatment suppliers in order to achieve storm sewer guidelines.

7.0 WATER BALANCE

Typically, incident precipitation infiltrates through a pervious soil surface, then moves down through the unsaturated zone and then recharges the shallow groundwater. In turn, this shallow groundwater moves towards the lake, a watercourse to contribute to baseflow or to replenish aquifers, if present. Impervious surfaces of buildings or paving block infiltration and divert precipitation to become runoff that is then directed to storm sewers.

The pre-construction land use is occupied by asphalt-paved parking areas that are impervious, which block infiltration. Block B appears to be partially landscaped.

The post-construction land usage will mostly consist of impervious features that include the new buildings and the underlying parking garage structure. Block B will observe an increase in pervious area. Thus, the post-development lands may observe an overall increase in pervious area.

Low impact development (LID) measures to promote infiltration are challenging since the impervious garage footprint will span much of the site.

8.0 SUMMARY AND DISCUSSION

The following summarizes the information above, obtained as part of the investigation described above.

- The subsurface stratigraphy is generally comprised of surficial fill material underlain by sandy silt till and clayey silt till, a shale/till complex, and then Shale bedrock. Shale bedrock was encountered at all the borehole locations with the exception of borehole BH103.
- Groundwater levels were measured between December 2020 and January 2021 at BH100-series locations. Groundwater levels for wells screened in shale bedrock (MW107 and MW112) ranged between 2.72 mbg and 3.79 mbg, groundwater elevations in these wells ranged between 112.00 masl to 114.35 masl. Groundwater levels for wells screened in overburden materials (MW101, MW102, and MW113) ranged between 3.01 mbg and 6.06 mbg, groundwater elevations in these wells ranged between 111.21 masl and 112.88 masl. MW111 was found dry during all monitored events.
- Groundwater monitoring wells BH201 through BH203 (P3-Block A and Block C) were screened in the underlying bedrock. Groundwater levels at these locations were measured between September and October at BH200-series locations, and ranged between 5.3 mbg to 1.19 mbg, equivalent to approximately 114.10 masl to 114.81 masl.
- Groundwater measured at wells screened within the overburden are interpreted to have a horizontal gradient of approximately 2×10^{-3} (no units), flowing in a heading of 271.8 degrees (~SW) at a velocity of up to 4.6×10^{-4} cm/day.
- Groundwater measured at wells screened within the underlying bedrock is interpreted to have a horizontal gradient of approximately 4.7×10^{-3} (no units), flowing in a heading of 279 degrees (~SW) at a velocity of up to 1.6×10^{-3} cm/day.
- Groundwater within the bedrock may be hydraulically connected to the groundwater within the overburden soils through fractures, and is interpreted to have an upward vertical gradient, demonstrating that the neighbouring water channel may have groundwater base flow contributions.
- Temporary construction dewatering calculations are estimated to range between approximately 48,492 L/day to 654,960 L/day, depending on the Block size calculated. A PTTW is not required for this estimated range, because these values include incident precipitation, which is no longer a requirement of permitting (July 1, 2021).

EASRs, however, should be filed for groundwater discharge inclusive of incident stormwater. The cumulative amount pumped from the excavations should be monitored daily during construction to confirm that the requested pumping rate limit stated in the EASR is not exceeded, and to confirm the calculated groundwater seepage rate.

- Preliminary post-construction permanent foundation dewatering effluent volumes are estimated to range between approximately 81,820 L/day to 154,960 L/day, depending on

the Block size calculated. A PTTW is required for permanent dewatering volumes exceeding 50,000 L/day.

- Based on the hydrochemical analyses carried out, groundwater meets the criteria for discharge without treatment to the sanitary sewers.

The western parcel will require filtration and chemical treatment in order to achieve storm sewer by-law limits.

The groundwater at the eastern parcel achieves storm sewer by-law limits with filtration.

Approval will have to be obtained from the City of Mississauga and the Regional Municipality of Peel before discharging to municipal storm sewer, and from the Regional Municipality of Peel before discharging to the sanitary sewer.

9.0 CLOSURE

This report has been completed in accordance with the terms of reference for this project as agreed upon by Hazelview Investments (the Client) and Terrapex Environmental Ltd. (Terrapex) and generally accepted hydrogeological consulting practices in this area.

The reported information is believed to provide a reasonable representation of the general hydrogeological conditions at the site; however, studies of this nature have inherent limitations. The data were collected at specific locations and conditions may vary at other locations, or with the passage of time. Where applicable, the assessment of the environmental quality of groundwater was limited to a study of those chemical parameters specifically addressed in this report.

Terrapex has relied in good faith on information and representations obtained from the Client and third parties and, except where specifically identified, has made no attempt to verify such information. Terrapex accepts no responsibility for any deficiency or inaccuracy in this report as a result of any misstatement, omission, misrepresentation, or fraudulent act of those providing information. Terrapex shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time of the study.

This report has been prepared for the sole use of Hazelview Investments. Terrapex accepts no liability for claims arising from the use of this report, or from actions taken or decisions made as a result of this report, by parties other than Hazelview Investments.

Respectfully Submitted,

TERRAPEX ENVIRONMENTAL LTD.



Andrew Durbano, M.Sc., P.Geo.
Project Manager, Hydrogeology

Zen Keizars, P.Geo., FGC
Senior Hydrogeologist

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FIGURES

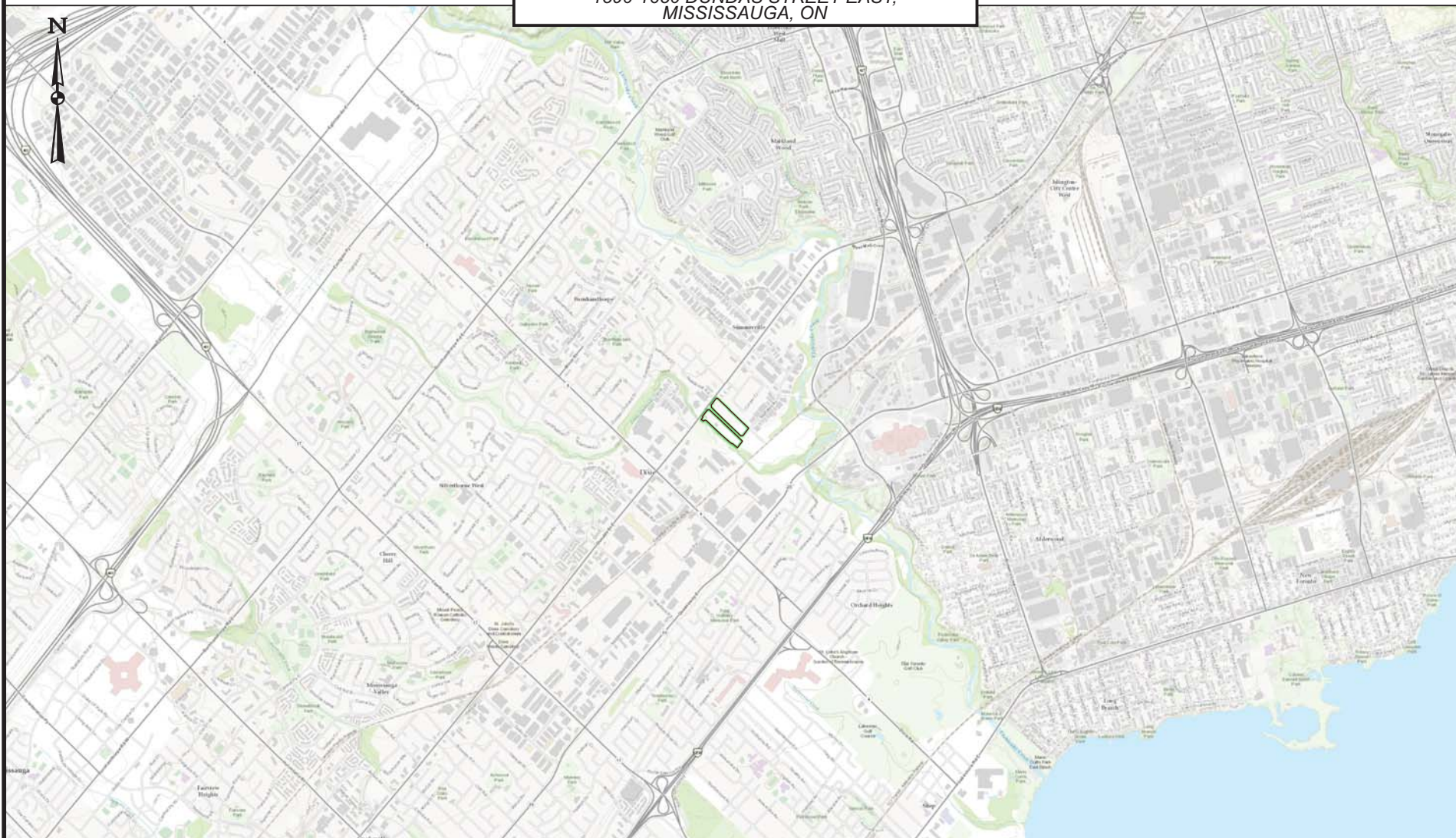


SITE LOCATION

1590-1650 DUNDAS STREET EAST,
MISSISSAUGA, ON

CLIENT

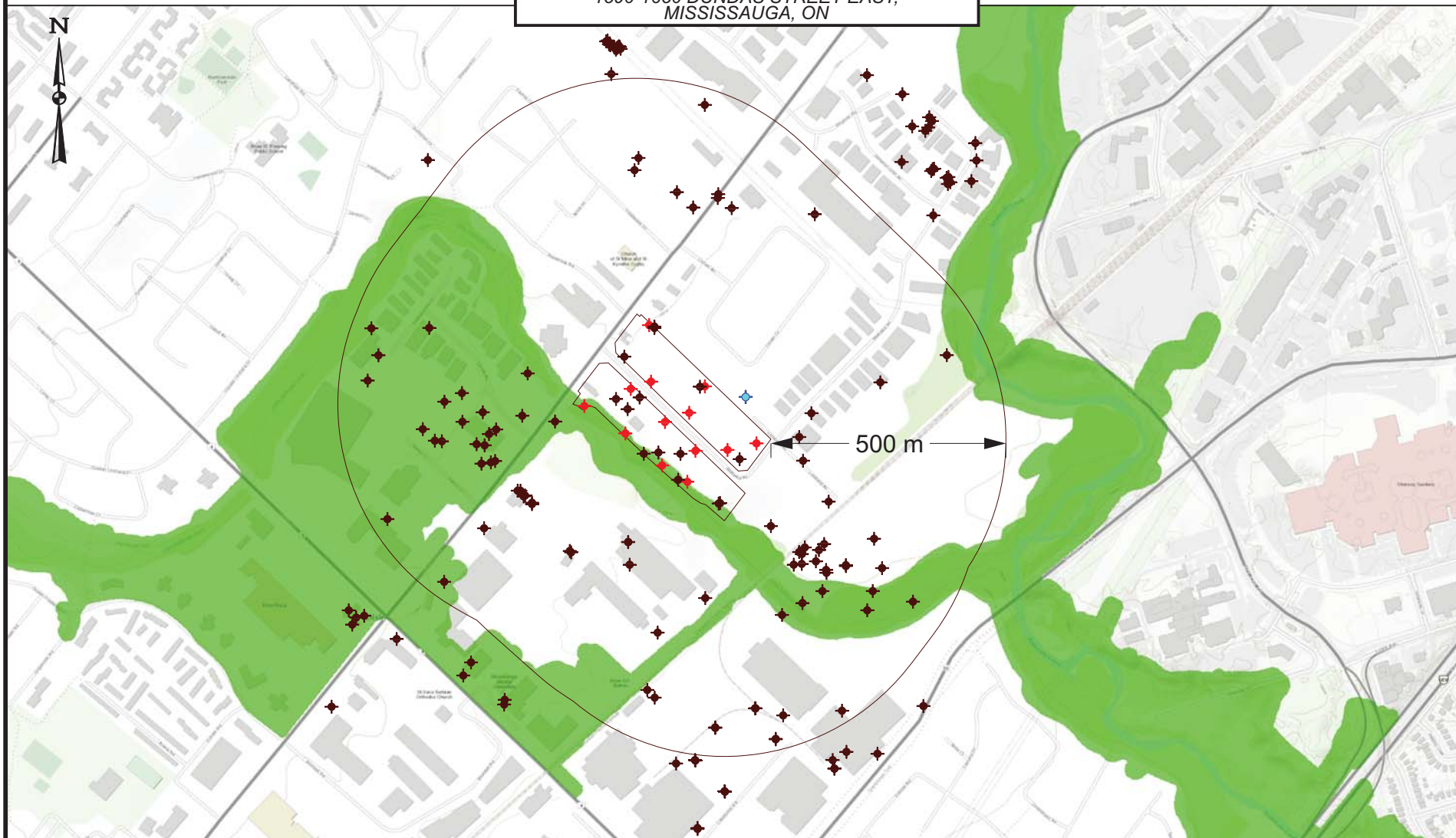
HAZELVIEW INVESTMENTS



SOURCE: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY.



PROJECT #	CA20-149	
SCALE	AS SHOWN	
DATE	FEBRUARY 2021	
DRAWN	JOB	CHECKED
DRAWING #	FIGURE 1	



- TRCA REGULATED AREA
- ◆ LOCATIONS OF INVESTIGATIONS
- ◆ WATER WELL RECORD LOCATION (NOT SUPPLY WELL)
- ◆ WATER WELL RECORD LOCATION (SUPPLY WELL)

SOURCE: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, THE GIS USER COMMUNITY, TRCA REGULATED AREA LIMIT (JULY 2019), AND ONTARIO'S WATER WELL INFORMATION SYSTEM

0 250m 500m

PROJECT # CA20-149

SCALE AS SHOWN

DATE FEBRUARY 2021

DRAWN JOB CHECKED

DRAWING #

FIGURE 2

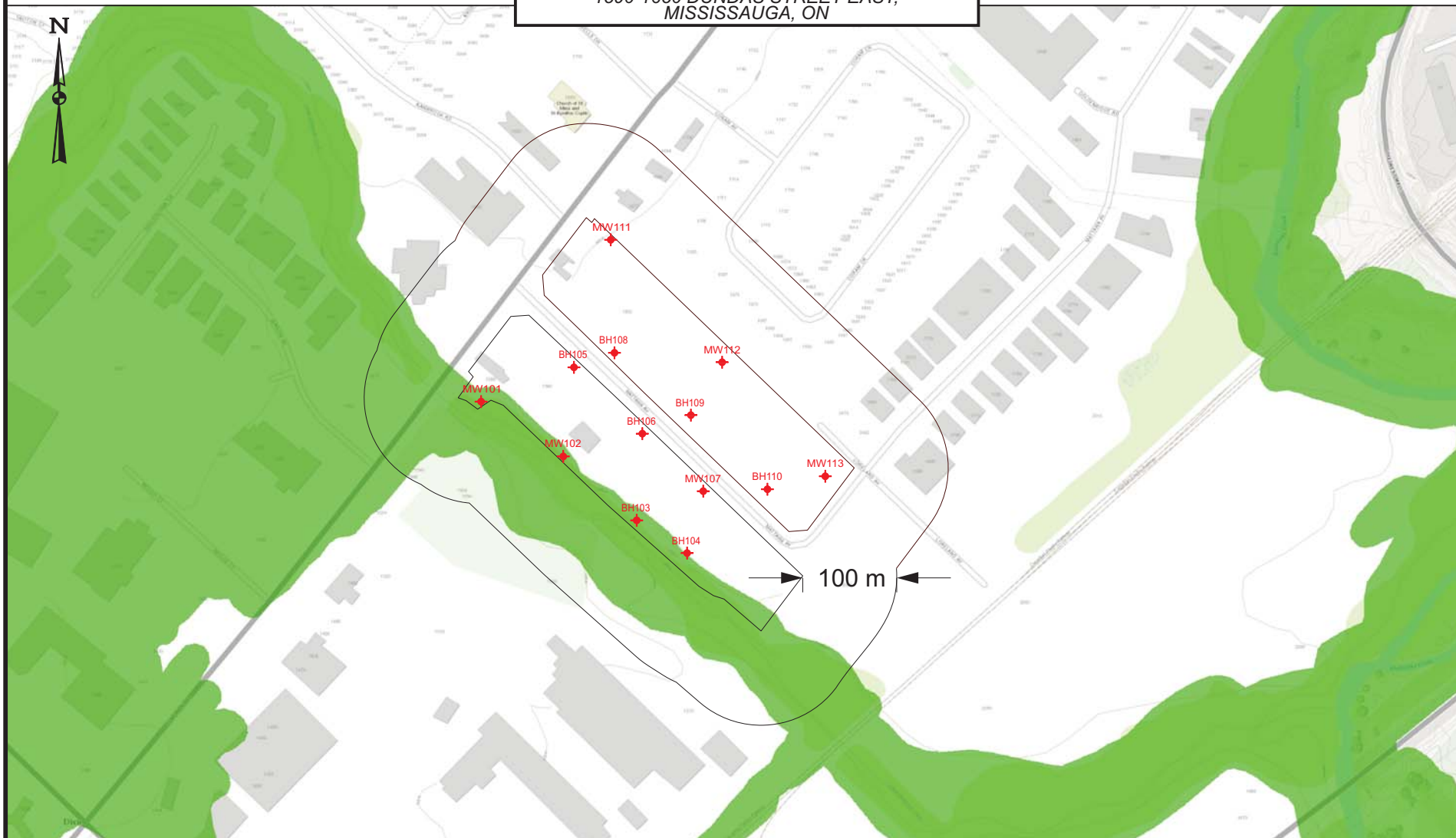


SITE VICINITY 100m

1590-1650 DUNDAS STREET EAST,
MISSISSAUGA, ON

CLIENT

HAZELVIEW INVESTMENTS



- TRCA REGULATED AREA
- LOCATIONS OF INVESTIGATIONS

SOURCE: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, THE GIS USER COMMUNITY, AND TRCA REGULATED AREA LIMIT (JULY 2019).

PROJECT #	CA20-149
SCALE	AS SHOWN
DATE	FEBRUARY 2021
DRAWN	JOB
CHECKED	
DRAWING #	

FIGURE 3



BOREHOLE LOCATION PLAN

1590-1650 DUNDAS STREET EAST
MISSISSAUGA, ON

CLIENT

HAZELVIEW INVESTMENTS



TABLES

TABLE 1
Monitoring Well Construction Details
1650 & 1590 Dundas Street East, Mississauga ON

Position and Depth

Well Desig.	UTM Easting	UTM Northing	Date of Construct	Stick Down (flush mount) (m)	Depth of Borehole (mbg)	Depth to Well Bottom (mbg)	Screen Length (m)	Depth to Screen Bottom (mbg)	Depth to Screen Top (mbg)	Depth to Top Sand (mbg)
(m)	(m)	(m)	dd-mmm-yy	(m)	(mbg)	(mbg)	(m)	(mbg)	(mbg)	(mbg)
MW101	614691.7	4829907.9	16-Dec-20	-0.11	7.70	6.70	1.52	6.60	5.18	4.88
MW102	614780.1	4829851.2	16-Dec-20	-0.13	7.70	7.60	1.52	7.50	6.08	5.50
MW107	614929.7	4829817.0	21-Dec-20	-0.11	11.10	9.15	1.52	9.05	7.63	7.00
MW111	614826.7	4830081.9	16-Dec-20	-0.12	4.10	3.05	1.52	2.95	1.53	1.20
MW112	614947.5	4829954.1	16-Dec-20	-0.06	12.50	9.15	1.52	9.05	7.63	7.00
MW113	615059.3	4829835.0	15-Dec-20	-0.09	3.95	3.05	1.52	2.95	1.53	1.23
MW201	614868.5	4829837.9	31-Aug-21	-0.10	14.00	13.78	3.00	13.68	10.68	10.38
MW202	614763.5	4829883.2	01-Sep-21	-0.17	14.00	14.04	3.00	13.94	10.94	10.64
MW203	614751.9	4829979.8	02-Sep-21	-0.07	14.00	14.05	3.00	13.95	10.95	10.65

Key Elevations

Well Desig.	Ground Elev.	End of Borehole Elev.	Top of Pipe Elev.	Screen Bottom Elev.	Screen Top Elev.
	(masl)	(masl)	(masl)	(masl)	(masl)
MW101	117.27	109.57	117.16	110.67	112.09
MW102	117.12	109.42	117.00	109.62	111.05
MW107	115.78	104.68	115.67	106.73	108.16
MW111	119.78	115.68	119.66	116.83	118.25
MW112	117.06	104.56	117.00	108.01	109.44
MW113	115.90	111.95	115.80	112.95	114.37
MW201	116.09	102.09	115.99	102.41	105.41
MW202	116.64	102.64	116.46	102.70	105.70
MW203	119.00	105.00	119.07	105.05	108.05

Notes:

1. masl = metres above sea level
2. mbg = metres below ground (or grade)
3. UTM locations and elevations obtained from TOPCON GNSS

TABLE 2
Observed Groundwater Levels
1530-1650 Dundas Street East, Mississauga, ON

Monitoring Well ID	Date	Ground Elev. (masl)	Top Pipe Elev. (masl)	Well Depth ¹ (mbg)	Groundwater Depth (mbmp) (mbg)		Groundwater Elevation (masl)	Comment
MW101	22-Dec-20	117.27	117.16	6.69	DRY	-	-	
	08-Jan-21				5.96	6.06	111.21	
	21-Jan-21				4.89	4.99	112.28	
	30-Mar-21				5.03	5.13	112.14	
MW102	22-Dec-20	117.12	117.00	7.62	4.44	4.56	112.56	
	08-Jan-21				4.19	4.31	112.81	
	21-Jan-21				4.24	4.37	112.76	
	30-Mar-21				4.51	4.64	112.49	
MW107	22-Dec-20	115.78	115.67	9.00	2.97	3.08	112.70	
	08-Jan-21				3.22	3.33	112.45	
	21-Jan-21				3.68	3.79	112.00	
	30-Mar-21				3.49	3.60	112.18	
MW111	22-Dec-20	119.78	119.66	3.01	DRY	-	-	
	08-Jan-21				DRY	-	-	
	21-Jan-21				DRY	-	-	
	30-Mar-21				DRY	-	-	
MW112	22-Dec-20	117.06	117.00	9.07	-	-	-	
	08-Jan-21				2.66	2.72	114.35	
	21-Jan-21				2.78	2.84	114.22	
	30-Mar-21				3.40	3.47	113.60	
MW113	22-Dec-20	115.90	115.80	3.02	3.01	3.10	112.79	
	08-Jan-21				2.96	3.05	112.84	
	21-Jan-21				2.92	3.01	112.88	
	30-Mar-21				2.94	3.03	112.87	
MW201	14-Sep-21	116.00	115.90	102.32	1.29	1.19	114.81	
	16-Sep-21				1.33	1.23	114.77	
	01-Oct-21				1.34	1.24	114.77	
MW202	14-Sep-21	116.80	116.70	102.86	2.60	2.50	114.30	
	16-Sep-21				2.65	2.55	114.25	
	01-Oct-21				2.65	2.55	114.25	
MW203	14-Sep-21	119.40	119.30	105.45	5.40	5.30	114.10	
	16-Sep-21				5.37	5.27	114.13	
	01-Oct-21				5.37	5.27	114.13	

Notes

Elevations measured by Topcon GNSS device

masl = metres above sea level

mbmp = metres below measurement point (top of pipe)

mbg = metres below ground

¹ = Depth as measured upon installation

bold = screened in bedrock

**Table 3: Summary of Encountered Subsurface
1590 and 1650 Dundas Street East, Mississauga, Ontario**

Borehole Location	BH No.	Ground Elevation (m)	Asphaltic Concrete/Topsoil (mm)	Granular Base (mm)	Fill (mbg)	Sandy Silt (till) (mbg)	Clayey Silt (till) (mbg)	Clayey Silt (mbg)	Sandy/Silty layer (mbg)	Shale/Till complex (mbg)	Shale Bedrock (mbg)
Top of the Slope at 1595 Dundas St E	MW101	117.4	75	200	6.0	-	-	-	-	6.0-7.5	7.5
	MW102	117.1	450	-	2.1	2.1-6.0	-	-	-	6.0-7.5	7.5
	BH103	115.7	450	-	2.7	-					
	BH104	115.6	80	150	3.8	-	3.8-6.0	-	-	-	6.0
1595 Dundas St E	BH105	119.1	80	150	1.2	4.5-6.0	1.2-4.5	-	-	6.0-7.5	7.5
	BH106	117.3	75	225	1.5	-	1.5-3.4	-	-	3.4-4.5	4.5
	MW107	115.7	105	500	1.7	2.2-3.0	-	1.7-2.2	3.0-3.6	3.6-4.5	4.5
1650 Dundas St E	BH108	119.3	?	?	2.0	3.3-5.2	2.0-3.3	-	5.2-5.8	5.7-6.1	6.1
	BH109	116.7	100	200	1.2	1.2-2.1 3.2-3.8	-	-	2.1-3.2	3.8-4.2	4.2
	BH110	116.0	100	250	1.7	-	1.7-2.5	-	-	2.5-4.0	4.0
	MW111	119.9	100	150	1.2	-	1.2-3.1	-	-	3.1-4.0	4.0
	MW112	117.1	125	225	0.7	-	0.7-2.1	-	-	2.1-3.0	3.0
	MW113	116.0	80	200	1.0	-	1.4-2.2	1.5-2.2	-	2.2-3.7	3.7

**Table 4: Hydraulic Conductivity Estimates from *In-Situ* Testing
1590 and 1650 Dundas Street East, Mississauga, Ontario**

Location Identification	Description of Soil Materials Adjacent to Screened Interval	Reported	Reported Screened Interval	Estimated Hydraulic Conductivity
		SPT N-Value	mbg	K (m/s)
			(masl)	
In-Situ Analyses				
MW101	fill to till/shale complex	16 (fill)	5.18-6.70	4.66 x10 ⁻¹¹
		6 (till/shale)	(110.67-112.09)	
MW102	till/shale complex	97/250mm	6.08-7.60	2.71 x10 ⁻⁸
			(109.62-111.05)	
MW111	clayey silt to clayey silt till	60/200mm (clayey silt)	1.53-3.05	4.12 x10 ⁻⁹
		41 (clayey silt till)	(116.83-118.25)	
MW112	shale bedrock	-	1.53-3.05	4.04 x10 ⁻⁸
			(108.01-109.44)	
MW201	shale bedrock	RQD range		1.03 x10 ⁻⁸
Theoretical Hydraulic Conductivity Estimates using Hazen Formula				
MW102	sand and silt	50/125mm	sample 7, 4.6 mbg	1.9 x10 ⁻⁷
BH108	silt and clay	30	sample 4, 2.3 mbg	N/A

mbgs – indicates 'metres below ground surface'

masl – indicates 'metres above sea level'

Table 5: Construction Dewatering Worksheet - Block A and Block C


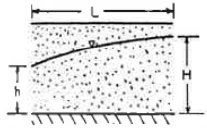
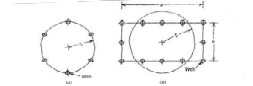
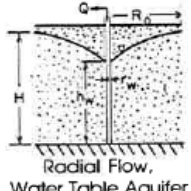
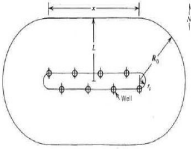
Construction Dewatering Worksheet				
		Project:	1590-1650 Dundas Street East Mississauga, Ontario	
		Project Number:	CA20-149	
		Location:	Block A and Block C	
		Date:	August 9, 2022	
Input Parameters				
 <p>Water Table Flow From a Line Source to a Drainage Trench</p>	(1)	Aquifer Thickness	(H)	20 m
	(2)	Target Depth	(h)	9.49 m
	(3)	Effective Drawdown	(Δh)	10.51 m
	(4)	Hydraulic Conductivity	(K)	2.0E-08 m/s
	(5)	Hydraulic Conductivity	(K)	1.8E-03 m/d
	(6)	Excavation length	(a)	225 m
	(7)	Excavation width	(b)	67 m
	(8)	Excavation Length/Width Ratio	(a/b)	3.4
Distance Calculations				
 <p>Figure 6.7 Approximation of equivalent radius r_e. (a) Circular system, (b) Rectangular system.</p>  <p>Radial Flow, Water Table Aquifer</p>	(9)	Width of Dewatering	(L)	2 m
	(10)	Radius/Zone of Influence (ZOI)	(R_o)	5 m
	(11)	Equivalent Radius of Well (where $a/b \leq 1.5$)	(R_s)	m
	(12)	Equivalent Radius of Well (where $a/b > 1.5$)	(R_s)	93 m
Volume Calculations				
 <p>Figure 6.8 Approximate analysis of long narrow systems.</p>	(13)	Trench Calculation (where $a/b \leq 1.5$)	(Q)	m ³ /day
			(Q)	L/day
	(14)	Trench Calculation (where $a/b > 1.5$)	(Q)	54 m ³ /day
		(Q)	54,021 L/day	
	(15)	Anticipated Incident Precipitation		376,875 L/day @ 25mm storm
Relevant Formulae (Powers, 2007)				
	(9)	$R_o / 2$		(eq. 6.15, p. 105)
	(10)	$3000 (H - h) \times \text{sqrt}(K)$		(eq. 6.12, p. 71)
	(11)	$\text{sqrt}((a \times b) / \pi)$		(eq. 6.9, p. 70) (eq. 6.10, p.102)
	(12)	$(a+b)/\pi$		
	(13)	$(\pi \times K \times (H^2 - h^2)) / \ln (R_o / R_s) + 2 \times (X \times K \times (H^2 - h^2)) / (2 \times L)$		(pg. 66,67,68; eq. 6.1 and 6.2)
	(14)	$(\pi \times K \times (H^2 - h^2)) / \ln (R_o / R_s) + 2 \times (X \times K \times (H^2 - h^2)) / (2 \times L)$		(pg. 66,67,68; eq. 6.1 and 6.2)
	(15)	$a \times b \times 25$		

Table 6: Construction Dewatering Worksheet - Block E


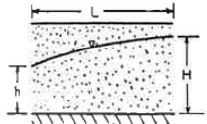
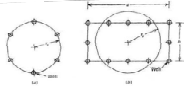
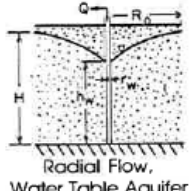
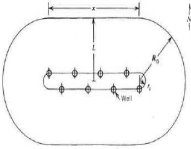
Construction Dewatering Worksheet				
		Project:	1590-1650 Dundas Street East Mississauga, Ontario	
		Project Number:	CA20-149	
		Location:	Block E	
		Date:	August 9, 2022	
Input Parameters				
 <p>Water Table Flow From a Line Source to a Drainage Trench</p>	(1)	Aquifer Thickness	(H)	20 m
	(2)	Target Depth	(h)	15.72 m
	(3)	Effective Drawdown	(Δh)	4.28 m
	(4)	Hydraulic Conductivity	(K)	2.0E-08 m/s
	(5)	Hydraulic Conductivity	(K)	1.8E-03 m/d
	(6)	Excavation length	(a)	140 m
	(7)	Excavation width	(b)	80 m
	(8)	Excavation Length/Width Ratio	(a/b)	1.8
Distance Calculations				
 <p>Figure 6.7 Approximation of equivalent radius r_e. (a) Circular system, (b) Rectangular system.</p>  <p>Radial Flow, Water Table Aquifer</p>	(9)	Width of Dewatering	(L)	1 m
	(10)	Radius/Zone of Influence (ZOI)	(R_o)	2 m
	(11)	Equivalent Radius of Well (where $a/b \leq 1.5$)	(R_s)	m
	(12)	Equivalent Radius of Well (where $a/b > 1.5$)	(R_s)	70 m
Volume Calculations				
 <p>Figure 6.8 Approximate analysis of long narrow systems.</p>	(13)	Trench Calculation (where $a/b \leq 1.5$)	(Q)	m ³ /day
			(Q)	L/day
	(14)	Trench Calculation (where $a/b > 1.5$)	(Q)	41 m ³ /day
		(Q)	40,909 L/day	
	(15)	Anticipated Incident Precipitation		280,000 L/day @ 25mm storm
Relevant Formulae (Powers, 2007)				
	(9)	$R_o / 2$		(eq. 6.15, p. 105)
	(10)	$3000 (H - h) \times \sqrt{K}$		(eq. 6.12, p. 71)
	(11)	$\sqrt{[(a \times b) / \pi]}$		(eq. 6.9, p. 70) (eq. 6.10, p. 102)
	(12)	$(a+b)/\pi$		
	(13)	$[\pi \times K \times (H^2 - h^2)] / \ln (R_o / R_s) + 2 \times (X \times K \times (H^2 - h^2)) / (2 \times L)$		(pg. 66,67,68; eq. 6.1 and 6.2)
	(14)	$[\pi \times K \times (H^2 - h^2)] / \ln (R_o / R_s) + 2 \times (X \times K \times (H^2 - h^2)) / (2 \times L)$		(pg. 66,67,68; eq. 6.1 and 6.2)
	(15)	$a \times b \times 25$		

Table 7: Construction Dewatering Worksheet - Block F and Block G


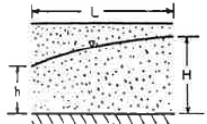
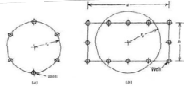
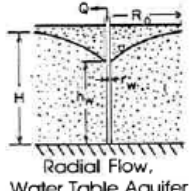
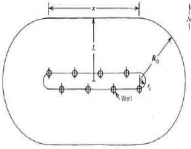
Construction Dewatering Worksheet				
		Project:	1590-1650 Dundas Street East Mississauga, Ontario	
		Project Number:	CA20-149	
		Location:	Block F and Block G	
		Date:	August 9, 2022	
Input Parameters				
 <p>Water Table Flow From a Line Source to a Drainage Trench</p>	(1)	Aquifer Thickness	(H)	20 m
	(2)	Target Depth	(h)	17.72 m
	(3)	Effective Drawdown	(Δh)	2.28 m
	(4)	Hydraulic Conductivity	(K)	2.0E-08 m/s
	(5)	Hydraulic Conductivity	(K)	1.8E-03 m/d
	(6)	Excavation length	(a)	250 m
	(7)	Excavation width	(b)	80 m
	(8)	Excavation Length/Width Ratio	(a/b)	3.1
Distance Calculations				
 <p>Figure 6.7 Approximation of equivalent radius r_e. (a) Circular system. (b) Rectangular system.</p>  <p>Radial Flow, Water Table Aquifer</p>	(9)	Width of Dewatering	(L)	0 m
	(10)	Radius/Zone of Influence (ZOI)	(R_o)	1 m
	(11)	Equivalent Radius of Well (where $a/b \leq 1.5$)	(R_s)	m
	(12)	Equivalent Radius of Well (where $a/b > 1.5$)	(R_s)	105 m
Volume Calculations				
 <p>Figure 6.8 Approximate analysis of long narrow systems.</p>	(13)	Trench Calculation (where $a/b \leq 1.5$)	(Q)	m ³ /day
			(Q)	L/day
	(14)	Trench Calculation (where $a/b > 1.5$)	(Q)	77 m ³ /day
			(Q)	77,478 L/day
	(15)	Anticipated Incident Precipitation		500,000 L/day @ 25mm storm
Relevant Formulae (Powers, 2007)				
	(9)	$R_o / 2$		(eq. 6.15, p. 105)
	(10)	$3000 (H - h) \times \text{sqrt}(K)$		(eq. 6.12, p. 71)
	(11)	$\text{sqrt}((a \times b) / \pi)$		(eq. 6.9, p. 70) (eq. 6.10, p.102)
	(12)	$(a+b)/\pi$		
	(13)	$(\pi \times K \times (H^2 - h^2)) / \ln (R_o / R_s) + 2 \times (X \times K \times (H^2 - h^2)) / (2 \times L)$		(pg. 66,67,68; eq. 6.1 and 6.2)
	(14)	$(\pi \times K \times (H^2 - h^2)) / \ln (R_o / R_s) + 2 \times (X \times K \times (H^2 - h^2)) / (2 \times L)$		(pg. 66,67,68; eq. 6.1 and 6.2)
	(15)	$a \times b \times 25$		

Table 8. Summary of Estimated Dewatering Volumes for Concept Development

		(A)	(B)	(C)		
Excavation Concept	Dimensions ¹	Estimated Dewatering Volume	Incident Precipitation ²	Total Dewatering Volume (A+B)	Design Dewatering Volume (A x 2) + B	Zone of Influence (ZOI)
		(L/day)	(L/day)	(L/day)	(L/day)	(m radius)
Block A and Block C	Three levels of underground (~15,000 m ²)	54,020	376,875	430,900	484,92	5
Block E	Two levels of underground (~11,200 m ²)	40,910	280,000	320,910	361,820	2
Block F and Block G	One level of underground (~20,000 m ²)	77,480	500,000	577,480	654,960	1
¹ SvN Architects, 18June2021; 27July2022 ² Based on a 100-year storm, with a precipitation of 25 mm						

Table 9. Summary of Steady State Foundation Drainage Rate Estimates

Parking Structure Area	Post-Construction Drainage Rate	Post-Construction Drainage Rate (FOS Applied)	Anticipated Discharge Permitting Requirements for Permanent Foundation Drainage
	(L/d)	(L/d)	
Block A and Block C	54,020	~108,040	PTTW (assuming no waterproofing)
Block E	40,910	~81,820	PTTW (assuming no waterproofing)
Block F and Block G	77,480	~154,960	PTTW (assuming no waterproofing)

No Permitting, < 50,000 L/day

**Table 10: Summary of Tested Parameters Identified as Not Meeting Applicable Sanitary and Storm By-Law Criteria
1590 and 1650 Dundas Street East, Mississauga, Ontario**

Parameter		Sanitary Sewers	Storm Sewers	Storm Sewers	MW107	MW112
	Units	By-law Criteria¹	By-law Criteria²	By-law Criteria³	21-Jan-21	21-Jan-21
Total Suspended Solids (TSS)	mg/L	350	15	15	<10	17
Aluminum	mg/L	50	-	1	0.031	1.220
Manganese (Mn)	mg/L	5	0.05	0.05	0.238	0.040
Total Kjeldahl Nitrogen (TKN)	mg/L	100	1	1	3.09	2.17

¹ Regional Municipality of Peel Sanitary Sewer Discharge, By-law 53-2010

² Regional Municipality of Peel Storm Sewer Discharge, By-law 53-2010

³ City of Mississauga Storm Sewer Discharge, By-law 259-05

TABLE 10 (cont).
Summary of Groundwater Quality
1530-1650 Dundas Street East, Mississauga, ON

	Units	Sewers Bylaw			MW107	MW112
		Peel Sanitary	Peel Storm	Mississauga Storm	01/21/2021	01/21/2021
VOLATILE ORGANIC COMPOUNDS						
Benzene	mg/L	0.01	0.002	0.002	<0.0002	<0.0002
Chloroform	mg/L	0.04	0.002	-	<0.0002	<0.0002
Methylene Chloride (Dichloromethane)	mg/L	2	0.0052	-	<0.0003	<0.0003
Dichlorobenzene, 1,2-	mg/L	0.05	0.0056	-	<0.0001	<0.0001
Dichlorobenzene, 1,4-	mg/L	0.08	0.0068	-	<0.0001	<0.0001
Dichloroethylene, cis-1,2-	mg/L	4	0.0056	-	<0.0002	<0.0002
Dichloropropene, trans-1,3-	mg/L	0.14	0.0056	-	<0.0003	<0.0003
Ethylbenzene	mg/L	0.16	0.002	0.002	<0.0001	<0.0001
Methyl Ethyl Ketone	mg/L	8.0	-	-	<0.0009	<0.0009
Styrene	mg/L	0.2	-	-	<0.0001	<0.0001
Tetrachloroethane, 1,1,2,2-	mg/L	1.4	0.017	-	<0.0001	<0.0001
Tetrachloroethylene	mg/L	1	0.0044	-	<0.0001	<0.0001
Toluene	mg/L	0.27	0.002	0.002	<0.0002	<0.0002
Trichloroethylene	mg/L	0.4	0.008	-	<0.0002	<0.0002
Xylenes (Total)	mg/L	1.4	0.0044	0.0044	<0.0001	<0.0001
Polycyclic Aromatic Hydrocarbons	mg/L	-	-	0.002	<0.0003	<0.0003
SEMIVOLATILE ORGANIC COMPOUNDS						
Bis (2-ethylhexyl) phthalate	mg/L	0.012	0.0088	-	<0.0005	<0.0005
Di-N-Butyl phthalate	mg/L	0.08	0.015	-	<0.0005	<0.0005
MISCELLANEOUS ORGANIC PARAMETERS						
Nonylphenols (Total)	mg/L	0.02	-	-	<0.001	<0.001
Nonylphenol Ethoxylate (Total)	mg/L	0.2	-	-	<0.001	<0.001
PCBs	mg/L	0.001	0.004	-	<0.0002	<0.0002

Notes

1. Sewer use criteria values based on Peel Region sewer bylaw (53-2010) and City of Mississauga storm sewer bylaw (0259-2005)
2. Bold and italic values at least exceed either Table 1 or Table 2, as highlighted
3. mg/L = milligrams per litre
4. CFU/100mL = colony forming units per 100 millilitres
5. "-" indicates no established criteria for the parameter

TABLE 11
Summary of Groundwater Quality
1530-1650 Dundas Street East, Mississauga ON

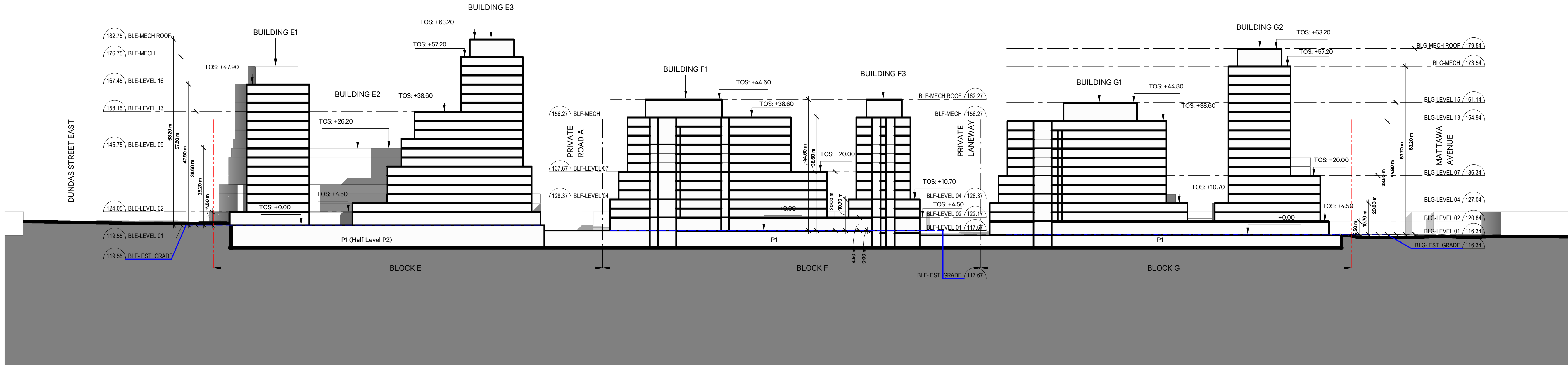
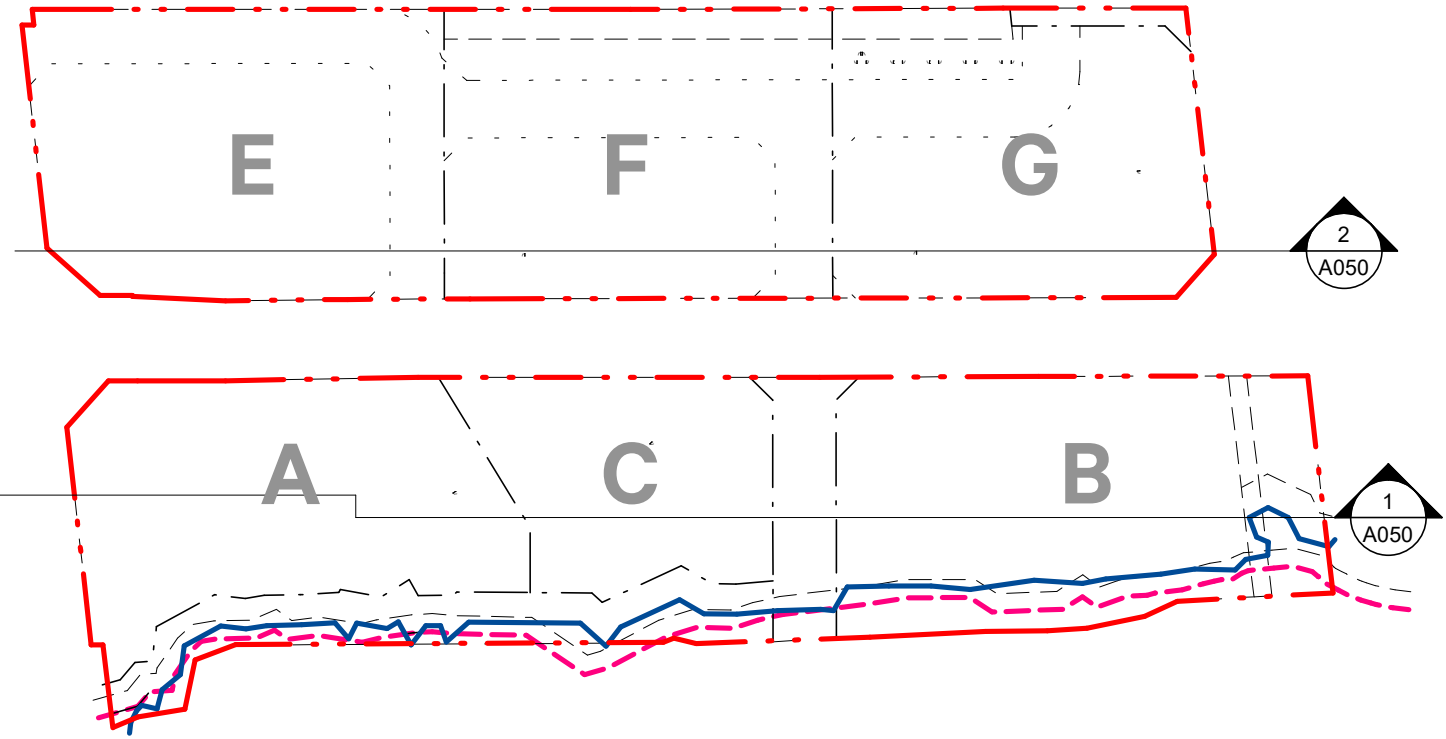
	Units	Sewers Bylaw			MW107	MW112
		Peel Sanitary	Peel Storm	Mississauga Storm	01/21/2021	01/21/2021
MISCELLANEOUS INORGANIC PARAMETERS						
Fluoride	mg/L	10	-		<0.13	<0.07
pH	pH units	5.5-10	6.0-9.0	6.0-9.0	7.59	8.02
Total Suspended Solids	mg/L	350	15	15	<10	17
Cyanide - Total (CN)	mg/L	2	0.02	0.02	<0.002	<0.002
Total Residual Chlorine	mg/L	-	-	1	<0.1	<0.1
METALS (Total)						
Aluminium (Al)	mg/L	50	-	1	0.031	1.220
Antimony (Sb)	mg/L	5	-	-	<0.020	<0.020
Arsenic (As)	mg/L	1	0.02	0.02	<0.015	<0.015
Cadmium (Cd)	mg/L	0.7	0.008	0.008	<0.010	<0.010
Hexavalent Chromium (Cr VI)	mg/L	-	-	0.04	<0.005	<0.005
Chromium (Cr)	mg/L	5	0.08	0.08	<0.015	<0.015
Cobalt (Co)	mg/L	5	-	-	<0.020	<0.020
Copper (Cu)	mg/L	3	0.05	0.04	<0.010	<0.010
Lead (Pb)	mg/L	3	0.120	0.120	<0.020	<0.020
Manganese (Mn)	mg/L	5	0.05	0.05	0.238	0.040
Mercury (Hg)	mg/L	0.01	0.0004	0.0004	<0.0002	<0.0002
Molybdenum (Mo)	mg/L	5	-	-	<0.020	<0.020
Nickel (N)	mg/L	3	0.08	0.08	<0.015	<0.015
Selenium (Se)	mg/L	1	0.02	0.02	<0.020	<0.020
Silver (Ag)	mg/L	5	0.12	0.12	<0.010	<0.010
Tin (Sn)	mg/L	5	-	-	<0.025	<0.025
Titanium (Ti)	mg/L	5	-	-	<0.020	0.038
Zinc (Zn)	mg/L	3	0.04	0.04	<0.020	<0.020
MICROBIOLOGICAL AND NUTRIENTS						
Escherichia coli	CFU/100 mL	-	200	200	ND	ND
Oil & Grease: Animal and Vegetable	mg/L	150	-	-	<0.5	<0.5
Oil & Grease: Mineral and Synthetic	mg/L	15	-	-	<0.5	<0.5
Biological Oxygen Demand (BOD)	mg/L	300	15	15	15	6
Phenolics (4AAP)	mg/L	1.0	0.008	0.008	0.002	<0.002
Phosphorus (P)	mg/L	10	0.4	0.4	<0.02	0.06
Sulfate (SO4)	mg/L	1500	-	-	191	222
Total Kjeldahl Nitrogen (TKN)	mg/L	100	1	1	3.09	2.17

Notes

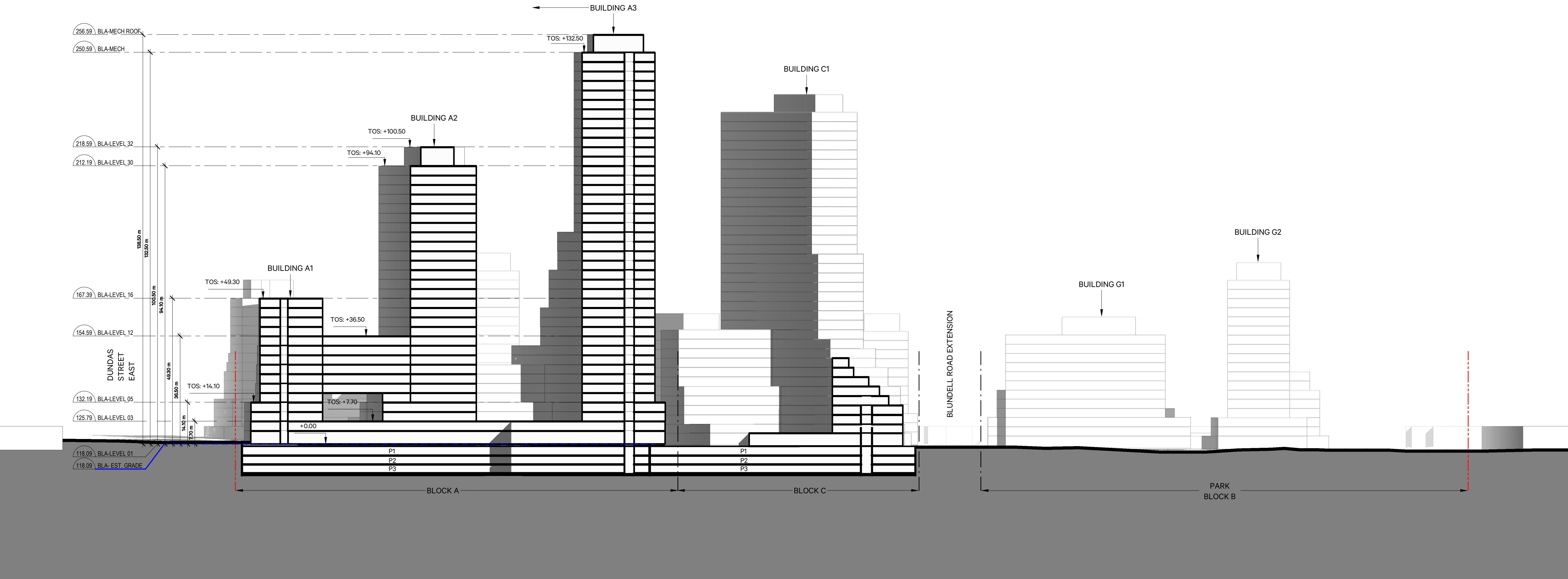
1. Sewer use criteria values based on Peel Region sewer bylaw (53-2010) and City of Mississauga storm sewer bylaw (0259-2005)
2. Bold and italic values at least exceed either Table 1 or Table 2, as highlighted
3. mg/L = milligrams per litre
4. CFU/100mL = colony forming units per 100 millilitres
5. "-" indicates no established criteria for the parameter

APPENDIX I
PROVIDED DRAWINGS
AND INFORMATION

KEY PLAN



2 North - South Site Section B
A050 1 : 750



1 North - South Site Section A
A050 1 : 750

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NO.	DATE	REVISION / COMMENT
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NOTES

SvN

110 Adelaide St. E.
Toronto, ON
M5C 1K9

ONTARIO ASSOCIATION
OF
ARCHITECTS

ANDREW SINGHAN
LICENSE
6992

DUNDAS & MATTAWA

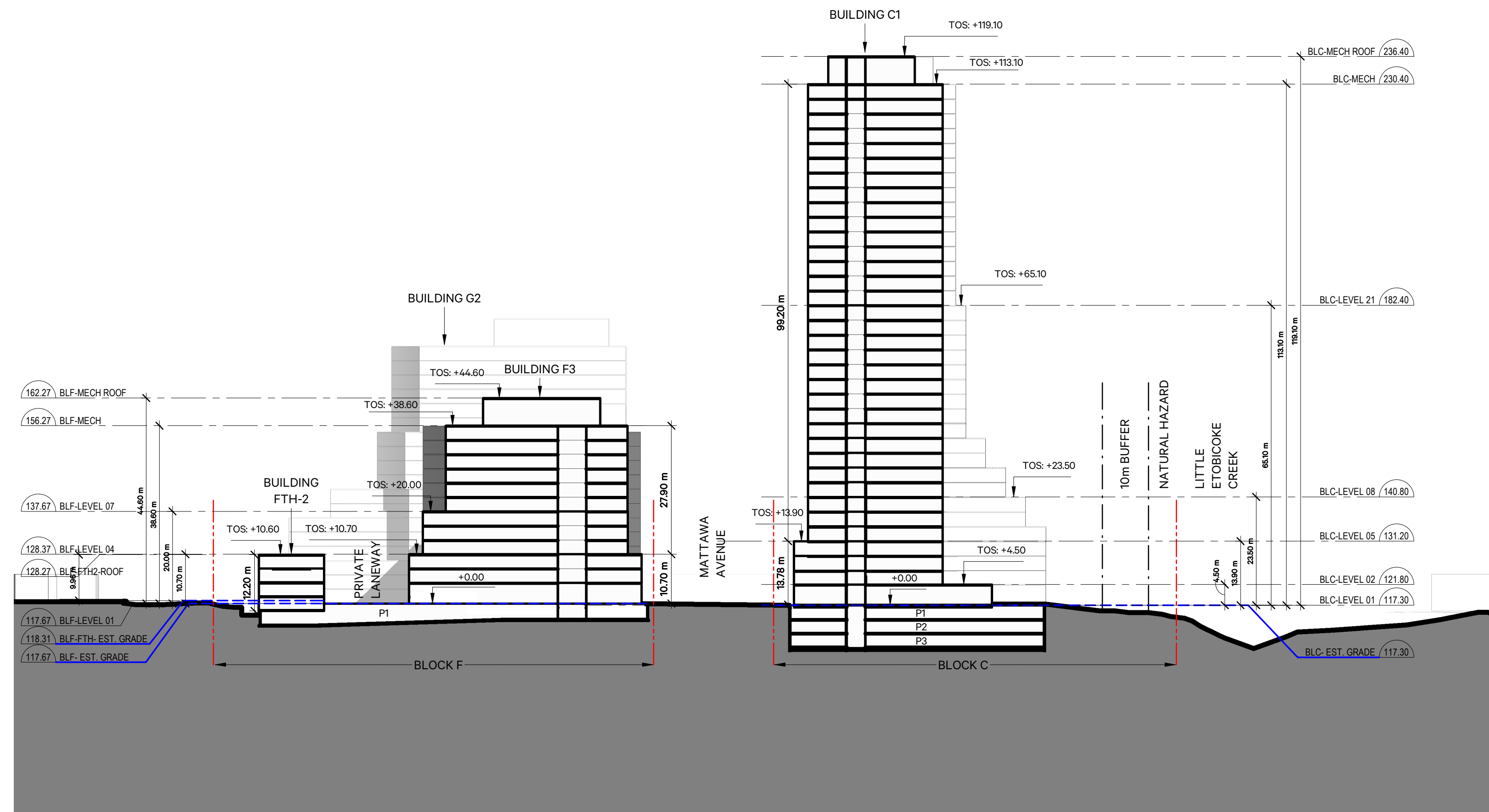
1580-1590 and 1650 Dundas Street East
Mississauga, Ontario

Hazelview Investments

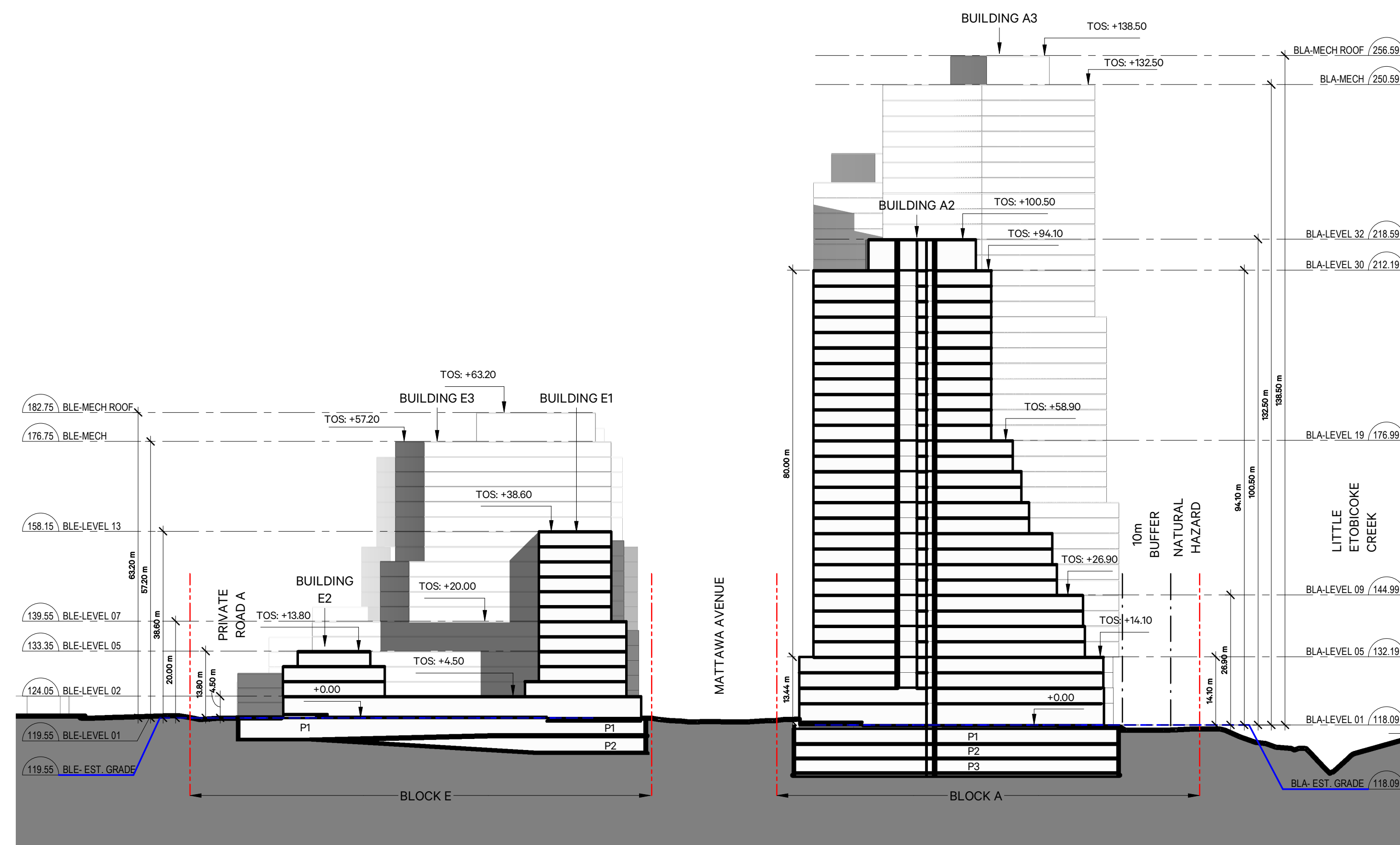
SITE SECTIONS

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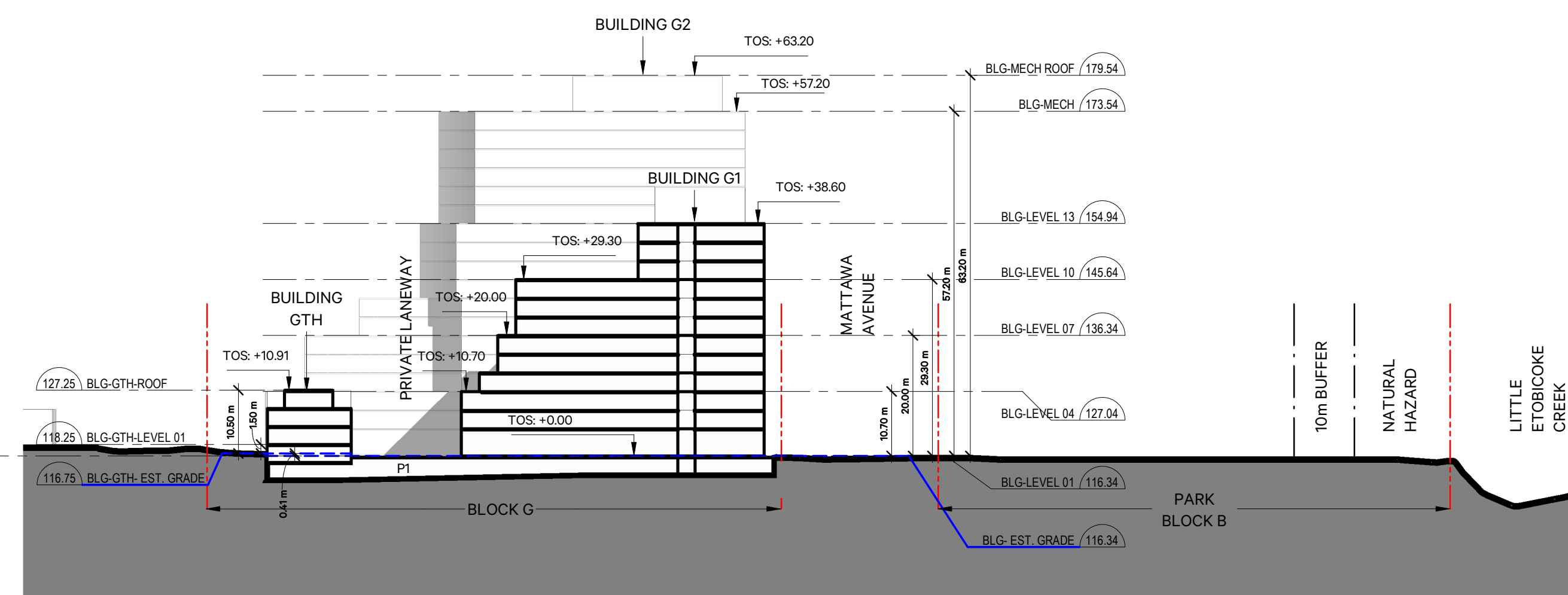
A050



2 East - West Site Section B
A051 1 : 750



1 East - West Site Section A
A051 1 : 750



3 East - West Site Section C
A051 1 : 750

NO.	DATE	REVISION / COMMENT
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[illegible]

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DATE	03/15/21	PLOTTED	

A051

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NOTES

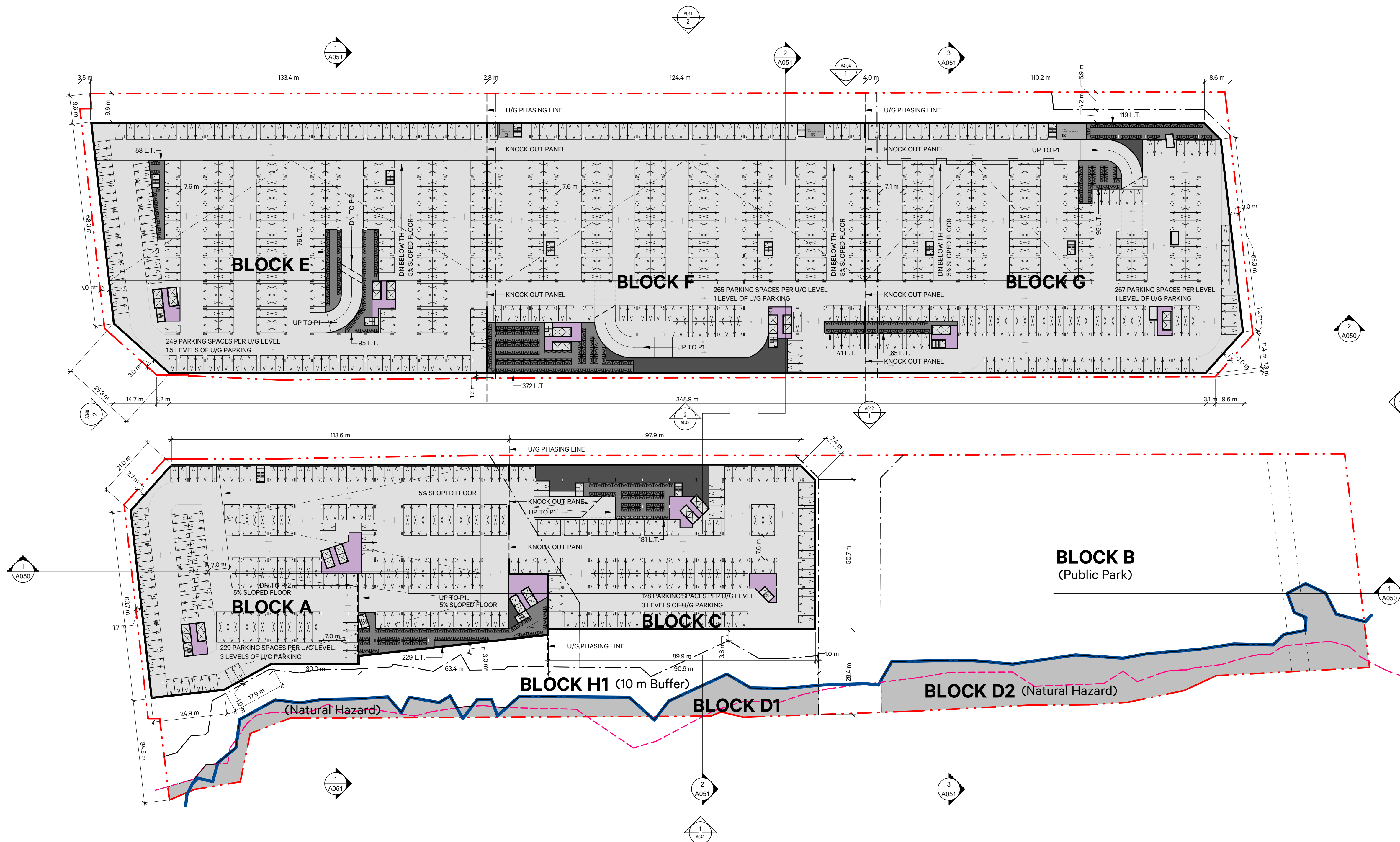
	PARKING / LOADING / CIRCULATION
	WASTE STORAGE
	STORAGE (BIKES/ LOCKERS)
	MECHANICAL
	RESIDENTIAL - LOBBY
	RESIDENTIAL - UNITS
	RESIDENTIAL - AMENITY
	COMMUNITY
	RETAIL
	DISTRICT ENERGY PLANT
	ENERGY TRANSFER STATION
	GREEN ROOF/ LANDSCAPE
	OUTDOOR AMENITY AREA

The diagrams illustrate various parking configurations and their required clearances for wheelchair access:

- PARALLEL:** Shows a side view of a parallel parking space with a total width of 6700mm.
- TYPICAL:** Shows a side view of a typical parking space with 300mm clearances on both sides of the vehicle and 2600mm between adjacent vehicles.
- DOUBLE ACCESSIBLE VEHICLE:** Shows a side view of two adjacent accessible vehicles. Each vehicle requires a 3660mm clearance on its outer side, and there is a 1500mm gap between the two vehicles.
- SINGLE ACCESSIBLE VEHICLE:** Shows a side view of a single accessible vehicle with a 3660mm clearance on its outer side and a 1500mm gap to the next parking space.
- TYPICAL BIKE: FACING PARKING:** A detailed view of a parking space for a bicycle facing a parking row, requiring a 1800mm clearance.
- VERTICAL BIKE: FACING OBSTRUCTION:** A detailed view of a parking space for a bicycle facing an obstruction, requiring a 1200mm clearance.




A100




APPENDIX II
BOREHOLE LOG RECORDS

CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: MW101									
ADDRESS: 1590 & 1650 Dundas Street East				STATION:													
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 117.4									
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling													
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug									
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> DRIVEN <input checked="" type="checkbox"/> CORING <input checked="" type="checkbox"/> DYNAMIC CONE <input checked="" type="checkbox"/> SHELBY <input checked="" type="checkbox"/> SPLIT SPOON																	
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)		WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					40	80	120	160	PL								W.C.
		Asphaltic Concrete (75 mm)	0														
		Granular Base (200 mm)															
		very stiff to firm															
		damp to moist															
		greyish brown, brown, dark brown															
		clayey silt															
		trace gravel															
		brick pieces															
		trace organics															
		trace brick and concrete pieces															
		(FILL)															
			2	115.5	7					3		83					
		some organics	2.5	115	8					4		22					
		concrete pieces	3	114.5	10					5		44					
			3.5	114													
		black	4	113.5	5					6		100					
			4.5	113													
		some organics	5	112.5	22					7		100					
			5.5	112													
			6	111.5													
		hard, damp, grey	6														
		TILL/SHALE complex	6.5	111	77/125					8		100					
			7	110.5													
		grey	7.5	110	50/75					9		100					
		SHALE BEDROCK															
		END OF BOREHOLE															
					LOGGED BY: RG					DRILLING DATE: 16-Dec-2020							
					INPUT BY: SA					MONITORING DATE: 08-Jan-2021							
					REVIEWED BY: VN					PAGE 1 OF 1							


CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: MW102										
ADDRESS: 1590 & 1650 Dundas Street East				STATION:														
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 117.1										
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling														
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug										
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> DRIVEN <input checked="" type="checkbox"/> CORING <input type="checkbox"/> DYNAMIC CONE <input type="checkbox"/> SHELBY <input type="checkbox"/> SPLIT SPOON																		
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL	W.C.	LL							
		Topsoil (450 mm)	0	117	9								1	44				sand
		very stiff damp to moist brown to black clayey silt trace gravel, trace sand trace glass and brick pieces (FILL)	0.5	116.5									2	50				bentonite
	1		116	14									3	94				
	1.5		115.5	24									4	78				
		dense to very dense damp, brown SANDY SILT trace gravel trace to some clay (TILL)	2	115									5	94				sand
	2.5		114.5	30									6	100				
	3		114	31									7	100				
	3.5		113.5	50/125									8	100				
		hard, damp, grey TILL/SHALE complex	4	113									9	100				sand + screen
	4.5		112.5	50/125														
	5		112	97/250														
		grey SHALE BEDROCK END OF BOREHOLE	5.5	111.5														
	6		111															
			6.5	110.5														
			7	110														
			7.5	109.5														
					LOGGED BY: RG				DRILLING DATE: 16-Dec-2020									
					INPUT BY: SA				MONITORING DATE: 08-Jan-2021									
					REVIEWED BY: VN				PAGE 1 OF 1									

CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH103												
ADDRESS: 1590 & 1650 Dundas Street East				STATION:																
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 115.7												
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling																
BOREHOLE DIAMETER (cm): 20		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE: 2		SEALANT TYPE: Holeplug												
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON										
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					N-VALUE (Blows/300mm)				PL W.C. LL											
		Topsoil (450 mm)	0	115.5	6									1		100				
		loose to compact damp to moist brown sand and gravel some concrete pieces (FILL)	0.5	115										2		39				
			1	114.5	8									3		22				
			1.5	114	6									4		-				
			2	113.5																
			2.5	113	12															
		END OF BOREHOLE																		Auger Refusal due to concrete

	LOGGED BY: RG	DRILLING DATE: 21-Dec-2020
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CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH104			
ADDRESS: 1590 & 1650 Dundas Street East				STATION:							
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 115.6			
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling							
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug			
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON	

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)		WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					40	80	120	160	PL								W.C.
		Asphaltic Concrete (80 mm)	0	115.5	12					7	38						
		Granular Base (150 mm)	0.5	115													
		compact to loose damp to moist greyish brown sandy silt (FILL)	1	114.5	15					10							
			1.5	114	5					10							
		soft to stiff moist dark brown to black clayey silt trace organics (FILL)	2	113.5													
			2.5	113	3					17							
			3	112.5													
			3.5	112	10					14							
		very stiff damp, brown CLAYEY SILT trace gravel, trace sand (TILL)	4	111.5	19					16							
			4.5	111													
			5	110.5	29					15							
			5.5	110													
		grey SHALE BEDROCK END OF BOREHOLE	6	109.5	50/100					2							
										8		100					

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CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH105			
ADDRESS: 1590 & 1650 Dundas Street East				STATION:							
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.1			
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling							
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug			
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON	

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)		WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)		PL	W.C.	LL							
					40	80	120	160	20							
		Asphaltic Concrete (80 mm)	0	119												
		Granular Base (150 mm)														
		very stiff	0.5	118.5												
		damp to moist														
		greyish brown														
		clayey silt (FILL)	1	118												
		very stiff	1.5	117.5												
		damp														
		CLAYEY SILT														
		trace gravel, trace sand (TILL)	2	117												
		occasional sand layers brown														
			2.5	116.5												
			3	116												
			3.5	115.5												
		grey	4	115												
			4.5	114.5												
		very dense, damp, grey														
		SANDY SILT														
		trace gravel, trace clay (TLL)	5	114												
			5.5	113.5												
			6	113												
		hard, damp, grey														
		SHALE/TILL complex														
			6.5	112.5												
			7	112												
			7.5	111.5												
		Georgian Bay Formation:														
		grey														
		TCR= 98%														
		RQD= 32%														
		Medium strong														
		SHALE														
		moderately weathered														
		intensely to moderately														
		fractured														
		occasional thin														
		limestone beddings														
			8	111												
			8.5	110.5												
			9	110												



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CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH105											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.1											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug											
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input checked="" type="checkbox"/> DYNAMIC CONE		<input checked="" type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON									
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
					40	80	120	160	20	40	60	80							
		TCR= 98% RQD= 41% Georgian Bay Formation: grey Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings occasional thin clay seams TCR= 100% RQD= 58%	9.5 10 10.5 11 11.5 12 12.5	109.5 109 108.5 108 107.5 107										RC2 RC3					
		END OF BOREHOLE																	

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CLIENT: Hazlevue Investment				PROJECT NO.: CA20-149				RECORD OF: BH106											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 117.3											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug											
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON									
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
		Asphaltic Concrete (75 mm)	0	117	10								1A		67				
		Granular Base (225 mm)	0.5	116.5									1B						
		stiff damp to moist greyish brown clayey silt (FILL)	1	116															
		hard damp, brown CLAYEY SILT trace gravel, trace sand (TILL)	1.5	115.5	31								2		61				
			2	115															
			2.5	114.5															
			3	114									3A		94				
		hard, damp, grey SHALE/TILL complex	3.5	113.5									3B						
			4	113															
			4.5	112.5									4		57				
		grey SHALE BEDROCK			90/200														
		END OF BOREHOLE																	

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CLIENT: Hazlevue Investment				PROJECT NO.: CA20-149				RECORD OF: MW107					
ADDRESS: 1590 & 1650 Dundas Street East				STATION:									
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 115.7					
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling									
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug					
SAMPLE TYPE		AUGER		DRIVEN		CORING		DYNAMIC CONE		SHELBY		SPLIT SPOON	

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)		WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)		PL	W.C.	LL							
					40	80										
		Asphaltic Concrete (105 mm)	0	115.5	19		48			1A		67				sand
		Granular Base (500 mm)	0.5	115						1B						
		stiff, damp to moist grey to black clayey silt trace organic (FILL)	1	114.5	10		25			2		67				bentonite
		stiff, damp, greyish brown CLAYEY SILT trace organics	2	114	10		19			3		55				
		dense, damp, brown SANDY SILT trace gravel, trace clay (TILL)	2.5	113.5	40		9			4		94				
		very dense, damp, grey SILT, trace sand	3	113												
		hard, damp, grey TILL/SHALE complex	3.5	112.5	59		14			5		59				
			4	112			6			6		33				
			4.5	111.5	63		4			7		100				
		Georgian Bay Formation: grey Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings occasional thin clay seams TCR= 100% RCD= 23% UCS= 18.0 MPa	5	111	50/100											
			5.5	110.5						RC1						
			6	110												
			6.5	109.5												
			7	109												
			7.5	108.5						RC2						sand
			8	108												sand + screen
			8.5	107.5												
			9	107						RC3						
			9	106.5												

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CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: MW107											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 115.7											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE <input type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON									
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
					40	80	120	160	20	40	60	80							
		TCR= 100% RCD= 71% Georgian Bay Formation: grey Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings occasional thin clay seams END OF BOREHOLE	9.5 10 10.5 11	106 105.5 105															



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CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH108											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.3											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug											
SAMPLE TYPE		AUGER		DRIVEN		CORING		DYNAMIC CONE		SHELBY		SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
		Asphaltic Concrete (... mm)	0	119	5				9	14			1A	50					
		Granular Base (... mm)	0.5	118.5	3				16				1B						
		soft to firm damp to moist greyish brown clayey silt (FILL)	1	118	8				15				2	83					
			1.5	117.5	30				13				3	79					
		very stiff damp, brown CLAYEY SILT trace gravel, trace sand (TILL)	2	117	49				13				4	100					
			2.5	116.5	50/75				6				5						
		very dense, damp, brown SANDY SILT trace gravel, trace clay (TILL)	3	116	50/75				8				6	100					
			3.5	115.5	55				14				7	67					
		very dense, wet, brown SAND trace gravel, trace silt	4	115					7				8A	92					
			4.5	114.5					9				8B						
		hard, damp, grey SHALE/TILL complex	5	114									9	100					
		grey SHALE BEDROCK END OF BOREHOLE	6	113.5															
					LOGGED BY: RG				DRILLING DATE: 15-Dec-2020										
					INPUT BY: SA				MONITORING DATE:										
					REVIEWED BY: VN				PAGE 1 OF 1										


CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH109			
ADDRESS: 1590 & 1650 Dundas Street East				STATION:							
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.7			
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling							
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug			
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON	

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL									
					40	80	120	160	PL	W.C.	LL							
		Asphaltic Concrete (100 mm)	0	116.5	11								1A		58			
		Granular Base (200 mm)	0.5	116									1B					
		stiff to very stiff damp to moist greyish brown clayey silt trace asphalt pieces (FILL)	1	115.5	16								2A		83			
		very dense damp, brown SANDY SILT trace gravel, trace clay (TILL)	1.5	115									2B					
		very dense, wet greyish brown SILTY SAND	2	114.5									3		83			
			2.5	114									4		92			
		very dense, damp, brown SANDY SILT trace gravel, trace clay (TILL)	3	113.5									5		100			
			3.5	113									6A		92			
		hard, damp, grey SHALE/TILL complex	4	112.5									6B					
		grey SHALE BEDROCK END OF BOREHOLE																


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CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH110												
ADDRESS: 1590 & 1650 Dundas Street East				STATION:																
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.0												
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling																
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug												
SAMPLE TYPE		AUGER		DRIVEN		CORING		DYNAMIC CONE		SHELBY		SPLIT SPOON								
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					N-VALUE (Blows/300mm)				PL W.C. LL											
		Asphaltic Concrete (100 mm)	0	116	22				7				1A		83					
		Granular Base (250 mm)							9				1B							
		very stiff damp to moist greyish brown clayey silt (FILL)	0.5	115.5																
			1	115	23				13				2		37					
			1.5	114.5																
		very stiff damp, brown CLAYEY SILT trace gravel, trace clay (TILL)	2	114	29				12				3		100					
			2.5	113.5																
		hard, damp, grey SHALE/TILL complex	3	113	28				9				4		83					
			3.5	112.5																
			4	112	50/100				9				5		100					
			4.5	111.5																
		grey SHALE BEDROCK			50/125				5				6		91					
		END OF BOREHOLE			50/100				5				7		100					
				LOGGED BY: RG				DRILLING DATE: 15-Dec-2020												
				INPUT BY: SA				MONITORING DATE:												
				REVIEWED BY: VN				PAGE 1 OF 1												

CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: MW111										
ADDRESS: 1590 & 1650 Dundas Street East				STATION:														
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.9										
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling														
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug										
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> DRIVEN <input checked="" type="checkbox"/> CORING <input type="checkbox"/> DYNAMIC CONE <input type="checkbox"/> SHELBY <input type="checkbox"/> SPLIT SPOON																		
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					40	80	120	160	PL W.C. LL									
		Asphaltic Concrete (100 mm)	0															
		Granular Base (150 mm)																
		firm, damp to moist, greyish brown clayey silt (FILL)	0.5	119.5									1A	62				bentonite
		very stiff, damp, greyish brown CLAYEY SILT	1	119									1B					
		trace gravel, trace sand (TILL)											2	83				
		hard, damp, greyish brown CLAYEY SILT	1.5	118.5									3	100				sand
			2	118														sand + screen
		hard damp, greyish brown CLAYEY SILT	2.5	117.5									4	100				
		trace gravel, trace sand (TILL)																
		hard, damp, grey SHALE/TILL complex	3	117									5	100				
			3.5	116.5														
		grey SHALE BEDROCK	4	116									6	100				
		END OF BOREHOLE																
										LOGGED BY: RG		DRILLING DATE: 16-Dec-2020						
										INPUT BY: SA		MONITORING DATE:						
										REVIEWED BY: VN		PAGE 1 OF 1						

CLIENT: Hazlevue Investment				PROJECT NO.: CA20-149				RECORD OF: MW112											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 117.1											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		AUGER		DRIVEN		CORING		DYNAMIC CONE		SHELBY		SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
		Asphaltic Concrete (125 mm)	0	117	12								1A	100					sand
		Granular Base (225 mm)											1B						
		firm, damp, brown clayey silt (FILL)	0.5	116.5															
		very stiff, damp, brown CLAYEY SILT	1	116	23								2	89					bentonite
		trace gravel, trace sand (TILL)																	
		hard, damp, grey TILL/SHALE complex	1.5	115.5	26								3	100					
			2	115															
			2.5	114.5									4	83					
		Georgian Bay Formation:	3	114									5	100					
		TCR= 100% RQD= 34% grey Medium strong SHALE	3.5	113.5															
		moderately weathered intensely to moderately fractured	4	113									RC1						
		occasional thin limestone beddings	4.5	112.5															
		occasional thin clay seams	5	112															
		TCR= 100% RQD= 40 %	5.5	111.5									RC2						
			6	111															
		TCR= 98% RQD= 47%	6.5	110.5															
			7	110									RC3						sand
			7.5	109.5															
		UCS= 16.8 MPa	8	109															
		TCR= 98% RQD= 32%	8.5	108.5									RC4						
			9	108															sand + screen
					LOGGED BY: RG				DRILLING DATE: 16-Dec-2020										
					INPUT BY: SA				MONITORING DATE: 08-Jan-2021										
					REVIEWED BY: VN				PAGE 1 OF 2										

CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: MW112											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 117.1											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON									
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
					40	80	120	160	20	40	60	80							
		TCR= 100% Georgian Bay RQD= 32% Formation: grey Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings TCR= 87% occasional thin RQD= 37% clay seams	9.5 10 10.5 11 11.5 12	107.5 107 106.5 106 105.5 105									RC5 RC6						
		END OF BOREHOLE																	



LOGGED BY: RG


INPUT BY: SA

REVIEWED BY: VN

DRILLING DATE: 16-Dec-2020

MONITORING DATE: 08-Jan-2021

PAGE 2 OF 2

CLIENT: Hazlevue Investment				PROJECT NO.: CA20-149				RECORD OF: MW113										
ADDRESS: 1590 & 1650 Dundas Street East				STATION:														
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.0										
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling														
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug										
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> DRIVEN <input checked="" type="checkbox"/> CORING <input type="checkbox"/> DYNAMIC CONE <input type="checkbox"/> SHELBY <input type="checkbox"/> SPLIT SPOON																		
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					40	80	120	160	PL W.C. LL									
					N-VALUE (Blows/300mm)													
					20 40 60 80				20 40 60 80									
		Asphaltic Concrete (80 mm)	0	116	14								1A	92				bentonite
		Granular Base (200 mm)	0.5	115.5									1B	75				
		very stiff																
		damp to moist, dark brown clayey silt (FILL)																
		compact, wet, brown gravelly sand (FILL)	1	115	25								2A					
		hard, damp, brown CLAYEY SILT	1.5	114.5									2B					sand
		trace gravel																sand + screen
		trace sand (TILL)	2	114	41								3	75				
		hard, wet, grey TILL/SHALE complex	2.5	113.5	29								4	-				
			3	113														
			3.5	112.5	69								5	-				
													6	-				
		grey SHALE BEDROCK			50/125													
		END OF BOREHOLE																
										LOGGED BY: RG		DRILLING DATE: 15-Dec-2020						
										INPUT BY: SA		MONITORING DATE: 08-Jan-2021						
										REVIEWED BY: VN		PAGE 1 OF 1						

CLIENT: Hazlevue Investments				PROJECT NO.: CA20-149				RECORD OF: MW201												
ADDRESS: 1590 & 1650 Dundas Street East																				
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.0												
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling																
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug												
SAMPLE TYPE		AUGER		DRIVEN		CORING		DYNAMIC CONE		SHELBY		SPLIT SPOON								
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					N-VALUE (Blows/300mm)				PL W.C. LL											
		Asphaltic Concrete (125 mm)	0	116																
		Granular Base (275 mm)																		
		stiff, moist, black to dark brown silty clay trace gravel, trace sand trace organics (FILL)	0.5	115.5	9								1A		75					
			1	115									1B							
		very stiff, moist, brown CLAYEY SILT trace gravel, trace sand (TILL)	1.5	114.5	26								2A		78					
			2	114									2B							
		dense, moist, brown SANDY SILT trace gravel, trace clay (TILL)	2.5	113.5																
			3	113									3		100					
			3.5	112.5	44															
			4	112																
		Georgian Bay Formation: grey Weak to Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings	4.5	111.5	50/25								4		100					
		TCR= 98% RQD= 68%	5	111																
			5.5	110.5																
			6	110									RC1							
		TCR= 98% RQD= 91%	6.5	109.5																
			7	109																
			7.5	108.5																
		TCR= 98% RQD= 89%	8	108																
			8.5	107.5																
			9	107									RC3							
					LOGGED BY: JC				DRILLING DATE: 31-Aug-2021											
					INPUT BY: EM				MONITORING DATE:											
					REVIEWED BY: SA				PAGE 1 OF 2											

CLIENT: Hazleview Investments				PROJECT NO.: CA20-149				RECORD OF: MW201											
ADDRESS: 1590 & 1650 Dundas Street East																			
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.0											
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		<input type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
					40	80	120	160	20	40	60	80							
		TCR= 98% RQD= 94% Georgian Bay Formation: grey Medium strong SHALES moderately weathered moderately fractured occasional thin limestone beddings	9.5	106.5															
			10	106															
			10.5	105.5															
		TCR= 97% RQD= 79%	11	105															Sand
			11.5	104.5															Sand + Screen
			12	104															
			12.5	103.5															
		TCR= 100% RQD= 97%	13	103															
			13.5	102.5															
			14	102															
		TCR= 97% RQD= 87%	14.5	101.5															
			15	101															
			15.5	100.5															
		TCR= 100% RQD= 100%	16	100															
			16.5	99.5															
			17	99															
		END OF BOREHOLE																	
LOGGED BY: JC									DRILLING DATE: 31-Aug-2021										
INPUT BY: EM									MONITORING DATE:										
REVIEWED BY: SA									PAGE 2 OF 2										

CLIENT: Hazlevie Investments				PROJECT NO.: CA20-149				RECORD OF: MW202											
ADDRESS: 1590 & 1650 Dundas Street East																			
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.8											
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		<input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input checked="" type="checkbox"/> DYNAMIC CONE		<input checked="" type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
		Asphaltic Concrete (100 mm) Granular Base (400 mm)	0	116.5	47								1		75				
		stiff, moist, black to dark brown silty clay trace gravel, trace sand (FILL)	0.5	116															
		Limestone Slab	1	115.5															
		hard, moist SANDY CLAYEY SILT trace gravel (TILL)	3	114									3						
		greyish brown	3.5	113.5															
			4	113	50/115								3		86				
			4.5	112.5															
		grey	5	112	50								4		94				
		Georgian Bay Formation: grey Weak to Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings	5.5	111.5															
		TCR= 40% RQD= 0% TCR= 100% RQD= 24%	6	111															
			6.5	110.5									RC1						
			7	110															
			7.5	109.5															
			8	109															
		TCR= 91% RQD= 44%	8.5	108.5															
			9	108															
LOGGED BY: AD										DRILLING DATE: 01-Sept-2021									
INPUT BY: EM										MONITORING DATE:									
REVIEWED BY: SA										PAGE 1 OF 2									

CLIENT: Hazlevue Investments				PROJECT NO.: CA20-149				RECORD OF: MW202												
ADDRESS: 1590 & 1650 Dundas Street East																				
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.8												
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling																
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug												
SAMPLE TYPE		<input type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON								
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					N-VALUE (Blows/300mm)				PL W.C. LL											
					40	80	120	160	20	40	60	80								
		TCR= 98% RQD= 39%	9.5	107.5																
		Georgian Bay Formation: grey Medium strong SHALE moderately weathered moderately fractured occasional thin limestone beddings	10	107																
		TCR= 99% RQD= 40%	10.5	106.5									RC4							
			11	106															Sand	
			11.5	105.5															Sand + Screen	
		TCR= 99% RQD= 89%	12	105									RC5							
			12.5	104.5																
			13	104																
		TCR= 100% RQD= 87%	13.5	103.5									RC6							
			14	103																
			14.5	102.5																
			15	102									RC7							
		TCR= 99% RQD= 84%	15.5	101.5																
			16	101																
			16.5	100.5									RC8							
			17	100																
		END OF BOREHOLE																		
					LOGGED BY: AD					DRILLING DATE: 01-Sept-2021										
					INPUT BY: EM					MONITORING DATE:										
					REVIEWED BY: SA					PAGE 2 OF 2										

CLIENT: Hazlevue Investments				PROJECT NO.: CA20-149				RECORD OF: MW203			
ADDRESS: 1590 & 1650 Dundas Street East											
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.4			
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling							
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug			
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input checked="" type="checkbox"/> DYNAMIC CONE		<input checked="" type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON	

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)		WATER CONTENT (%)		SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					40	80	120	160							
0		Asphgaltic Concrete (50 mm)	0						1		70				
		Granular Base (225 mm)													
0.5		very dense, moist, brown silty clay	0.5	119											
1		trace gravel, trace sand (FILL)	1	118.5											
1.5		hard, moist, brown CLAYEY SILT	1.5	118											
2		trace gravel, trace sand (TILL)	2	117.5					2		100				
2.5			2.5	117											
3			3	116.5											
3.5			3.5	116					3		100				
4			4	115.5											
4.5		very dense, moist, grey SANDY SILT	4.5	115											
5		trace gravel, trace clay (TILL)	5	114.5					4		100				
5.5			5.5	114											
6		trace shale fragments	6	113.5					5		100				
6.5			6.5	113											
7			7	112.5											
7.5		Georgian Bay Formation: grey Weak to Medium strong SHALE	7.5	112					6		100				
8		moderately weathered fractured	8	111.5											
8.5		occasional thin limestone beddings	8.5	111											
9			9	110.5											

LOGGED BY: JC		DRILLING DATE: 02-Sept-2021	
INPUT BY: EM		MONITORING DATE:	
REVIEWED BY: SA		PAGE 1 OF 2	

CLIENT: Hazlevew Investments				PROJECT NO.: CA20-149				RECORD OF: MW203											
ADDRESS: 1590 & 1650 Dundas Street East																			
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.4											
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		<input type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
					40	80	120	160	20	40	60	80							
		TCR= 100% RQD= 91% Georgian Bay Formation: grey Medium strong SHALE moderately weathered moderately fractured occasional thin limestone beddings	9.5	110															
			10	109.5															
			10.5	109															
		TCR= 100% RQD= 100%	11	108.5															Sand
			11.5	108															Sand + Screen
			12	107.5															
		TCR= 95% RQD= 94%	12.5	107															
			13	106.5															
			13.5	106															
		TCR= 100% RQD= 100%	14	105.5															
			14.5	105															
			15	104.5															
		TCR= 98% RQD= 97%	15.5	104															
			16	103.5															
			16.5	103															
			17	102.5															
		END OF BOREHOLE																	
					LOGGED BY: JC					DRILLING DATE: 02-Sept-2021									
					INPUT BY: EM					MONITORING DATE:									
					REVIEWED BY: SA					PAGE 2 OF 2									

APPENDIX III
MECP WELL RECORD REPORT

Water Well Records

February 2, 2021

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TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
	17 614969 4830362 W	2006-07 7241	1.97				0012 5	7035423 (Z34340) A039337	BRWN SILT CLAY STNS 0017
MISSISSAUGA CITY	17 614584 4829701 W	2013-11 7472	2.04	0015		MO	0008 9	7212553 (Z182841) A158948	BRWN FSND PCKD 0005 GREY SILT CLAY HARD 0015 GREY SILT CLAY SHLE 0017
MISSISSAUGA CITY	17 615379 4830513 W	2013-01 7241	2			MT	0010 5	7197191 (Z165631) A143719	BLCK 0000 BRWN SAND GRVL LOOS 0001 BRWN SILT CLAY LOOS 0010 GREY SILT CLAY LOOS 0015
MISSISSAUGA CITY	17 615415 4830533 W	2013-01 7241	2			MT	0004 5	7197192 (Z165632) A143720	BRWN SAND GRVL LOOS 0001 BRWN SAND SILT LOOS 0009
MISSISSAUGA CITY	17 615421 4830525 W	2013-01 7241	2			MT	0010 5	7197193 (Z165633) A143669	BRWN SAND GRVL LOOS 0001 BRWN SAND SILT LOOS 0010 GREY SILT CLAY LOOS 0015
MISSISSAUGA CITY	17 615407 4830504 W	2013-01 7241	2			MT	0010 5	7197194 (Z165770) A143670	BLCK 0000 BRWN SAND GRVL LOOS 0001 BRWN SILT CLAY LOOS 0010 GREY SILT CLAY LOOS 0015
MISSISSAUGA CITY	17 615413 4830511 W	2013-01 7241	2			MT	0005 5	7197195 (Z165634) A143721	BLCK 0000 BRWN SAND GRVL LOOS 0001 BRWN SILT CLAY LOOS 0010
MISSISSAUGA CITY	17 615262 4829184 W	2012-08 6988						7199439 (M10768) A118393 P	
MISSISSAUGA CITY	17 614937 4830551 W	2013-04 7215	2			TH	0018 10	7202084 (Z159944) A142376	BRWN FILL SAND LOOS 0004 BRWN SILT GRVL 0009 GREY SILT GRVL DRY 0016 GREY 0018
MISSISSAUGA CITY	17 614790 4829621 W	2013-08 7247	2	UT		MT		7208354 (Z176638) A141126	BRWN SAND SILT GRVL 0005 GREY SAND SILT GRVL 0023
MISSISSAUGA CITY	17 614790 4829621 W	2013-08 7247		UT 0016				7208355 (Z176647) A141126 A	
MISSISSAUGA CITY	17 614669 4829597 W	2013-09 7472	0.75			MO	0010 10	7211032 (Z179091) A155421	BRWN SAND PCKD 0004 BRWN SILT CLAY DNSE 0010 GREY CLAY SILT GRVL 0020
MISSISSAUGA CITY	17 614483 4829645 W	2013-09 7472	0.75			MO	0010 10	7211034 (Z179090) A155420	BRWN SAND PCKD 0004 BRWN SILT CLAY DNSE 0010 GREY CLAY SILT GRVL 0020

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION	
MISSISSAUGA CITY	17 614375 4829829 W	2013-11 7472	2.04			MO	0010 10	7212549 (Z182851) A158954	BRWN FSND PCKD 0007 GREY SILT CLAY DNSE 0020	
MISSISSAUGA CITY	17 614433 4829870 W	2014-09 7241	1.5			MT	0004 10	7228413 (Z165543) A170577	BLCK 0004 BRWN SAND GRVL CLAY 0014	
MISSISSAUGA CITY	17 614559 4829726 W	2013-11 7472	2.04	0015		MO	0010 10	7212551 (Z182843) A158950	BRWN FSND PCKD 0005 GREY SILT CLAY HARD 0015 GREY SILT CLAY SHLE 0020	
MISSISSAUGA CITY	17 614916 4830333 W	2012-10 7241	2			MT	0010 10	7191113 (Z160767) A119305	BLCK 0000 BRWN SAND GRVL LOOS 0001 BRWN SILT SAND LOOS 0009 GREY SILT SAND LOOS 0020	
MISSISSAUGA CITY	17 614476 4829891 W	2013-11 7472	2.04			MO	0015 10	7212560 (Z182852) A158955	BRWN FSND PCKD 0007 GREY SILT CLAY DNSE 0023 GREY SHLE HARD 0025	
MISSISSAUGA CITY	17 614666 4829600 W	2014-05 7148						7220713 (Z186416) A		
MISSISSAUGA CITY	17 614584 4829698 W	2014-05 7148						7220714 (Z186417) A		
MISSISSAUGA CITY	17 614553 4829726 W	2014-05 7148						7220715 (Z186418) A		
MISSISSAUGA CITY	17 614566 4829714 W	2014-05 7148						7220716 (Z186419) A		
MISSISSAUGA CITY	17 614390 4829828 W	2014-09 7241	2			MT	0006 10	7228405 (Z165542) A170588	BRWN SAND SILT 0008 BRWN SILT CLAY SAND 0016	
MISSISSAUGA CITY	17 614431 4829931 W	2014-09 7241	2			MT	0006 10	7228406 (Z195954) A170578	BLCK 0003 BRWN SAND SILT 0010 GREY SILT SAND 0016	
MISSISSAUGA CITY	17 614504 4829788 W	2014-09 7241	2			MT	0006 10	7228407 (Z195958) A170576	GREY GRVL SAND 0005 BRWN SILT SAND 0010 BRWN SILT SAND CLAY 0016	
MISSISSAUGA CITY	17 614481 4829821 W	2014-09 7241	2			MT	0006 10	7228410 (Z195961) A165573	GREY 0001 BRWN SAND 0002 BRWN SILT CLAY 0012 GREY SILT CLAY SAND 0016	
MISSISSAUGA CITY	17 615120 4829472 W	2018-11 7320						7355114 (C44302) A259657 P		
MISSISSAUGA CITY	17 614505 4829855 W	2014-09 7241	2			MT	0006 10	7228412 (Z195959) A165575	BRWN 0004 BRWN SAND 0005 BRWN SILT SAND CLAY 0016	

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
MISSISSAUGA CITY	17 614569 4829716 W	2013-11 7472	2.04	0015		MO	0010 10	7212550 (Z182842) A158949	BRWN FSND PCKD 0005 GREY SILT CLAY HARD 0015 GREY SILT CLAY SHLE 0020
MISSISSAUGA CITY	17 615093 4829660 W	2010-04 7241	0.49			MT		7145408 (M07007) A097144	BRWN FILL LOOS 0079 GREY SILT SAND 0098
MISSISSAUGA CITY	17 614852 4829292 W	2004-08 6809	0.79				0006 5	4909651 (Z11194) A011027	BRWN SAND 0004 GREY SHLE 0011
MISSISSAUGA CITY	17 615281 4830620 W	2005-01 7215	2			NU	0003 10	4909660 (Z26010) A020503	
MISSISSAUGA CITY	17 615507 4830399 W	2005-12 7215	1.25			NU	0003 10	4910021 (Z38613) A026745	
MISSISSAUGA CITY	17 614350 4830424 W	2006-01 7215	2				0005 10	4910034 (Z38596) A031349	
MISSISSAUGA CITY	17 615320 4829969 W	2006-02 7241	2				0003 10	4910087 (Z43704) A036539 A	BRWN GRVL SAND 0004 BRWN CLAY SILT 0007 GREY CLAY SILT 0013
MISSISSAUGA CITY	17 614277 4829661 W	2006-07 7215	2				0010 10	4910335 (Z50053) A039264	
MISSISSAUGA CITY	17 614998 4830333 W	2006-09 6607	2.00	FR 0008			0005 10	4910347 (Z54956) A048454	BRWN SAND GRVL 0007 GREY SHLE 0015
MISSISSAUGA CITY	17 614165 4829261 W	2006-07 7241	1.5				0005 5	7035354 (Z51865) A046069 A	BRWN GRVL SAND LOOS 0004 BRWN SAND SILT SOFT 0008 GREY SHLE ROCK HARD 0010
MISSISSAUGA CITY	17 615517 4830443 W	2007-02 7241	2				0014 10	7043263 (Z59441) A051854	BRWN FILL SAND GRVL 0006 GREY SILT SAND GRVL 0017 GREY SILT SAND GRVL 0019 GREY 0024
MISSISSAUGA CITY	17 615461 4830029 W	2007-06 7238	2.00	0010			0006 14	7047171 (Z72604) A048756	BRWN SAND GRVL FILL 0005 GREY SILT SAND SNDY 0010 GREY SILT CLAY TILL 0016 GREY SHLE 0020
MISSISSAUGA CITY	17 615357 4830581 W	2007-07 7241	1.5			NU	0003 10	7048082 (Z74067) A056123	BRWN GRVL SAND FILL 0004 BRWN SAND GRVL 0008 GREY CLAY SILT DNSE 0012 GREY SHLE WTHD 0013
MISSISSAUGA CITY	17 614725 4830682 W	2008-04 7241						7105509 (M01512) A067193 A	

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
MISSISSAUGA CITY	17 615126 4829259 W	2012-11 6946						7193392 (C19549) A136751 P	
MISSISSAUGA CITY	17 615514 4830480 W	2010-01 6946	2.04	OT 0002		MO	0010 10	7139957 (Z109101) A094453	BRWN SAND STNS LOOS 0002 BRWN SILT CLAY SAND 0004 BRWN SILT CLAY STNS 0007 BRWN SILT CLAY STNS 0010 GREY SILT WBRG ---- 0020
MISSISSAUGA CITY	17 614956 4829505 W	2012-10 7230						7191934 (C19719) P	
MISSISSAUGA CITY	17 614982 4829230 W	2010-04 7238	2.00			TH		7146653 (M06034) A099600	BRWN SAND SILT 0007 GREY CLAY SILT SAND 0013 BLCK SHLE 0027
MISSISSAUGA CITY	17 614532 4829272 W	2010-12 7473	6 2	UT 0008		MO	0015 5	7159280 (Z126502) A111698	BRWN GRVL SAND PCKD 0001 BRWN SILT CLAY HARD 0007 GREY SHLE HARD 0020
MISSISSAUGA CITY	17 614533 4829282 W	2011-08 7215				TH		7168510 (Z136947) A111699 A	
MISSISSAUGA CITY	17 614968 4830354 W	2011-08 6946	2.04	FR 0009		MO	0010 10	7168811 (Z131596) A112916	BRWN SILT SAND LOOS 0005 GREY SILT STNS DNSE 0007 GREY SILT STNS DNSE 0010 GREY SILT STNS DNSE 0020
MISSISSAUGA CITY	17 615424 4829284 W	2011-12 7230						7179424 (C17731) A119551 P	
MISSISSAUGA CITY	17 614898 4829810 W	2012-02 7241	1.5			MT	0010 10	7183404 (Z145300) A087220	BRWN LOAM LOOS 0001 BRWN SAND STNS FILL 0012 BRWN WDFR DNSE 0013 BRWN CLAY SOFT 0020
MISSISSAUGA CITY	17 614894 4829755 W	2012-02 7241	1.5			MT	0022 5	7183407 (Z145316) A087221	BRWN LOAM SOFT 0002 BRWN SAND STNS FILL 0019 BRWN SHLE FCRD SOFT 0021 GREY SHLE FCRD 0027
MISSISSAUGA CITY	17 615212 4829569 W	2012-02 7241	1.5			MT	0008 10	7183741 (Z145314) A126496	BLCK GRVL LOOS 0001 BRWN FILL STNS SAND 0009 GREY FILL SAND STNS 0016 BLCK FILL GRVL SAND 0018
MISSISSAUGA CITY	17 614790 4830410 W	2012-10 7241	2.04			MT	0010 10	7190996 (Z157113) A138336	BRWN FILL SAND GRVL 0003 BRWN GRVL SILT DNSE 0015 GREY SILT CLAY DNSE 0020
MISSISSAUGA CITY	17 614798 4830436 W	2012-10 7241	2.04			MT	0010 10	7190997 (Z157114) A120868	BRWN FILL SAND GRVL 0003 BRWN GRVL SILT DNSE 0015 GREY SILT CLAY DNSE 0020
MISSISSAUGA CITY	17 614881 4830365 W	2012-10 7241	2			MT	0007 10	7190998 (Z160766) A119306	BLCK 0000 BRWN SAND GRVL LOOS 0008 GREY SAND SILT LOOS 0017

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
MISSISSAUGA CITY	17 614490 4829845 W	2014-09 7241	2			MT	0006 10	7228411 (Z195960) A165574	GREY 0001 BRWN SAND 0002 BRWN SILT CLAY 0012 GREY SILT CLAY SAND 0016
MISSISSAUGA CITY	17 614836 4829308 W	2008-08 6607	2.31	FR 0010		MO		7130892 (M03048) A074971	BRWN SAND SILT FILL 0002 GREY SILT TILL 0010 GREY SHLE LMSN ROCK 0025
MISSISSAUGA CITY	17 615427 4830325 W	2017-03 7437	2			MO	0010 5	7304767 (Z226923) A218179	BRWN SILT CLAY 0002 GREY SILT CLAY 0010 GREY SILT CLAY 0015
MISSISSAUGA CITY	17 615207 4829624 W	2017-08 7241	2			TH MO	0004 10	7295871 (Z263476) A183259	BRWN SAND SILT 0014
MISSISSAUGA CITY	17 615196 4829611 W	2017-08 7241	2			TH MO	0005 10	7295872 (Z263477) A217194	BRWN SILT SAND 0015
MISSISSAUGA CITY	17 615143 4829579 W	2017-08 7241	2			TH MO	0004 10	7295873 (Z263475) A180304	BRWN SILT SAND 0014
MISSISSAUGA CITY	17 615213 4829563 W	2017-08 7241	2			TH MO	0005 10	7295874 (Z263474) A208717	BRWN SILT SAND 0015
MISSISSAUGA CITY	17 614495 4829785 W	2015-06 7437						7248342 (C29621) A183928 P	
MISSISSAUGA CITY	17 615254 4829578 W	2017-08 7241	1.25			TH MO	0013 10	7295876 (Z263472) A217478	BRWN SILT SAND 0023
MISSISSAUGA CITY	17 614475 4829782 W	2014-09 7241	2			MT	0006 10	7228408 (Z195957) A166967	GREY GRVL SAND 0005 BRWN SILT SAND 0010 BRWN SILT SAND CLAY 0016
MISSISSAUGA CITY	17 615312 4829526 W	2017-08 7241	1.25			TH MO	0008 5	7295878 (Z267930) A217550	GREY GRVL 0000 BRWN FILL 0013 BRWN SAND 0018
MISSISSAUGA CITY	17 615398 4829505 W	2017-08 7241	2			TH MO	0003 7	7295879 (Z247596) A233959	GREY GRVL 0000 BRWN SAND 0005 GREY SHLE 0010
MISSISSAUGA CITY	17 615301 4829485 W	2017-08 7241	2			TH MO	0006 10	7295880 (Z247597) A185457	BLCK LOAM 0001 BRWN SAND SILT 0004 GREY SHLE 0016
MISSISSAUGA CITY	17 614851 4829812 W	2017-08 7241	2			TH MO	0014 10	7295870 (Z267935) A221689	BLCK 0000 BRWN FILL 0003 BRWN CLAY SILT 0014 GREY CLAY SILT 0017 GREY SHLE 0024

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
MISSISSAUGA CITY	17 615175 4829901 W	2017-10 7464						7303231 (C38159) A227117 P	
MISSISSAUGA CITY	17 615254 4829580 W	2017-08 7241	2			TH MO	0028 10	7295875 (Z263473) A211581	BRWN SILT SAND 0022 GREY SILT CLAY TILL 0024 GREY SHLE 0038
MISSISSAUGA CITY	17 615237 4829148 W	2018-02 6607	2.00	UT 0011		MO	0021 5	7311660 (Z266995) A232649	GREY ---- 0001 BRWN SAND GRVL FILL 0011 GREY SHLE LMSN LYRD 0026
MISSISSAUGA CITY	17 615328 4829181 W	2018-02 6607	2.00			MO	0023 3	7311661 (Z266987) A232648	BRWN SAND GRVL FILL 0011 GREY SHLE LMSN LYRD 0026
MISSISSAUGA CITY	17 615237 4829148 W	2018-02 6607	2.00	UT 0011		MO	0021 5	7311662 (Z266988) A232603	BRWN SAND GRVL FILL 0011 GREY SHLE LMSN LYRD 0026
MISSISSAUGA CITY	17 615251 4829271 W	2018-05 7215						7315981 (C42050) A246937 P	
MISSISSAUGA CITY	17 614984 4829707 W	2017-07 7241	2			TH MO	0003 10	7316119 (Z291824) A252058	BRWN SAND GRVL FILL 0013
MISSISSAUGA CITY	17 614981 4829706 W	2018-07 7241	2			TH MO	0018 10	7316120 (Z291819) A252057	BRWN SAND GRVL FILL 0015 BRWN SILT TILL 0020 GREY SHLE 0028
MISSISSAUGA CITY	17 615175 4830323 W	2019-04 7215						7333532 (C44021) A266434 P	
MISSISSAUGA CITY	17 614460 4829360 W	2018-08 7282						7338625 (C42337) A240989 P	
MISSISSAUGA CITY	17 615462 4830396 W	2019-09 7241	2		///:	MT	0005 8	7346065 (Z323574) A281658	BLCK ---- 0003 BRWN SILT SAND 0008 GREY SILT SAND TILL 0013
MISSISSAUGA CITY	17 615454 4830405 W	2019-09 7241	2		///:	MT	0004 6	7346066 (Z323575) A281657	GREY ---- 0000 BRWN SILT SAND SHLE 0010
MISSISSAUGA CITY	17 614444 4829332 W	2019-08 7464						7351583 (C46165) A205110 P	
MISSISSAUGA CITY	17 615163 4829498 W	2017-08 7241	2			TH MO	0016 10	7295881 (Z267964) A233961	BRWN SAND SILT 0008 GREY SHLE 0026

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
MISSISSAUGA CITY	17 615421 4830419 W	2016-09 7241	1.25			MT	0005 5	7273303 (Z238201) A205873	BRWN SAND GRVL 0004 BRWN SILT SAND SHLE 0010
MISSISSAUGA CITY	17 614464 4829823 W	2015-11 7501	2	UT		MT	0019 5	7255219 (Z224042) A165293	BRWN SAND GRVL LOOS 0003 GREY CLAY SILT 0024
MISSISSAUGA CITY	17 614231 4829455 W	2015-11 7241	2			MT	0004 10	7256601 (Z218012) A171206	BRWN SAND GRVL LOOS 0002 BRWN SAND SILT LOOS 0004 GREY SHLE HARD 0014
MISSISSAUGA CITY	17 614198 4829466 W	2015-11 7241	2			MT	0005 10	7256602 (Z207280) A170583	BRWN FILL LOOS 0001 BRWN SAND SILT LOOS 0003 GREY SHLE SILT DNSE 0015
MISSISSAUGA CITY	17 614214 4829451 W	2015-11 7241	2			MT	0005 10	7256603 (Z207279) A171205	BRWN SAND GRVL LOOS 0001 BRWN SAND SILT LOOS 0014 GREY SHLE DNSE 0015
MISSISSAUGA CITY	17 614206 4829436 W	2015-11 7241	2			MT	0005 10	7256604 (Z218010) A180462	BRWN FILL LOOS 0002 BRWN SAND SILT LOOS 0005 GREY SHLE DNSE 0015
MISSISSAUGA CITY	17 615331 4829575 W	2017-08 7241	1.25			TH MO	0014 10	7295877 (Z267892) A217529	BRWN SILT SAND GRVL 0024
MISSISSAUGA CITY	17 615458 4830407 W	2016-04 7241	1.25				0004 5	7273302 (Z241209) A205865	BRWN SAND GRVL 0005 BRWN SILT SAND SHLE 0009
MISSISSAUGA CITY	17 614820 4829809 W	2017-08 7241	2			TH MO	0010 10	7295869 (Z267934) A208746	BLCK 0000 BRWN FILL 0003 BRWN CLAY SILT 0014 GREY CLAY SILT 0017 GREY SHLE 0020
MISSISSAUGA CITY	17 615457 4830392 W	2016-09 7241	1.25			MT	0005 5	7273304 (Z238202) A205865	BLCK ---- 0000 BRWN SAND GRVL 0003 BRWN SILT SAND SHLE 0010
MISSISSAUGA CITY	17 615424 4830423 W	2016-09 7241	1.25			MT	0005 5	7273305 (Z238203) A205872	BRWN SAND GRVL 0004 BRWN SILT SAND SHLE 0010
MISSISSAUGA CITY	17 615427 4830424 W	2016-09 7241	1.25			MT	0004 5	7273306 (Z238204) A205871	BRWN SAND GRVL 0004 BRWN SILT SAND SHLE 0009
MISSISSAUGA CITY	17 614359 4830068 W	2016-10 7215						7276348 (C35121) A178752 P	
MISSISSAUGA CITY	17 614759 4829924 W	2017-08 7241	2			TH MO	0013 10	7295868 (Z267933) A221727	BLCK 0000 BRWN FILL 0003 BRWN CLAY SILT 0015 GREY CLAY SILT 0018 GREY SHLE 0023

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
MISSISSAUGA CITY	17 614570 4829975 W	2017-02 7230	1.97	UT 0019		TH MO	0010 10	7283312 (Z251284) A220780	BLCK ---- HARD 0000 GREY SAND GRVL DNSE 0006 GREY CLAY SILT SAND 0006 GREY SILT SNDY CLAY 0020
MISSISSAUGA CITY	17 614301 4829407 W	2017-03 7148						7285148 (Z248067) A	
MISSISSAUGA CITY	17 615233 4829166 W	2017-06 7215						7289572 (C37371) A212517 P	
MISSISSAUGA CITY	17 615024 4829801 W	2017-08 7241	2			TH MO	0005 10	7295861 (Z267890) A177256	BRWN SAND SILT 0012 GREY SHLE 0015
MISSISSAUGA CITY	17 614809 4829928 W	2017-08 7241	2			TH MO	0012 10	7295867 (Z267936) A233921	BLCK 0000 BRWN FILL 0003 BRWN CLAY SILT 0015 BRWN SILT SAND 0018 GREY SHLE 0022
MISSISSAUGA CITY	17 614400 4829530 W	2016-06 7247	2	UT 0024		TH MO	0015 10	7281324 (Z228888) A202372	BRWN SAND GRVL LOOS 0005 BRWN CLAY SAND HARD 0010 GREY SHLE WTHD 0025
MISSISSAUGA CITY	17 614784 4829903 W	2017-08 7241	1.25			TH MO	0003 9	7295866 (Z267932) A217503	GREY 0000 BRWN FILL 0003 BRWN SILT SAND 0009 GREY SILT SAND 0012
MISSISSAUGA CITY 01 002	17 615159 4829800 W	2005-07 6607	2.00	0009			0007 5	4909894 (Z32280) A026518	BRWN LOAM 0001 BRWN SAND DRY 0007 GREY SILT SAND DRY 0009 GREY TILL SAND WBRG 0012
MISSISSAUGA CITY DS N 01 003	17 614937 4829953 W	2017-08 7241	2			TH MO	0012 10	7295863 (Z267889) A217551	BRWN SAND SILT GRVL 0010 GREY SHLE 0022
MISSISSAUGA CITY DS N 01 003	17 614838 4830076 W	2017-08 7241	2			TH MO	0005 10	7295864 (Z267931) A217480	BLCK 0000 BRWN FILL 0003 BRWN CLAY SILT 0010 GREY SHLE 0015
MISSISSAUGA CITY DS N 01 003	17 614838 4830079 W	2017-08 7241	2			TH MO	0012 10	7295865 (Z247591) A217479	BLCK 0000 BRWN FILL 0003 BRWN SILT SAND 0008 GREY SHLE 0022
MISSISSAUGA CITY DS N 01 004	17 614236 4830065 W	2019-04 6607	2.00	UT 0012	///:	MO	0005 10	7331596 (EBS4SZJI) A243629	BRWN SAND FILL PCKD 0005 GREY SAND SILT HARD 0015
MISSISSAUGA CITY DS N 01 004	17 614560 4829885 W	7147	1.25	UT 0006		MO	0007 5	7321273 (Z271398) A247255	BRWN FILL 0002 BRWN SILT SAND GRVL 0003 GREY SAND SILT GRVL 0012
MISSISSAUGA CITY DS N 01 004	17 614394 4829912 W	2019-04 6607	2.00	UT 0012	///:	MO	0005 10	7331607 (VM7548LO) A242100	BRWN SAND FILL PCKD 0005 GREY SAND SILT HARD 0015

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
MISSISSAUGA CITY DS N 01 005	17 614230 4829954 W	2019-04 6607	2.00	UT 0007	///:	MO	0005 10	7331598 (GJKWZIPZ) A264600	BRWN SAND FILL PCKD 0005 GREY SAND SILT HARD 0015
MISSISSAUGA CITY DS N 01 005	17 614252 4830008 W	2019-04 6607	2.00	UT 0006	///:	MO	0005 10	7331592 (BZ2SNDF6) A242096	BRWN SAND FILL PCKD 0005 GREY SAND SILT HARD 0015
MISSISSAUGA CITY DS N 01 005	17 614349 4829853 W	2019-04 6607	2.00	UT 0009	///:	MO	0005 10	7331603 (OXESDTFX) A242097	BRWN SAND FILL PCKD 0005 GREY SAND SILT HARD 0015
MISSISSAUGA CITY DS S 01 003	17 615035 4829933 W	1978-04 3349	6 6	FR 0099	32/104/5/:30	DO		4905538 ()	BLCK LOAM 0002 BRWN CLAY GRVL 0051 RED SHLE 0104
MISSISSAUGA CITY DS S 01 004	17 614775 4830014 W	2017-08 7241	2			TH MO	0011 10	7295862 (Z267891) A179360	BRWN SILT SAND TILL 0016 GREY SHLE 0021
MISSISSAUGA CITY DS S 01 004	17 614630 4829874 W	2011-03 7295	1.79			MO		7164922 (Z120154) A	
MISSISSAUGA CITY DS S 01 005	17 614900 4829153 W	2019-04 7215						7333480 (C45116) A269254 P	
MISSISSAUGA CITY HSE	17 615358 4830437 W	2004-06 6032	1.97 1.97			NU	0005 10	4909491 (Z05474) A005315	BRWN CLAY GRVL DNSE 0005 GREY SHLE DNSE 0017
TORONTO CITY	17 615150 4829850 W	2004-06 6607	1.97	0007			0007 5	6928573 (Z14481) A011834	BRWN CLAY SILT 0006 BRWN SAND FSND 0009 BRWN SILT CLAY TILL 0010 GREY SHLE WTHD 0012
TORONTO CITY	17 614794 4829573 W	2008-08 6607	2.00	UK 0009		MO		7115828 (M03036) A069698	BLCK GRVL SAND 0001 GREY SILT GRVL TILL 0005 GREY SHLE ROCK 0010

TOWNSHIP CON LOT	UTM	DATE CNTR	CASING DIA	WATER	PUMP TEST	WELL USE	SCREEN	WELL	FORMATION
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Notes:
UTM: UTM in Zone, Easting, Northing and Datum is NAD83; L: UTM estimated from Centroid of Lot; W: UTM not from Lot Centroid
DATE CNTR: Date Work Completedand Well Contractor Licence Number
CASING DIA: .Casing diameter in inches
WATER: Unit of Depth in Fee. See Table 4 for Meaning of Code

PUMP TEST: Static Water Level in Feet / Water Level After Pumping in Feet / Pump Test Rate in GPM / Pump Test Duration in Hour : Minutes
WELL USE: See Table 3 for Meaning of Code
SCREEN: Screen Depth and Length in feet
WELL: WEL (AUDIT #) Well Tag . A: Abandonment; P: Partial Data Entry Only
FORMATION: See Table 1 and 2 for Meaning of Code

1. Core Material and Descriptive terms

Code	Description	Code	Description	Code	Description	Code	Description	Code	Description
BLDR	BOULDERS	FCRD	FRACTURED	IRFM	IRON FORMATION	PORS	POROUS	SOFT	SOFT
BSLT	BASALT	FGRD	FINE-GRAINED	LIMY	LIMY	PRDG	PREVIOUSLY DUG	SPST	SOAPSTONE
CGRD	COARSE-GRAINED	FGVL	FINE GRAVEL	LMSN	LIMESTONE	PRDR	PREV. DRILLED	STKY	STICKY
CGVL	COARSE GRAVEL	FILL	FILL	LOAM	TOPSOIL	QRTZ	QUARTZITE	STNS	STONES
CHRT	CHERT	FLDS	FELDSPAR	LOOS	LOOSE	QSND	QUICKSAND	STNY	STONEY
CLAY	CLAY	FLNT	FLINT	LTCL	LIGHT-COLOURED	QTZ	QUARTZ	THIK	THICK
CLN	CLEAN	FOSS	FOSILIFEROUS	LYRD	LAYERED	ROCK	ROCK	THIN	THIN
CLYY	CLAYEY	FSND	FINE SAND	MARL	MARL	SAND	SAND	TILL	TILL
CMTD	CEMENTED	GNIS	GNEISS	MGRD	MEDIUM-GRAINED	SHLE	SHALE	UNKN	UNKNOWN TYPE
CONG	CONGLOMERATE	GRNT	GRANITE	MGVL	MEDIUM GRAVEL	SHLY	SHALY	VERY	VERY
CRYS	CRYSTALLINE	GRSN	GREENSTONE	MRBL	MARBLE	SHRP	SHARP	WBRG	WATER-BEARING
CSND	COARSE SAND	GRVL	GRAVEL	MSND	MEDIUM SAND	SHST	SCHIST	WDFR	WOOD FRAGMENTS
DKCL	DARK-COLOURED	GRWK	GREYWACKE	MUCK	MUCK	SILT	SILT	WTHD	WEATHERED
DLMT	DOLOMITE	GVLY	GRAVELLY	OBDN	OVERBURDEN	SLTE	SLATE		
DNSE	DENSE	GYPS	GYPSUM	PCKD	PACKED	SLTY	SILTY		
DRTY	DIRTY	HARD	HARD	PEAT	PEAT	SNDS	SANDSTONE		
DRY	DRY	HPAN	HARDPAN	PGVL	PEA GRAVEL	SNDY	SANDYOAPSTONE		

2. Core Color

Code	Description
WHIT	WHITE
GREY	GREY
BLUE	BLUE
GREN	GREEN
YLLW	YELLOW
BRWN	BROWN
RED	RED
BLCK	BLACK
BLGY	BLUE-GREY

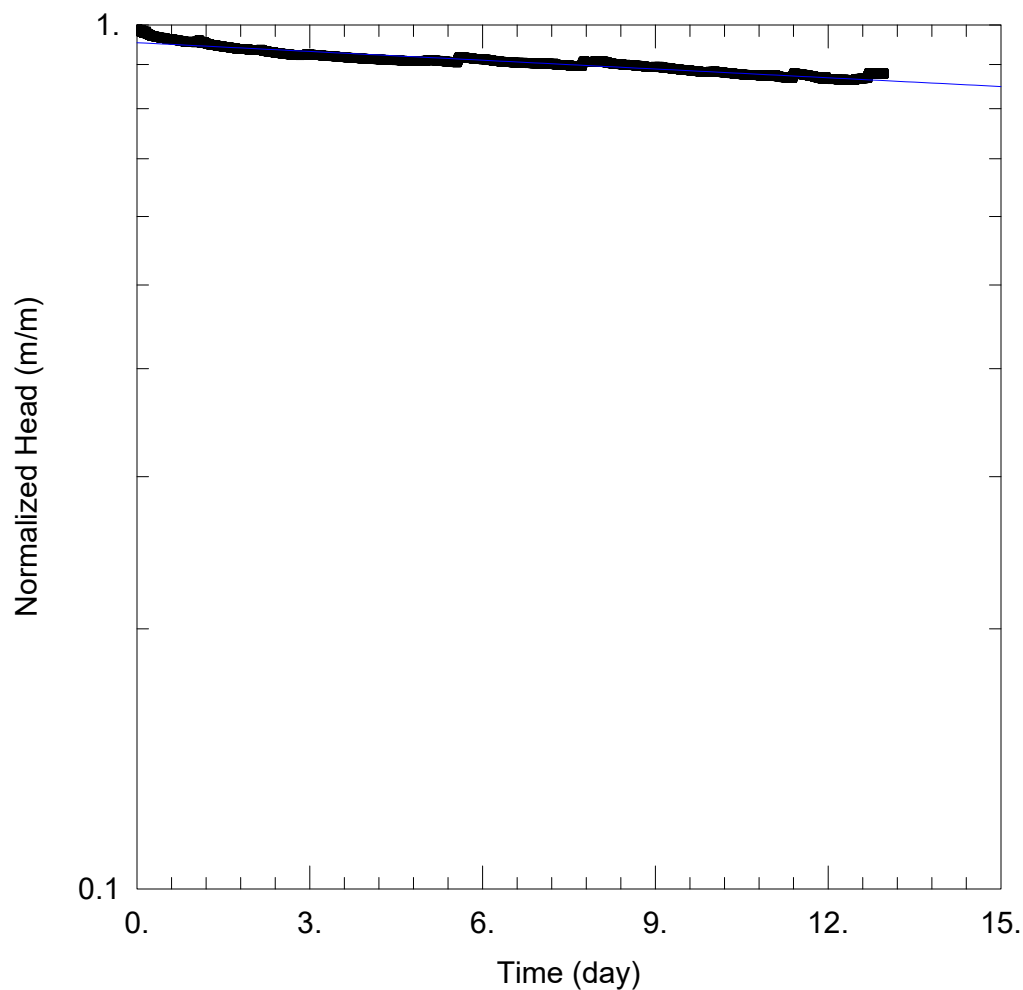
3. Well Use

Code	Description	Code	Description
DO	Domestic	OT	Other
ST	Livestock	TH	Test Hole
IR	Irrigation	DE	Dewatering
IN	Industrial	MO	Monitoring
CO	Commercial	MT	Monitoring TestHole
MN	Municipal		
PS	Public		
AC	Cooling And A/C		
NU	Not Used		

4. Water Detail

Code	Description	Code	Description
FR	Fresh	GS	Gas
SA	Salty	IR	Iron
SU	Sulphur		
MN	Mineral		
UK	Unknown		

APPENDIX IV
ANALYTICAL HYDRAULIC ANALYSES REPORTS



HYDROGEOLOGICAL ASSESSMENT

Data Set: D:\...\MW101.aqt

Date: 10/22/21

Time: 15:47:00

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.

Client: Hazelview Investments Inc.

Project: CA20-149

Location: 1650&1590 Dundas St E

Test Well: MW101

Test Date: 08-Jan-21

AQUIFER DATA

Saturated Thickness: 20. m

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW101)

Initial Displacement: 1.202 m

Static Water Column Height: 20. m

Total Well Penetration Depth: 6.7 m

Screen Length: 1.52 m

Casing Radius: 0.022 m

Well Radius: 0.0254 m

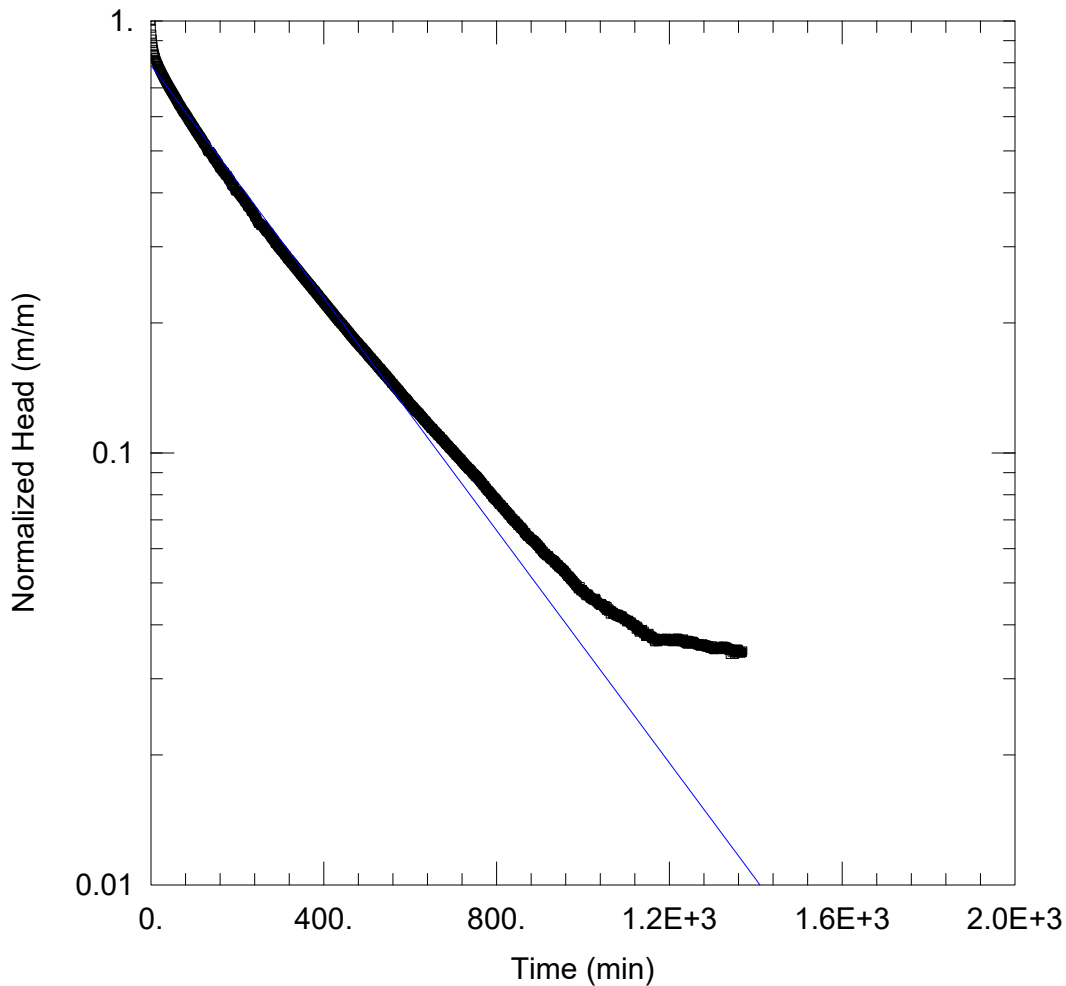
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 4.668E-11 m/sec

y0 = 1.146 m



HYDROGEOLOGICAL ASSESSMENT

Data Set: D:\...\MW102.aqt

Date: 10/22/21

Time: 15:50:20

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.

Client: Hazelview Investments Inc.

Project: CA20-149

Location: 1650&1590 Dundas St E

Test Well: MW102

Test Date: 08-Jan-21

AQUIFER DATA

Saturated Thickness: 20. m

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW102)

Initial Displacement: 1.259 m

Static Water Column Height: 20. m

Total Well Penetration Depth: 7.6 m

Screen Length: 1.52 m

Casing Radius: 0.022 m

Well Radius: 0.0254 m

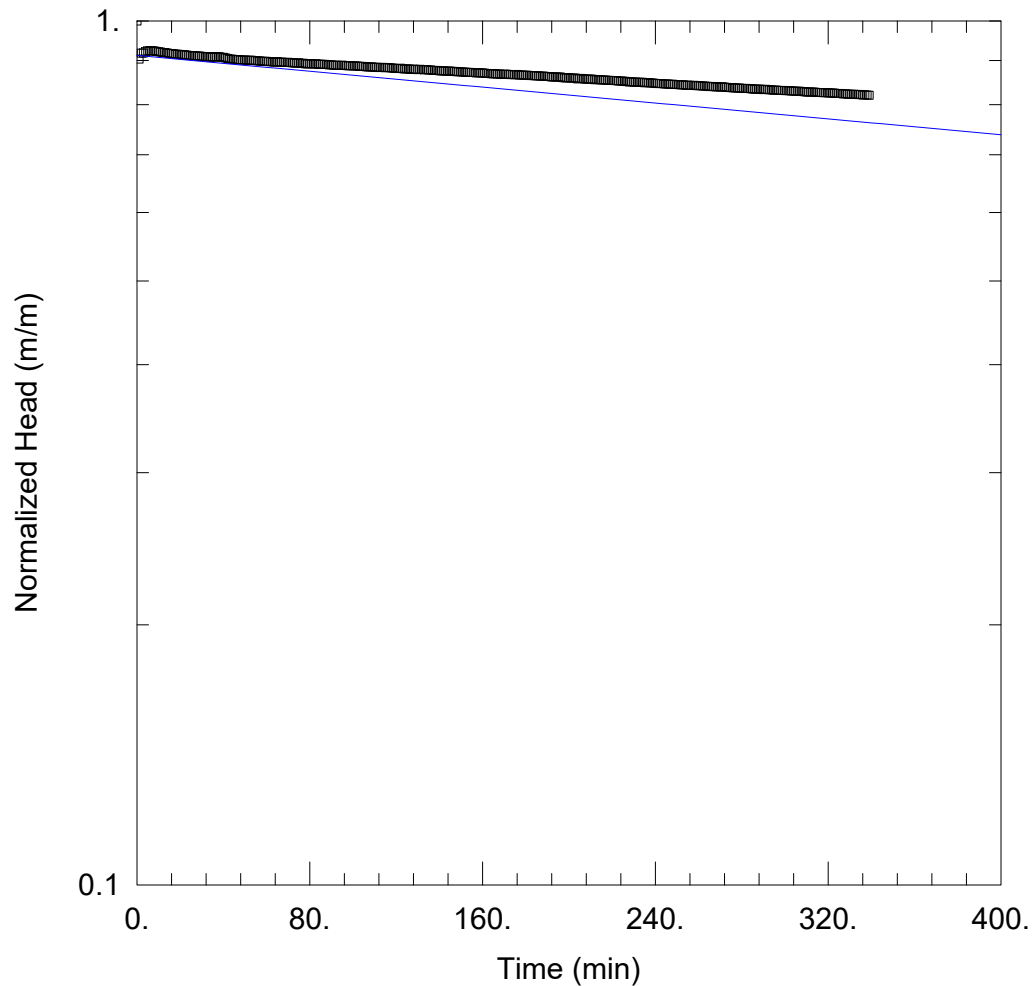
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

K = 2.71E-8 m/sec

y0 = 0.9923 m



HYDROGEOLOGICAL ASSESSMENT

Data Set: D:\...\MW111.aqt

Date: 10/22/21

Time: 15:54:12

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.

Client: Hazelview Investments Inc.

Project: CA20-149

Location: 1650&1590 Dundas St E

Test Well: MW111

Test Date: 21-Jan-21

AQUIFER DATA

Saturated Thickness: 20. m

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW111)

Initial Displacement: 1.087 m

Static Water Column Height: 20. m

Total Well Penetration Depth: 3.05 m

Screen Length: 1.52 m

Casing Radius: 0.022 m

Well Radius: 0.0254 m

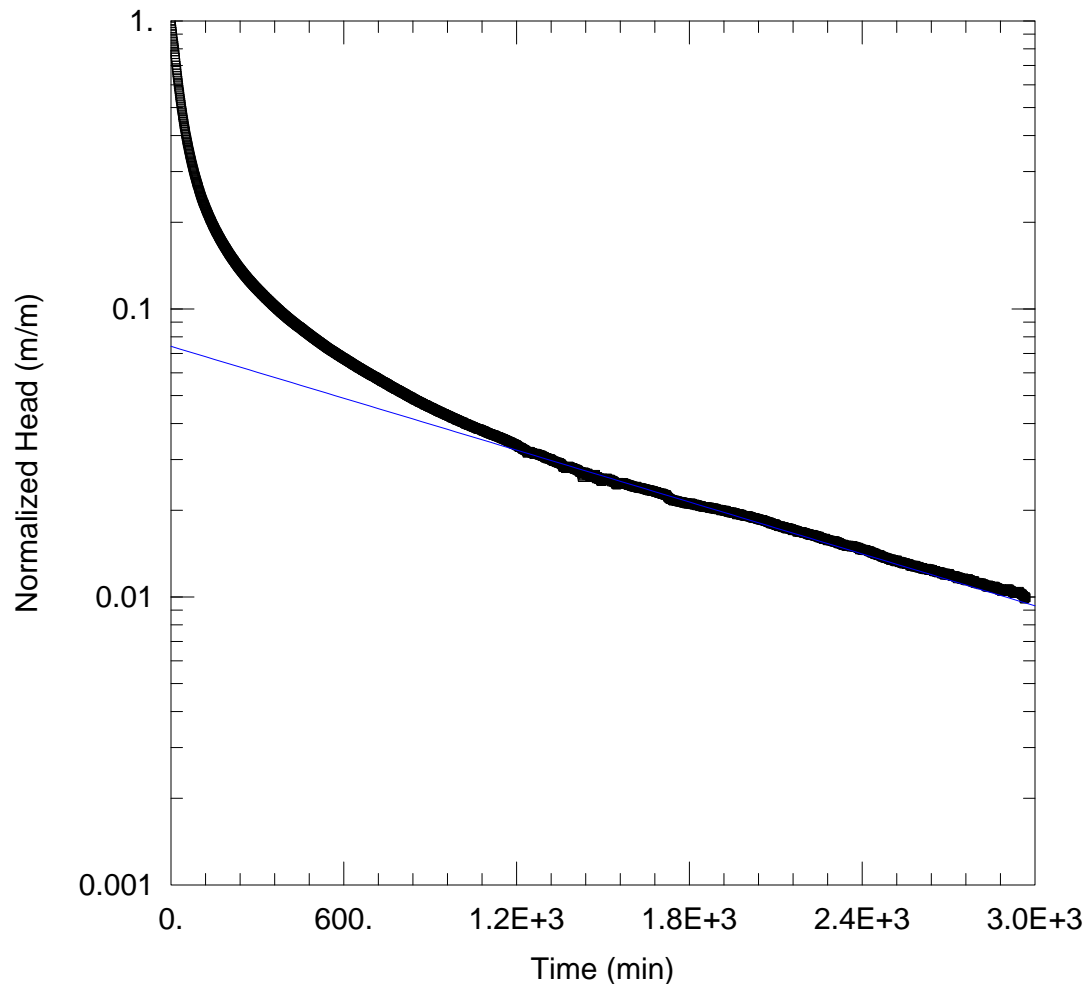
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 4.123E-9$ m/sec

$y_0 = 0.9915$ m



HYDROGEOLOGICAL ASSESSMENT

Data Set: S:\...\MW112.aqt

Date: 02/05/21

Time: 10:10:39

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.

Client: Hazelview Investments Inc.

Project: CA20-149

Location: 1650&1590 Dundas St E

Test Well: MW112

Test Date: 08-Jan-21

AQUIFER DATA

Saturated Thickness: 0.2 m

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW112)

Initial Displacement: 6.12 m

Static Water Column Height: 6.4 m

Total Well Penetration Depth: 6.37 m

Screen Length: 1.52 m

Casing Radius: 0.022 m

Well Radius: 0.0254 m

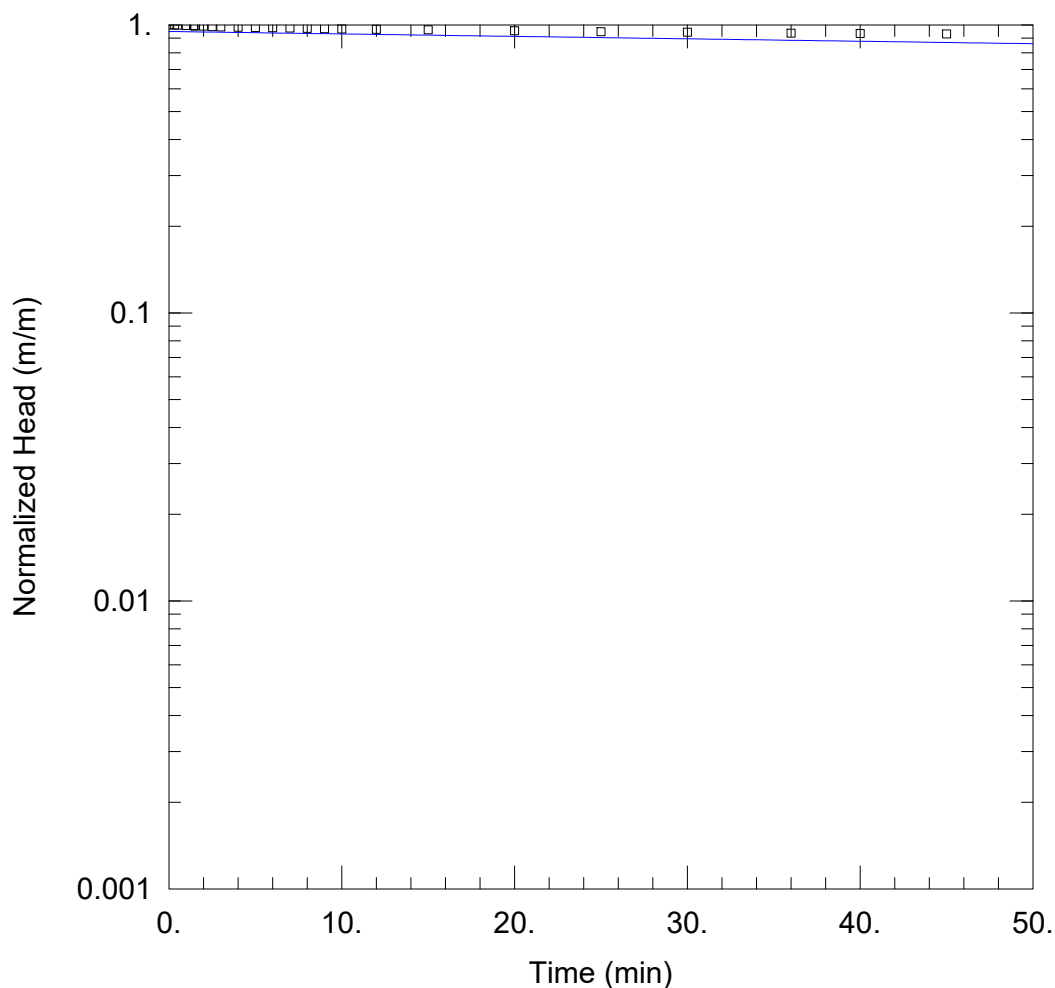
SOLUTION

Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 4.046E-8$ m/sec

$y_0 = 0.4537$ m



HYDROGEOLOGICAL ASSESSMENT

Data Set: D:\...\MW201.aqt

Date: 10/22/21

Time: 15:37:41

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.

Client: Hazelview Investments Inc.

Project: CA20-149

Location: 1650&1590 Dundas St E

Test Well: MW201

Test Date: September 16, 2021

AQUIFER DATA

Saturated Thickness: 20. m

Anisotropy Ratio (K_z/K_r): 1.

WELL DATA (MW112)

Initial Displacement: 3.605 m

Static Water Column Height: 20. m

Total Well Penetration Depth: 13.68 m

Screen Length: 3. m

Casing Radius: 0.022 m

Well Radius: 0.0254 m

SOLUTION

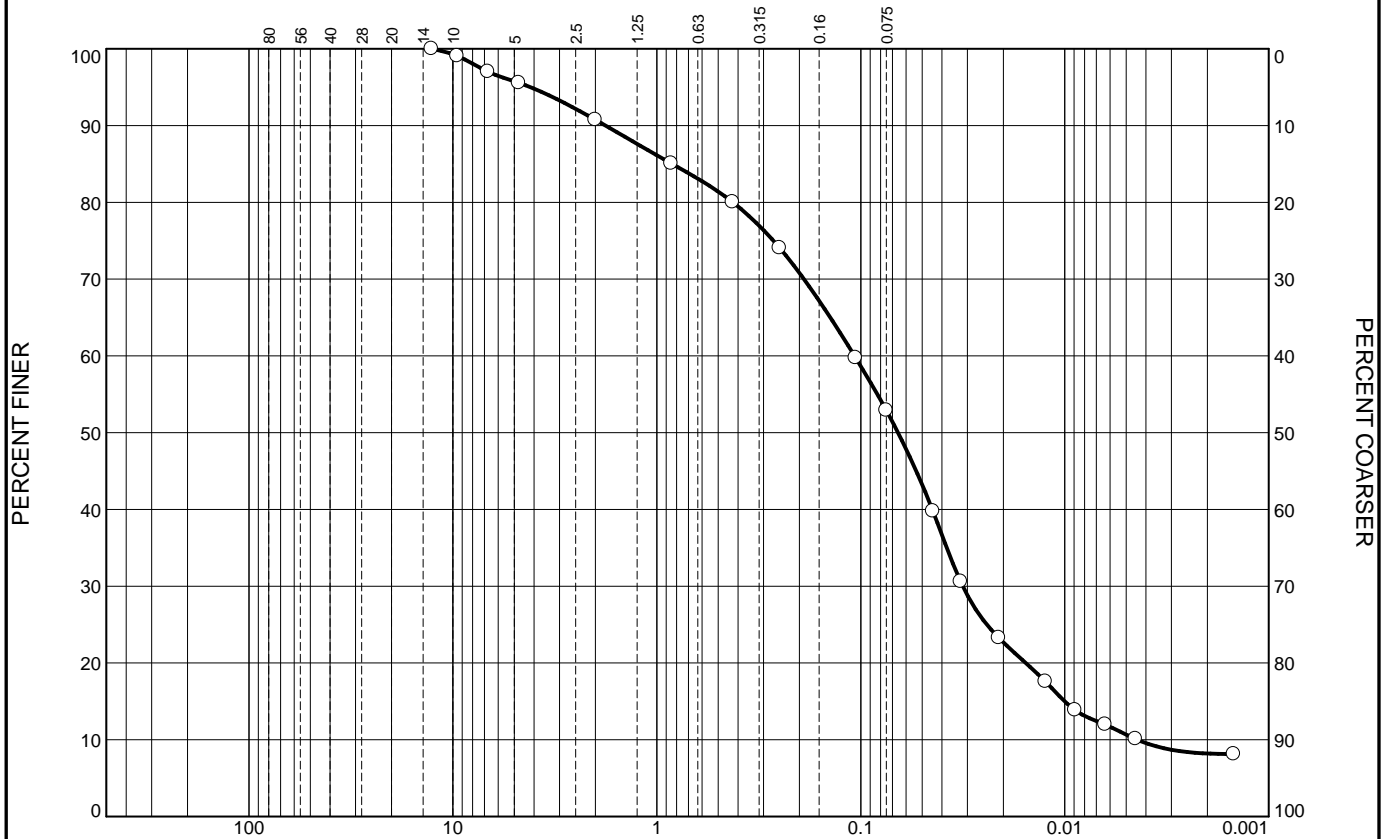
Aquifer Model: Unconfined

Solution Method: Bouwer-Rice

$K = 1.037E-8$ m/sec

$y_0 = 3.42$ m

Particle Size Distribution Report



GRAIN SIZE - mm.

	% +3"		% Gravel			% Sand		% Fines		
						Coarse	Fine	Silt		Clay
<input type="radio"/>	0.0		9.3			10.7	27.1	44.7		8.2
<input checked="" type="checkbox"/>	LL	PL	D85	D60	D50	D30	D15	D10	Cc	Cu
<input type="radio"/>			0.8422	0.1074	0.0657	0.0316	0.0100	0.0044	2.11	24.36

Material Description	USCS	AASHTO
<input type="radio"/> SAND and SILT trace gravel trace clay		

Project No. CA20-149 Client: Hazelview Investments Inc Project: 1530-1650 Dundas St East Mississauga <input type="radio"/> Sample Number: MW102, SS7	Remarks: <div>Figure 1</div>
Terrapex	

Tested By: AM Checked By: DM

APPENDIX V
ANALYTICAL LABORATORY ANALYSES REPORTS

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
90 SCARSDALE RD
TORONTO, ON M3B2R7
(905) 474-5265

ATTENTION TO: Zen Keizars

PROJECT: CA20-149

AGAT WORK ORDER: 21T702306

MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

ULTRA TRACE REVIEWED BY: Anastasia Kazakova, chimiste

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Feb 01, 2021

PAGES (INCLUDING COVER): 25

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 following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- 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.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

E. Coli (Using MI Agar)

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

		SAMPLE DESCRIPTION:		MW107	MW112
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-01-21 12:00	2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	1987595
Escherichia coli	CFU/100mL	200	1	ND	ND

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to City of Mississauga - Storm Sewer Discharge
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.
1987562-1987595 ND - Not Detected.
Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



Nivine Basly



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

Mississauga Storm - Organics

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

		SAMPLE DESCRIPTION:		MW107	MW112
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-01-21 12:00	2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	1987595
Benzene	mg/L		0.0002	<0.0002	<0.0002
Toluene	mg/L	0.002	0.0002	<0.0002	<0.0002
Ethylbenzene	mg/L	0.002	0.0001	<0.0001	<0.0001
Xylenes (Total)	mg/L	0.0044	0.0001	<0.0001	<0.0001
Total PAHs	mg/L	0.002	0.0003	<0.0003	<0.0003

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to City of Mississauga - Storm Sewer Discharge
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.

1987562-1987595 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:



Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

Peel Region Sanitary - Organics

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

		SAMPLE DESCRIPTION:		MW107	MW112
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-01-21 12:00	2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	1987595
Oil and Grease (animal/vegetable) in water	mg/L	150	0.5	<0.5	<0.5
Oil and Grease (mineral) in water	mg/L	15	0.5	<0.5	<0.5
Methylene Chloride	mg/L	2	0.0003	<0.0003	<0.0003
Methyl Ethyl Ketone	mg/L	8.0	0.0009	<0.0009	<0.0009
cis- 1,2-Dichloroethylene	mg/L	4	0.0002	<0.0002	<0.0002
Chloroform	mg/L	0.04	0.0002	<0.0002	<0.0002
Benzene	mg/L	0.01	0.0002	<0.0002	<0.0002
Trichloroethylene	mg/L	0.4	0.0002	<0.0002	<0.0002
Toluene	mg/L	0.27	0.0002	<0.0002	<0.0002
Tetrachloroethylene	mg/L	1	0.0001	<0.0001	<0.0001
trans-1,3-Dichloropropylene	mg/L	0.14	0.0003	<0.0003	<0.0003
Ethylbenzene	mg/L	0.16	0.0001	<0.0001	<0.0001
1,1,2,2-Tetrachloroethane	mg/L	1.4	0.0001	<0.0001	<0.0001
Styrene	mg/L	0.2	0.0001	<0.0001	<0.0001
1,2-Dichlorobenzene	mg/L	0.05	0.0001	<0.0001	<0.0001
1,4-Dichlorobenzene	mg/L	0.08	0.0001	<0.0001	<0.0001
Xylenes (Total)	mg/L	1.4	0.0001	<0.0001	<0.0001
PCBs	mg/L	0.001	0.0002	<0.0002	<0.0002
Di-n-butyl phthalate	mg/L	0.08	0.0005	<0.0005	<0.0005
Bis(2-Ethylhexyl)phthalate	mg/L	0.012	0.0005	<0.0005	<0.0005

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Sanitary 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.

1987562-1987595 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.

Total Nonylphenol Ethoxylates is reported as the sum of Nonylphenol Ethoxylate and Nonylphenol Diethoxylate. NP/NPE analysis done at AGAT 5623 McAdam Road Mississauga location.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

N Popiwko



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

Nonylphenol and Nonylphenol Ethoxylates (Ontario, mg/L)

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

		SAMPLE DESCRIPTION:		MW107	MW112
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-01-21 12:00	2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	1987595
Total Nonylphenol	mg/L	0.02	0.001	<0.001	<0.001
NP1EO	mg/L		0.001	<0.001	<0.001
NP2EO	mg/L		0.0003	<0.0003	<0.0003
Total Nonylphenol Ethoxylates	mg/L	0.2	0.001	<0.001	<0.001

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Sanitary 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.

Analysis performed at AGAT Montreal (unless marked by *)

Certified By:





AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

BOD

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

		SAMPLE DESCRIPTION:		MW107	MW112
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-01-21 12:00	2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	1987595
Biochemical Oxygen Demand, Total	mg/L	15	2	15	6

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to City of Mississauga - Storm Sewer Discharge

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.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Iris Veraástegui



Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

Mississauga Storm Sewer Use Bylaw- Inorganics

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

		SAMPLE DESCRIPTION:		MW107	MW112
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-01-21 12:00	2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	1987595
pH	pH Units	6.0-9.0	NA	7.59	8.02
Total Suspended Solids	mg/L	15	10	<10	17
Total Residual Chlorine	mg/L	1.0	0.1	<0.1	<0.1
Total Cyanide	mg/L	0.02	0.002	<0.002	<0.002
Phenols	mg/L	0.008	0.001	0.002	0.002
Total Phosphorus	mg/L	0.4	0.02	<0.02	0.06
Total Kjeldahl Nitrogen	mg/L	1	0.10	3.09	2.17
Chromium VI	mg/L	0.04	0.005	<0.005	<0.005
Total Aluminum	mg/L	1.0	0.010	0.031	1.22
Total Arsenic	mg/L	0.02	0.015	<0.015	<0.015
Total Cadmium	mg/L	0.008	0.005	<0.005	<0.005
Total Chromium	mg/L	0.08	0.015	<0.015	<0.015
Total Copper	mg/L	0.04	0.010	<0.010	<0.010
Total Lead	mg/L	0.12	0.020	<0.020	<0.020
Total Manganese	mg/L	0.05	0.020	0.238	0.040
Total Mercury	mg/L	0.0004	0.0002	<0.0002	<0.0002
Total Nickel	mg/L	0.08	0.015	<0.015	<0.015
Total Selenium	mg/L	0.02	0.020	<0.020	<0.020
Total Silver	mg/L	0.12	0.010	<0.010	<0.010
Total Zinc	mg/L	0.04	0.020	<0.020	<0.020

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to City of Mississauga - Storm Sewer Discharge

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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Iris Veraistegui



Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

Peel Sanitary Sewer Use By-Law - Inorganics

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

SAMPLE DESCRIPTION:				MW107		MW112
SAMPLE TYPE:				Water		Water
DATE SAMPLED:				2021-01-21 12:00		2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	RDL	1987595
pH	pH Units	5.5-10	NA	7.59	NA	8.02
Total Suspended Solids	mg/L	350	10	<10	10	17
Fluoride	mg/L	10	0.13	<0.13	0.07	<0.07
Sulphate	mg/L	1500	2.0	191	1.0	222
Total Cyanide	mg/L	2	0.002	<0.002	0.002	<0.002
Phenols	mg/L	1.0	0.002	0.002	0.002	<0.002
Total Phosphorus	mg/L	10	0.02	<0.02	0.02	0.06
Total Kjeldahl Nitrogen	mg/L	100	0.10	3.09	0.10	2.17
Total Aluminum	mg/L	50	0.010	0.031	0.010	1.22
Total Antimony	mg/L	5	0.020	<0.020	0.020	<0.020
Total Arsenic	mg/L	1	0.015	<0.015	0.015	<0.015
Total Cadmium	mg/L	0.7	0.010	<0.010	0.010	<0.010
Total Chromium	mg/L	5	0.015	<0.015	0.015	<0.015
Total Cobalt	mg/L	5	0.020	<0.020	0.020	<0.020
Total Copper	mg/L	3	0.010	<0.010	0.010	<0.010
Total Lead	mg/L	3	0.020	<0.020	0.020	<0.020
Total Manganese	mg/L	5	0.020	0.238	0.020	0.040
Total Mercury	mg/L	0.01	0.0002	<0.0002	0.0002	<0.0002
Total Molybdenum	mg/L	5	0.020	<0.020	0.020	<0.020
Total Nickel	mg/L	3	0.015	<0.015	0.015	<0.015
Total Selenium	mg/L	1	0.020	<0.020	0.020	<0.020
Total Silver	mg/L	5	0.010	<0.010	0.010	<0.010
Total Tin	mg/L	5	0.025	<0.025	0.025	<0.025
Total Titanium	mg/L	5	0.020	<0.020	0.020	0.038
Total Zinc	mg/L	3	0.020	<0.020	0.020	<0.020

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Sanitary 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.

1987562-1987595 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

José Verástegui



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

cBOD

DATE RECEIVED: 2021-01-21

DATE REPORTED: 2021-02-01

		SAMPLE DESCRIPTION:		MW107	MW112
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2021-01-21 12:00	2021-01-21 14:00
Parameter	Unit	G / S	RDL	1987562	1987595
Biochemical Oxygen Demand, Carbonaceous	mg/L	300	2	8	<2

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Sanitary 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.

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

Iris Veraistegui



Exceedance Summary

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Zen Keizars

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
1987562	MW107	ON Mississauga SM	Mississauga Storm Sewer Use Bylaw- Inorganics	Total Kjeldahl Nitrogen	mg/L	1	3.09
1987562	MW107	ON Mississauga SM	Mississauga Storm Sewer Use Bylaw- Inorganics	Total Manganese	mg/L	0.05	0.238
1987595	MW112	ON Mississauga SM	Mississauga Storm Sewer Use Bylaw- Inorganics	Total Aluminum	mg/L	1.0	1.22
1987595	MW112	ON Mississauga SM	Mississauga Storm Sewer Use Bylaw- Inorganics	Total Kjeldahl Nitrogen	mg/L	1	2.17
1987595	MW112	ON Mississauga SM	Mississauga Storm Sewer Use Bylaw- Inorganics	Total Suspended Solids	mg/L	15	17

Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

ATTENTION TO: Zen Keizars

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

SAMPLED BY: AMD/ST

Microbiology Analysis

RPT Date: Feb 01, 2021			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	
								Lower	Upper		Lower	Upper

E. Coli (Using MI Agar)

Escherichia coli	1986079	ND	ND	NA	<1
------------------	---------	----	----	----	----

Comments: ND - Not Detected, NA - % RPD Not Applicable.

Certified By:



Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

ATTENTION TO: Zen Keizars

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

SAMPLED BY: AMD/ST

Trace Organics Analysis

RPT Date: Feb 01, 2021			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
Peel Region Sanitary - Organics															
Oil and Grease (animal/vegetable) in water	1977184		< 0.5	< 0.5	NA	< 0.5	90%	70%	130%	102%	70%	130%	106%	70%	130%
Oil and Grease (mineral) in water	1977184		< 0.5	< 0.5	NA	< 0.5	84%	70%	130%	86%	70%	130%	77%	70%	130%
Methylene Chloride	1991366		< 0.0003	< 0.0003	0.0%	< 0.0003	97%	50%	140%	110%	60%	130%	99%	50%	140%
Methyl Ethyl Ketone	1991366		< 0.0009	< 0.0009	0.0%	< 0.0009	104%	50%	140%	80%	50%	140%	78%	50%	140%
cis- 1,2-Dichloroethylene	1991366		< 0.0002	< 0.0002	0.0%	< 0.0002	97%	60%	130%	107%	60%	130%	106%	60%	130%
Chloroform	1991366		< 0.0002	< 0.0002	0.0%	< 0.0002	96%	60%	130%	111%	60%	130%	107%	60%	130%
Benzene	1991366		< 0.0002	< 0.0002	0.0%	< 0.0002	85%	50%	140%	99%	60%	130%	98%	50%	140%
Trichloroethylene	1991366		< 0.0002	< 0.0002	0.0%	< 0.0002	105%	50%	140%	120%	60%	130%	104%	50%	140%
Toluene	1991366		< 0.0002	< 0.0002	0.0%	< 0.0002	94%	50%	140%	117%	60%	130%	115%	50%	140%
Tetrachloroethylene	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001	110%	60%	130%	121%	60%	130%	111%	60%	130%
trans-1,3-Dichloropropylene	1991366		< 0.0003	< 0.0003	0.0%	< 0.0003	106%	60%	130%	75%	60%	130%	99%	60%	130%
Ethylbenzene	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001	95%	50%	140%	112%	60%	130%	111%	50%	140%
1,1,2,2-Tetrachloroethane	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001	104%	50%	140%	108%	60%	130%	112%	50%	140%
Styrene	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001	91%	50%	140%	113%	60%	130%	106%	50%	140%
1,2-Dichlorobenzene	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001	104%	50%	140%	113%	60%	130%	105%	50%	140%
1,4-Dichlorobenzene	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001	105%	50%	140%	111%	60%	130%	100%	50%	140%
Xylenes (Total)	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001		60%	130%		60%	130%		60%	130%
PCBs	1987562	1987562	< 0.0002	< 0.0002	NA	< 0.0002	102%	60%	130%	96%	60%	130%	98%	60%	130%
Di-n-butyl phthalate	1979247		< 0.0005	< 0.0005	NA	< 0.0005	101%	60%	130%	88%	60%	130%	96%	60%	130%
Bis(2-Ethylhexyl)phthalate	1979247		< 0.0005	< 0.0005	NA	< 0.0005	114%	50%	140%	110%	50%	140%	85%	50%	140%
Mississauga Storm - Organics															
Benzene	1991366		<0.0002	<0.0002	NA	< 0.0002	85%	50%	140%	99%	60%	130%	98%	50%	140%
Toluene	1991366		< 0.0002	< 0.0002	0.0%	< 0.0002	94%	50%	140%	117%	60%	130%	115%	50%	140%
Ethylbenzene	1991366		< 0.0001	< 0.0001	0.0%	< 0.0001	95%	50%	140%	112%	60%	130%	111%	50%	140%
Total PAHs	1978079		< 0.0003	< 0.0003	NA	< 0.0003	101%	60%	140%	88%	60%	140%	96%	60%	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:



Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

ATTENTION TO: Zen Keizars

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

SAMPLED BY: AMD/ST

Ultra Trace Analysis

RPT Date: Feb 01, 2021			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	
								Lower	Upper		Lower	Upper

Nonylphenol and Nonylphenol Ethoxylates (Ontario, mg/L)

Total Nonylphenol	1	1987595	< 0.001	< 0.001	NA	< 0.001	85%	60%	140%	NA	60%	140%	NA	60%	140%
NP1EO	1	1987595	< 0.001	< 0.001	NA	< 0.001	75%	60%	140%	NA	60%	140%	NA	60%	140%
NP2EO	1	1987595	< 0.0003	< 0.0003	NA	< 0.0003	95%	60%	140%	NA	60%	140%	NA	60%	140%

Certified By:



Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

ATTENTION TO: Zen Keizars

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

SAMPLED BY: AMD/ST

Water Analysis															
RPT Date: Feb 01, 2021			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

Peel Sanitary Sewer Use By-Law - Inorganics

pH	1988879		7.61	7.60	0.1%	NA	100%	90%	110%						
Total Suspended Solids	2007687		<10	<10	NA	< 10	96%	80%	120%						
Fluoride	1989070		<0.05	<0.05	NA	< 0.05	108%	90%	110%	101%	90%	110%	98%	85%	115%
Sulphate	1989070		54.3	53.2	2.0%	< 0.10	95%	70%	130%	107%	80%	120%	97%	70%	130%
Total Cyanide	1987562	1987562	<0.002	<0.002	NA	< 0.002	99%	70%	130%	91%	80%	120%	110%	70%	130%
Phenols	1987418		<0.002	<0.002	NA	< 0.002	101%	90%	110%	97%	90%	110%	84%	80%	120%
Total Phosphorus	2004940		<0.02	<0.02	NA	< 0.02	101%	70%	130%	102%	80%	120%	102%	70%	130%
Total Kjeldahl Nitrogen	1947438		24.8	25.2	1.6%	< 0.10	104%	70%	130%	103%	80%	120%	113%	70%	130%
Total Aluminum	1925683		0.015	0.016	NA	< 0.010	100%	70%	130%	102%	80%	120%	107%	70%	130%
Total Antimony	1925683		<0.020	<0.020	NA	< 0.020	97%	70%	130%	98%	80%	120%	103%	70%	130%
Total Arsenic	1925683		<0.015	<0.015	NA	< 0.015	101%	70%	130%	99%	80%	120%	106%	70%	130%
Total Cadmium	1925683		<0.010	<0.010	NA	< 0.010	101%	70%	130%	101%	80%	120%	100%	70%	130%
Total Chromium	1925683		<0.015	<0.015	NA	< 0.015	100%	70%	130%	99%	80%	120%	104%	70%	130%
Total Cobalt	1925683		<0.020	<0.020	NA	< 0.020	100%	70%	130%	98%	80%	120%	102%	70%	130%
Total Copper	1925683		<0.010	<0.010	NA	< 0.010	100%	70%	130%	100%	80%	120%	96%	70%	130%
Total Lead	1925683		<0.020	<0.020	NA	< 0.020	101%	70%	130%	97%	80%	120%	89%	70%	130%
Total Manganese	1925683		0.398	0.429	7.5%	< 0.020	99%	70%	130%	97%	80%	120%	102%	70%	130%
Total Mercury	1987994		<0.0002	<0.0002	NA	< 0.0002	100%	70%	130%	101%	80%	120%	103%	70%	130%
Total Molybdenum	1925683		<0.020	<0.020	NA	< 0.020	100%	70%	130%	102%	80%	120%	114%	70%	130%
Total Nickel	1925683		<0.015	<0.015	NA	< 0.015	100%	70%	130%	95%	80%	120%	96%	70%	130%
Total Selenium	1925683		<0.020	<0.020	NA	< 0.020	100%	70%	130%	97%	80%	120%	98%	70%	130%
Total Silver	1925683		<0.010	<0.010	NA	< 0.010	100%	70%	130%	99%	80%	120%	94%	70%	130%
Total Tin	1925683		<0.025	<0.025	NA	< 0.025	101%	70%	130%	103%	80%	120%	88%	70%	130%
Total Titanium	1925683		<0.020	<0.020	NA	< 0.020	103%	70%	130%	98%	80%	120%	115%	70%	130%
Total Zinc	1925683		<0.020	<0.020	NA	< 0.020	102%	70%	130%	102%	80%	120%	93%	70%	130%

Mississauga Storm Sewer Use Bylaw- Inorganics

Total Residual Chlorine	1987418		0.37	0.381	NA	< 0.1	102%	80%	120%	100%	85%	115%	98%	85%	115%
Chromium VI	1987562	1987562	<0.005	<0.005	NA	< 0.005	104%	70%	130%	108%	80%	120%	105%	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.

BOD

Biochemical Oxygen Demand, Total	1998885		2430	2220	9.0%	< 2	78%	70%	130%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

cBOD

Biochemical Oxygen Demand, Carbonaceous	1997992		328	360	9.3%	< 2	85%	70%	130%
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Comments: If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.



Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

ATTENTION TO: Zen Keizars

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

SAMPLED BY: AMD/ST

Water Analysis (Continued)

RPT Date: Feb 01, 2021			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	
								Lower	Upper		Lower	Upper

Certified By:

Iris Veraestegui



Time Markers

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Zen Keizars

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
1987562	MW107	Water	21-JAN-2021	21-JAN-2021

BOD

Parameter	Date Prepared	Date Analyzed	Initials
Biochemical Oxygen Demand, Total	27-JAN-2021	01-FEB-2021	AI

E. Coli (Using MI Agar)

Parameter	Date Prepared	Date Analyzed	Initials
Escherichia coli	22-JAN-2021	23-JAN-2021	SJM

Mississauga Storm - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	26-JAN-2021	26-JAN-2021	KS
Toluene	26-JAN-2021	26-JAN-2021	KS
Ethylbenzene	26-JAN-2021	26-JAN-2021	KS
Xylenes (Total)	26-JAN-2021	26-JAN-2021	KS
Total PAHs	26-JAN-2021	27-JAN-2021	US

Mississauga Storm Sewer Use Bylaw- Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
pH	25-JAN-2021	25-JAN-2021	ND
Total Suspended Solids	28-JAN-2021	28-JAN-2021	SR
Total Residual Chlorine	22-JAN-2021	22-JAN-2021	GKN
Total Cyanide	26-JAN-2021	26-JAN-2021	BG
Phenols	22-JAN-2021	22-JAN-2021	NK
Total Phosphorus	27-JAN-2021	27-JAN-2021	SK
Total Kjeldahl Nitrogen	25-JAN-2021	25-JAN-2021	GN
Chromium VI	27-JAN-2021	27-JAN-2021	NK
Total Aluminum	26-JAN-2021	26-JAN-2021	DW
Total Arsenic	26-JAN-2021	26-JAN-2021	DW
Total Cadmium	26-JAN-2021	26-JAN-2021	DW
Total Chromium	26-JAN-2021	26-JAN-2021	DW
Total Copper	26-JAN-2021	26-JAN-2021	DW
Total Lead	26-JAN-2021	26-JAN-2021	DW
Total Manganese	26-JAN-2021	26-JAN-2021	DW
Total Mercury	25-JAN-2021	25-JAN-2021	DL
Total Nickel	26-JAN-2021	26-JAN-2021	DW
Total Selenium	26-JAN-2021	26-JAN-2021	DW
Total Silver	26-JAN-2021	26-JAN-2021	DW
Total Zinc	26-JAN-2021	26-JAN-2021	DW

Nonylphenol and Nonylphenol Ethoxylates (Ontario, mg/L)

Parameter	Date Prepared	Date Analyzed	Initials
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Time Markers

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Zen Keizars

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
1987562	MW107	Water	21-JAN-2021	21-JAN-2021

Nonylphenol and Nonylphenol Ethoxylates (Ontario, mg/L)

Parameter	Date Prepared	Date Analyzed	Initials
Total Nonylphenol	27-JAN-2021	29-JAN-2021	TC
NP1EO	27-JAN-2021	29-JAN-2021	TC
NP2EO	27-JAN-2021	29-JAN-2021	TC
Total Nonylphenol Ethoxylates	27-JAN-2021	29-JAN-2021	TC

Peel Region Sanitary - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Oil and Grease (animal/vegetable) in water	26-JAN-2021	26-JAN-2021	RMK
Oil and Grease (mineral) in water	26-JAN-2021	26-JAN-2021	RMK
Methylene Chloride	26-JAN-2021	26-JAN-2021	KS
Methyl Ethyl Ketone	26-JAN-2021	26-JAN-2021	KS
cis- 1,2-Dichloroethylene	26-JAN-2021	26-JAN-2021	KS
Chloroform	26-JAN-2021	26-JAN-2021	KS
Benzene	26-JAN-2021	26-JAN-2021	KS
Trichloroethylene	26-JAN-2021	26-JAN-2021	KS
Toluene	26-JAN-2021	26-JAN-2021	KS
Tetrachloroethylene	26-JAN-2021	26-JAN-2021	KS
trans-1,3-Dichloropropylene	26-JAN-2021	26-JAN-2021	KS
Ethylbenzene	26-JAN-2021	26-JAN-2021	KS
1,1,2,2-Tetrachloroethane	26-JAN-2021	26-JAN-2021	KS
Styrene	26-JAN-2021	26-JAN-2021	KS
1,2-Dichlorobenzene	26-JAN-2021	26-JAN-2021	KS
1,4-Dichlorobenzene	26-JAN-2021	26-JAN-2021	KS
Xylenes (Total)	26-JAN-2021	26-JAN-2021	KS
PCBs	26-JAN-2021	27-JAN-2021	VDP
Di-n-butyl phthalate	27-JAN-2021	28-JAN-2021	US
Bis(2-Ethylhexyl)phthalate	27-JAN-2021	28-JAN-2021	US

Peel Sanitary Sewer Use By-Law - Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
pH	25-JAN-2021	25-JAN-2021	ND
Total Suspended Solids	28-JAN-2021	28-JAN-2021	SR
Fluoride	27-JAN-2021	27-JAN-2021	LC
Sulphate	27-JAN-2021	27-JAN-2021	LC
Total Cyanide	26-JAN-2021	26-JAN-2021	BG
Phenols	22-JAN-2021	22-JAN-2021	NK
Total Phosphorus	27-JAN-2021	27-JAN-2021	SK
Total Kjeldahl Nitrogen	25-JAN-2021	25-JAN-2021	GN
Total Aluminum	26-JAN-2021	26-JAN-2021	DW



Time Markers

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Zen Keizars

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
1987562	MW107	Water	21-JAN-2021	21-JAN-2021

Peel Sanitary Sewer Use By-Law - Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
Total Antimony	26-JAN-2021	26-JAN-2021	DW
Total Arsenic	26-JAN-2021	26-JAN-2021	DW
Total Cadmium	26-JAN-2021	26-JAN-2021	DW
Total Chromium	26-JAN-2021	26-JAN-2021	DW
Total Cobalt	26-JAN-2021	26-JAN-2021	DW
Total Copper	26-JAN-2021	26-JAN-2021	DW
Total Lead	26-JAN-2021	26-JAN-2021	DW
Total Manganese	26-JAN-2021	26-JAN-2021	DW
Total Mercury	25-JAN-2021	25-JAN-2021	DL
Total Molybdenum	26-JAN-2021	26-JAN-2021	DW
Total Nickel	26-JAN-2021	26-JAN-2021	DW
Total Selenium	26-JAN-2021	26-JAN-2021	DW
Total Silver	26-JAN-2021	26-JAN-2021	DW
Total Tin	26-JAN-2021	26-JAN-2021	DW
Total Titanium	26-JAN-2021	26-JAN-2021	DW
Total Zinc	26-JAN-2021	26-JAN-2021	DW

cBOD

Parameter	Date Prepared	Date Analyzed	Initials
Biochemical Oxygen Demand, Carbonaceous	27-JAN-2021	01-FEB-2021	AI

1987595	MW112	Water	21-JAN-2021	21-JAN-2021
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BOD

Parameter	Date Prepared	Date Analyzed	Initials
Biochemical Oxygen Demand, Total	27-JAN-2021	01-FEB-2021	AI

E. Coli (Using MI Agar)

Parameter	Date Prepared	Date Analyzed	Initials
Escherichia coli	22-JAN-2021	23-JAN-2021	SJM

Mississauga Storm - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	26-JAN-2021	26-JAN-2021	KS
Toluene	26-JAN-2021	26-JAN-2021	KS
Ethylbenzene	26-JAN-2021	26-JAN-2021	KS
Xylenes (Total)	26-JAN-2021	26-JAN-2021	KS
Total PAHs	26-JAN-2021	27-JAN-2021	US



Time Markers

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Zen Keizars

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
1987595	MW112	Water	21-JAN-2021	21-JAN-2021

Mississauga Storm Sewer Use Bylaw- Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
pH	25-JAN-2021	25-JAN-2021	ND
Total Suspended Solids	28-JAN-2021	28-JAN-2021	SR
Total Residual Chlorine	22-JAN-2021	22-JAN-2021	GKN
Total Cyanide	26-JAN-2021	26-JAN-2021	BG
Phenols	22-JAN-2021	22-JAN-2021	NK
Total Phosphorus	27-JAN-2021	27-JAN-2021	SK
Total Kjeldahl Nitrogen	25-JAN-2021	25-JAN-2021	GN
Chromium VI	27-JAN-2021	27-JAN-2021	NK
Total Aluminum	26-JAN-2021	26-JAN-2021	DW
Total Arsenic	26-JAN-2021	26-JAN-2021	DW
Total Cadmium	26-JAN-2021	26-JAN-2021	DW
Total Chromium	26-JAN-2021	26-JAN-2021	DW
Total Copper	26-JAN-2021	26-JAN-2021	DW
Total Lead	26-JAN-2021	26-JAN-2021	DW
Total Manganese	26-JAN-2021	26-JAN-2021	DW
Total Mercury	25-JAN-2021	25-JAN-2021	DL
Total Nickel	26-JAN-2021	26-JAN-2021	DW
Total Selenium	26-JAN-2021	26-JAN-2021	DW
Total Silver	26-JAN-2021	26-JAN-2021	DW
Total Zinc	26-JAN-2021	26-JAN-2021	DW

Nonylphenol and Nonylphenol Ethoxylates (Ontario, mg/L)

Parameter	Date Prepared	Date Analyzed	Initials
Total Nonylphenol	27-JAN-2021	29-JAN-2021	TC
NP1EO	27-JAN-2021	29-JAN-2021	TC
NP2EO	27-JAN-2021	29-JAN-2021	TC
Total Nonylphenol Ethoxylates	27-JAN-2021	29-JAN-2021	TC

Peel Region Sanitary - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Oil and Grease (animal/vegetable) in water	26-JAN-2021	26-JAN-2021	RMK
Oil and Grease (mineral) in water	26-JAN-2021	26-JAN-2021	RMK
Methylene Chloride	26-JAN-2021	26-JAN-2021	KS
Methyl Ethyl Ketone	26-JAN-2021	26-JAN-2021	KS
cis- 1,2-Dichloroethylene	26-JAN-2021	26-JAN-2021	KS
Chloroform	26-JAN-2021	26-JAN-2021	KS
Benzene	26-JAN-2021	26-JAN-2021	KS
Trichloroethylene	26-JAN-2021	26-JAN-2021	KS
Toluene	26-JAN-2021	26-JAN-2021	KS



Time Markers

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Zen Keizars

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
1987595	MW112	Water	21-JAN-2021	21-JAN-2021

Peel Region Sanitary - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Tetrachloroethylene	26-JAN-2021	26-JAN-2021	KS
trans-1,3-Dichloropropylene	26-JAN-2021	26-JAN-2021	KS
Ethylbenzene	26-JAN-2021	26-JAN-2021	KS
1,1,2,2-Tetrachloroethane	26-JAN-2021	26-JAN-2021	KS
Styrene	26-JAN-2021	26-JAN-2021	KS
1,2-Dichlorobenzene	26-JAN-2021	26-JAN-2021	KS
1,4-Dichlorobenzene	26-JAN-2021	26-JAN-2021	KS
Xylenes (Total)	26-JAN-2021	26-JAN-2021	KS
PCBs	26-JAN-2021	27-JAN-2021	VDP
Di-n-butyl phthalate	27-JAN-2021	28-JAN-2021	US
Bis(2-Ethylhexyl)phthalate	27-JAN-2021	28-JAN-2021	US

Peel Sanitary Sewer Use By-Law - Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
pH	25-JAN-2021	25-JAN-2021	ND
Total Suspended Solids	28-JAN-2021	28-JAN-2021	SR
Fluoride	27-JAN-2021	27-JAN-2021	LC
Sulphate	27-JAN-2021	27-JAN-2021	LC
Total Cyanide	26-JAN-2021	26-JAN-2021	BG
Phenols	22-JAN-2021	22-JAN-2021	NK
Total Phosphorus	27-JAN-2021	27-JAN-2021	SK
Total Kjeldahl Nitrogen	25-JAN-2021	25-JAN-2021	GN
Total Aluminum	26-JAN-2021	26-JAN-2021	DW
Total Antimony	26-JAN-2021	26-JAN-2021	DW
Total Arsenic	26-JAN-2021	26-JAN-2021	DW
Total Cadmium	26-JAN-2021	26-JAN-2021	DW
Total Chromium	26-JAN-2021	26-JAN-2021	DW
Total Cobalt	26-JAN-2021	26-JAN-2021	DW
Total Copper	26-JAN-2021	26-JAN-2021	DW
Total Lead	26-JAN-2021	26-JAN-2021	DW
Total Manganese	26-JAN-2021	26-JAN-2021	DW
Total Mercury	25-JAN-2021	25-JAN-2021	DL
Total Molybdenum	26-JAN-2021	26-JAN-2021	DW
Total Nickel	26-JAN-2021	26-JAN-2021	DW
Total Selenium	26-JAN-2021	26-JAN-2021	DW
Total Silver	26-JAN-2021	26-JAN-2021	DW
Total Tin	26-JAN-2021	26-JAN-2021	DW
Total Titanium	26-JAN-2021	26-JAN-2021	DW
Total Zinc	26-JAN-2021	26-JAN-2021	DW



AGAT Laboratories

Time Markers

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Zen Keizars

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
1987595	MW112	Water	21-JAN-2021	21-JAN-2021

cBOD

Parameter	Date Prepared	Date Analyzed	Initials
Biochemical Oxygen Demand, Carbonaceous	27-JAN-2021	01-FEB-2021	AI



Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 21T702306

PROJECT: CA20-149

ATTENTION TO: Zen Keizars

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

SAMPLED BY: AMD/ST

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli	MIC-93-7010	EPA 1604	Membrane Filtration
Trace Organics Analysis			
Benzene	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
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	P & T GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	P & T GC/MS
Total PAHs	ORG-91-5105	EPA SW-846 3510 & 8270E	GC/MS
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	EPA SW-846 5030B & 8260B	(P&T)GC/MS
Chloroform	VOL-91-5001	EPA SW-846 5030B & 8260B	(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
Tetrachloroethylene	VOL-91-5001	EPA SW-846 5030B & 8260B	(P&T)GC/MS
trans-1,3-Dichloropropylene	VOL-91-5001	EPA SW-846 5030B & 8260B	(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
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
PCBs	ORG-91-5112	EPA SW-846 3510C & 8082A	GC/ECD
Di-n-butyl phthalate	ORG-91-5114	EPA SW-846 3510C & 8270E	GC/MS
Bis(2-Ethylhexyl)phthalate	ORG-91-5114	EPA SW-846 3510C & 8270E	GC/MS
Ultra Trace Analysis			
Total Nonylphenol	NA	ASTM D7065-6	LC/MS/MS
NP1EO	NA	ASTM D7065-6	LC/MS/MS
NP2EO	NA	ASTM D7065-6	LC/MS/MS
Total Nonylphenol Ethoxylates	NA	ASTM D7065-6	LC/MS/MS



Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

PROJECT: CA20-149

SAMPLING SITE: 1650 & 1590 Dundas St E Mississauga

AGAT WORK ORDER: 21T702306

ATTENTION TO: Zen Keizars

SAMPLED BY: AMD/ST

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Biochemical Oxygen Demand, Total	INOR-121-6023	SM 5210 B	INCUBATOR
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
Total Suspended Solids	INOR-93-6028	modified from EPA 1684, ON MOECC E3139, SM 2540C, D	BALANCE
Total Residual Chlorine	INOR-93-6060	SM 4500 Cl- F	SPECTROPHOTOMETER
Total Cyanide	INOR-93-6051	modified from MOECC E3015; SM 4500-CN- A, B, & C	TECHNICON AUTO ANALYZER
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
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	SPECTROPHOTOMETER
Total Aluminum	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 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 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 Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Total Antimony	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 Molybdenum	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
Biochemical Oxygen Demand, Carbonaceous	INOR-121-6023	SM 5210 B	INCUBATOR



Sample Temperature Log

Client:

Terrapex

COC# or Work Order #:

of Coolers:

2 Med Blue & 2 BLK

of Submissions:

Arrival Temperatures - Branch/Driver

Cooler #1:	7.2	/	7.4	/	7.6	(free ice)
Cooler #2:	7.5	/	7.1	/	7.8	}
Cooler #3:	4.1	/	7.3	/	4.5	
Cooler #4:	4.4	/	4.1	/	4.3	
Cooler #5:		/		/		
Cooler #6:		/		/		
Cooler #7:		/		/		
Cooler #8:		/		/		
Cooler #9:		/		/		
Cooler #10:		/		/		

Arrival Temperatures - Laboratory

Cooler #1:		/		/	
Cooler #2:		/		/	
Cooler #3:		/		/	
Cooler #4:		/		/	
Cooler #5:		/		/	
Cooler #6:		/		/	
Cooler #7:		/		/	
Cooler #8:		/		/	
Cooler #9:		/		/	
Cooler #10:		/		/	

IR Gun ID:

IR Gun ID:

Taken By:

Taken By:

Date

Date (yyyy/mm/dd): _____ Time: _____:_____ AM / PM

(yyyy/mm/dd): _____ Time: _____:_____ AM / PM

Instructions for use of this form: 1) complete all fields of info including total # of coolers and # of submissions rec'd, 2) photocopy and place in each submission prior to giving a WO#, 3) Proceed as normal, write the WO# and scan (please make sure to scan along with the COC)