



May 25, 2022

1785 Bloor Holdings Inc.
204 - 181 Eglinton Avenue East
Toronto, ON, M4P 1J4

E-mail: michi@sajekiplanning.com

Attention: Mr. Michi McCloskey,
Senior Planner

Re: Hydrogeological Assessment
1785 Bloor Street, Mississauga, Ontario
Pinchin File: 291885.002

Pinchin Ltd. (Pinchin) has been retained by 1785 Bloor Holdings Inc. c/o Mr. Michi McCloskey (Client) to provide a hydrogeological assessment for the proposed redevelopment of the property located at 1785 Bloor Street (Site), in the City of Mississauga (City), Ontario.

A hydrogeological assessment was conducted at the Site to support the Development Application process for the proposed redevelopment. This letter provides a summary of soil and groundwater conditions at the Site and a conservative estimate of the volume of water that may require management during the construction and operations phases of the redevelopment of the Site. An evaluation of the quality of groundwater that could theoretically be discharged as part of the potential Site dewatering is also provided.

1.0 INTRODUCTION AND BACKGROUND

The Site is located on the northwest side of Bloor Street, approximately 230 m northeast of the intersection of Bloor Street and Fieldgate Drive, and is bounded by Bloor Street to the southeast, a hydro corridor to the northeast and residential properties to the southwest and northwest. The approximate site location is shown in Figure 1.

The Site comprises a parcel of land with a total area of approximately 3 acres (1.2 hectares), and is currently occupied by a ten-storey residential building surrounded by an in-ground pool, a surface parking lot and landscaped areas.

It is Pinchin's understanding that the Client intends to construct a residential building in the area immediately northwest of the existing 10-storey building.



1.1 Purpose

The purpose of this hydrogeological assessment was to characterize the soil and groundwater conditions of the Site, evaluate the dewatering requirements for the proposed construction and operations phases of the development, evaluate the groundwater quality of potential discharge water, assess any potential impacts on the surrounding environment due to the proposed development, and provide recommendations concerning mitigative measures, if required.

1.2 Proposed Development Parameters

It is Pinchin's understanding that the proposed building is located immediately northwest of the existing building and will consist of an L-shaped structure with 10-storey and 14-storey portions and a mechanical penthouse on the 15th level. The proposed building will be constructed sitting on a two-level common underground parking facility and will provide a total of 238 residential apartment units, 365 vehicle parking spaces and 206 bike storage spaces.

Development design plans dated March 2, 2022, prepared by Onespace Unlimited Inc., were provided by Pinchin for review. Drawings A-040 (Site Plan), A-100 (P2 Floor Plan), and A-400 (Building Sections) are provided in Appendix I for reference purposes.

For the purpose of dewatering estimates, the following parameters have been assumed:

- The lot area is 12,021 m² with 40% or 4,808.59 m² as landscaping area;
- The Level 1 (ground level) is at an elevation of 132.67 m above mean sea level (masl);
- The P1 Level is 5,506 m² in area at an elevation of 128.17 masl; and
- The P2 Level is 5,430 m² in area at an elevation of 125.27 masl.

It is understood that conventional strip and spread footing foundations will be designed for the proposed building. Based on the available topographic data, the topographic elevation in the development area is between 131.4 meters above sea level (masl) and 134.3 masl. The elevations at the four monitoring well locations range from 131.93 masl to 133.62 masl, with an average of 132.5 masl.

1.3 Previous and Current Investigations

Concurrently with this investigation, Pinchin completed a Phase One Environmental Site Assessment (ESA), Phase Two ESA and Geotechnical Investigation at the Site. There are no other known subsurface investigations at the Site.

The geologic data obtained from the Geotechnical Investigation was used in this hydrogeological assessment.



2.0 METHODOLOGY

The hydrogeological assessment was conducted at the Site concurrently with a geotechnical investigation, during which four boreholes (BH1 to BH4) were advanced at the Site to a maximum depth of approximately 12.3 meters below existing ground surface (mbgs), and were completed as monitoring wells that are identified as BH/MW1 to BH/MW4. The approximate monitoring well locations are shown on Figure 2.

The scope of work for the hydrogeological assessment consisted of the following tasks:

- A review of well installation details obtained from the geotechnical investigation;
- A desktop water well inventory survey using data from the MECP Water Well Information System (WWIS) database within 250 m of the Site property boundaries;
- A review and summary of the regional geology and hydrogeology, and its linkage to the site-specific geology and hydrogeology;
- Water level monitoring on a bi-weekly basis after well installation between November 2021, and February 2022, for a total of seven monitoring rounds, to capture the seasonal variation in the groundwater table;
- Rising head hydraulic conductivity testing of the four monitoring wells;
- Preparation of local scale geologic cross-sections, groundwater elevation contours and flow directions;
- Background groundwater quality analysis for Peel Region Sewer Use By-law parameters;
- A review of the conceptual/architectural design and details of the proposed redevelopment, and completion of a dewatering assessment for the construction and operations phases of the proposed redevelopment;
- Potential impact assessment with mitigative measures, if required; and
- Preparation of a hydrogeological assessment report summarizing the findings of the investigation.



3.0 WATER WELL RECORDS

Water well records from within a 250 m radius of the Site were accessed from the Ontario Ministry of the Environment, Conservation and Parks (MECP) Water Well Information System (WWIS).

Based on a review of the water well database, a total of 14 water well records were found within a radius of 250 m from the Site. The MECP water well records are provided in Appendix II. There are no water supply wells recorded in the study area, and all of the available records are related to test holes, observation wells, monitoring wells or abandoned wells or for wells with no detailed information, and. The approximate MECP water well locations are presented on Figure 3.

Based on the water well records, the encountered soils mainly consisted of sand and silt, occasionally with clay. Bedrock was not encountered to the maximum investigated depth of 9 mbgs.

4.0 GEOLOGY

Based on data from the Ontario Geological Survey, the Site is located in the South Slope physiographic region, which is described as a Drumlinized Till Plain physiographic landform, covered by clayey to silty till deposits and underlain by the Upper Ordovician Georgian Bay Formation, consisting of shale and limestone.

5.0 SURFACE WATER AND TOPOGRAPHY

The Site is located in the Etobicoke Creek Watershed within the Toronto and Region Conservation Authority (TRCA). No open water body is located on or near the Site. As shown on Figure 3, Etobicoke Creek is located approximately 300 m northeast the Site. In addition, the topographic contours indicate that the Site generally slopes towards the east to northeast.

6.0 RESULTS

Four boreholes and monitoring wells were completed at the Site as part of the concurrent geotechnical and hydrogeological investigations. The data and information obtained from the geotechnical field programs was incorporated into this report. The four monitoring wells were utilized for the groundwater level monitoring, sampling and hydraulic conductivity testing during this hydrogeological assessment.

The approximate borehole/monitoring well locations are shown on Figure 2. The borehole logs for the boreholes/monitoring wells are provided in Appendix III.



6.1 Soil Stratigraphy

In general, the soil stratigraphy at the Site comprises pavement structure and/or topsoil underlain by fill material, which is underlain by sand and silt followed by bedrock to the maximum borehole termination depths of approximately 12.3 mbgs.

The pavement structure was encountered surficially in Boreholes BH1 and BH4 at the Site and was observed to comprise 125 mm of asphaltic concrete overlying granular fill material.

The topsoil was encountered surficially in Boreholes BH2 and BH3 and was observed to extend to approximately 300 mm below the ground surface.

The fill material was encountered in all boreholes below the asphaltic concrete and topsoil and extends to depths ranging from 0.8 to 1.5 mbgs. The fill material comprised sand and gravel to silt with trace rootlets. The fill material had a very loose to compact relative density, based on SPT 'N' values of 3 to 13 blows per 300 mm penetration of a split spoon sampler.

A deposit of sand was encountered in all of the boreholes below the fill material, and extended to depths ranging from 2.7 to 4.5 mbgs (Elevation 128.4 to 129.4 masl). The sand deposit generally comprised brown fine sand with trace to some gravel and trace silt and clay. The sand deposit had a compact to very dense consistency based on SPT 'N' values of 14 to above 50 blows per 300 mm penetration of a split spoon sampler. The sand deposit extended to the bedrock surface in Boreholes BH2 and BH4.

Sandy silt was encountered underlying the sand deposits in Boreholes BH1 and BH3 and extended to the bedrock surface. The sandy silt deposit consisted of sandy silt with trace to some gravel and clay. The sandy silt deposit had a dense to very dense relative density based on SPT 'N' values of 35 to greater than 50 blows per 300 mm penetration of a split spoon sampler.

Bedrock was encountered in all boreholes at depths ranging from 3.2 to 6.2 mbgs (Elevation 129.1 to 126.0 masl). The bedrock was proven by coring in all boreholes. Rock Quality Designations (RQD) were calculated for the recovered core samples and are summarized on the appended borehole logs. The upper 2 to 4 metres of the bedrock was highly weathered. The calculated RQD values show that the bedrock classification is in the range of very poor to poor quality.

The details of the soil descriptions and stratigraphy are presented in the Borehole Logs provided in Appendix III. A cross-section showing the stratigraphy across the Site is provided on Figure 4 of this report.



6.2 Water Level Elevations and Groundwater Flow Regime

The approximate locations of the four on-Site monitoring wells are shown on Figure 2 and the monitoring well construction details are presented in Table 1.

Water level measurements were undertaken bi-weekly between December 2021 and February 2022. The groundwater level data is presented in Table 2 of this letter report.

The groundwater levels measured after well development ranged from 2.5 mbgs at BH/MW3 (January 4, 2022) to 4.5 mbgs at BH/MW2 (February 1, 2022), and groundwater level elevations ranged from 129.03 masl at BH/MW3 (February 1, 2022) to 129.62 masl at BH/MW1 (December 22, 2021).

Based on the groundwater elevations measured on December 22, 2021, groundwater elevation contours were prepared and are presented on Figure 5. The groundwater flow direction across the Site was inferred to be generally towards the northeast.

Based on the bi-weekly water level monitoring data, the groundwater level fluctuations in the four monitoring wells between December 2021 and February 2022 were observed to range from 0.4 m at BH/MW3 to 0.5 m at BH/MW1.

6.3 Hydraulic Conductivity Estimates

Rising head hydraulic conductivity (K-) tests were conducted in all the four monitoring wells (BH/MW1 to BH/MW4) on February 17, 2022. The results of K tests and data processing records are provided in Appendix IV.

The estimated hydraulic conductivities (K-values) for the tested/screened intervals at the four tested on-Site wells are as follows:

MWs	Screen Interval (mbgs)	Screened Medium	K-Estimate (cm/sec)
BH/MW1	9.1 – 12.2	Shale	1.0×10^{-4}
BH/MW2	9.1 – 12.2	Shale	1.0×10^{-4}
BH/MW3	9.1 – 12.2	Shale	3.3×10^{-5}
BH/MW4	9.1 – 12.2	Shale	4.0×10^{-4}
Geometric Mean			1.1×10^{-4}

The K-values at the Site ranged from a high of 4.0×10^{-4} cm/sec (BH/MW4) to a low of 3.3×10^{-5} cm/sec (BH/MW3), with a geometric mean of 1.1×10^{-4} cm/sec.



7.0 DEWATERING ESTIMATES

The proposed development will have a two-level common underground parking structure. The P2 slab level will be at an elevation of 125.27 masl.

It is understood that the shale bedrock was encountered in the boreholes at elevations ranging from 129.1 masl to 126.0 masl, and the proposed building will be founded on conventional strip and spread footings in the bedrock.

Based on the groundwater monitoring, the groundwater elevations measured in the on-site monitoring wells between December 2021 and February 2022 ranged from 129.03 to 129.62 masl, which are above the P2 level elevation. Therefore, groundwater control will be required during construction and operations phases of the buildings.

7.1 Short-Term Construction Dewatering Assessment

7.1.1 Groundwater Inflow

Based on the design, a conservative groundwater dewatering scenario during construction was undertaken that employed the following parameters and assumptions.

- The excavation or dewatering area is 5,506 m² (note: The P1 Level is 5,506 m² and P2 Level is 5,430 m² in area)
- The P2 Level slab elevation is at 125.27 masl. Assuming that the excavation will extend to 1 m below the underground parking concrete slab for the footing/foundation construction, the excavation bottom will be at 124.27 masl. The excavation will cut through the fill materials and overburden deposits and into the shale bedrock.
- The initial groundwater level will be assumed to be 130 masl (the highest static groundwater level measured over the period of record was 129.62 masl at BH/MW1).
- The target water level will be lowered to 0.5 m below the excavation bottom, or 123.77 masl.
- The hydraulic conductivity is 1.1×10^{-4} cm/sec (the average of the hydraulic conductivities estimated from the four tested monitoring wells).



Based on the above assumptions, the short-term construction dewatering rate and zone of influence were estimated and are presented below.

Excavation Area (m²)	Initial Water Level (masl)	Target Water Level (masl)	K- Estimate (cm/sec)	Estimated Zone of Influence (m from Edge of Excavation)	Dewatering Rate (without Safety Factor) (L/day)	Dewatering Rate Estimate with Safety Factor of 2 or 100% (L/day)
5,506	130	123.77	1.1×10^{-4}	20	35,007	70,014

It should be noted that the application of a Safety Factor provides a more conservative assessment for planning purposes to account for potential variabilities in the hydraulic conductivities in the soil and bedrock across the Site. In addition, during the initial stages of the construction dewatering, the dewatering volumes would be greater than those under a steady state condition, because the water stored in the soils is also being removed.

The above total volume estimate, assuming that one bulk excavation will be undertaken for the underground structure, and including a Safety Factor of 2, or 100%, is above the threshold for an Environmental Activity Sector Registration (EASR) requirement for construction dewatering of more than 50,000 L/day (50 m³/day) and below the threshold limit of 400,000 L/day (400 m³/day) for a Permit-to-Take-Water (PTTW) requirement. An EASR registration will be required for the construction of the proposed building.

7.1.2 Stormwater Inflow

A significant amount of the dewatering demand from any construction project is the volume of water that is derived from stormwater that is generated during and after precipitation events. In the case of the proposed development, it will be necessary to handle stormwater that will accumulate within the excavation footprint.

For planning purposes, dewatering estimates are developed assuming the potential occurrence of extreme storm events, which are based upon events that have an observed “return period” or period of recurrence.

Based on the Canadian Climatic Normals 1981-2010 Station Data for Toronto Pearson International Airport Station, the days which had a precipitation rate between 10 mm/day and 25 mm/day vary from 0.77 to 2.6 days per year, with an average of 1.9 days per year, and the days which had a precipitation rate greater than 25 mm/day vary from 0.07 to 0.9 days per year, with an average of 0.4 days per year.



The volume of water that can be generated within the Site at the full excavation extent of the underground levels of approximately 5,506 m² was estimated for a 30 mm/day high-precipitation storm event.

The estimated stormwater inflow is summarized below:

Excavation Area (m ²)	Precipitation Rate (mm/day)	Stormwater Volume (L/day)
5,506	30	165,180

The dewatering requirement from a high-precipitation storm with a rate of 30 mm/day is estimated to be 165,180 L/day. It should be noted that the above estimate does not take into account any infiltration or evaporation in the excavation area. However, it should also be noted that, for infrequent extreme storm events, the great majority of the generated stormwater becomes run-off or accumulates in the excavation area, due to the fixed assimilative capacity of the soils and the minimal evaporation until the cessation of the event.

7.1.3 Summary of Construction Dewatering Estimates

Based on the short-term construction dewatering calculations discussed above, the estimated construction phase dewatering rates are summarized below.

Construction Dewatering	Total Volume without Safety Factor for Groundwater (L/day)	Total Volume with Safety Factor of 2 for Groundwater (L/day)
Discharge of Groundwater	35,007	70,014
Discharge of Stormwater	165,180	165,180
Discharge of Groundwater and Stormwater	200,187	235,194

7.2 Long-Term Dewatering Estimate - Operations

The same calculation methodology for short-term dewatering estimate was used for the long-term dewatering estimate, except for employing a different target groundwater level just below the projected P2 slab elevation. The following parameters were employed:

- Building Footprint Area: 5,506 m²; and
- Target Water Level: 125.07 m (0.2 m below P2 concrete slab).



The estimated long-term dewatering rate and zone of influence are presented below.

Footprint Area (m ²)	Initial Water Level (masl)	Target Water Level (masl)	K- Estimate (cm/sec)	Estimated Zone of Influence (m from edge of Excavation)	Dewatering Rate (without safety factor) (L/day)	Dewatering Rate Estimate with safety factor of 2 or 100% (L/day)
5,506	130	125.07	1.1 X 10 ⁻⁴	16	23,017	46,034

The total dewatering volume estimated for long-term building operations, including a Safety Factor of 2, is below the threshold for long-term dewatering of 50,000 L/day (50 m³/day) that triggers a PTTW requirement from the MECP. A PTTW will not be required for the proposed building operations.

8.0 GROUNDWATER QUALITY

One groundwater sample was obtained on January 21, 2022 from BH/MW4 to evaluate the water quality with reference to the Peel Region Sewer Use By-Law parameter criteria, for storm sewer and sanitary sewer discharge.

The groundwater sample was submitted to and analyzed by Bureau Veritas Laboratories (BV). BV has been accredited by the Canadian Association For Laboratory Accreditation Inc. (CALA).

The analytical results were compared with the Peel Region Sewer Use Bylaw – Sanitary and Storm Sewer Discharge Limits. Exceedances of the Sanitary and/or Storm Sewer Discharge limits were detected in the analyzed water samples for 3 parameters, including Total Kjeldahl Nitrogen (TKN), total manganese and total suspended solids (TSS) and total cyanide, which are listed below.

Monitoring Well	Parameter	Unit	Storm Water Guideline Value	Sanitary Sewer Guideline Value	Measured Concentration
BH/MW4	TKN	mg/L	<u>1</u>	100	1.5
	TSS	mg/L	<u>15</u>	<u>350</u>	580
	Manganese	mg/L	<u>0.05</u>	5	0.069

It is considered that the exceedances of the sewer use discharge limits are attributed to sediment within the sample and may be reduced to acceptable levels following treatment for TSS prior to discharge. It should be noted, however, that manganese is commonly present in elevated concentrations in shallow groundwater in the Greater Toronto Area. Sampling and analysis of a filtered groundwater sample for metals and TKN should be considered to evaluate the affect of filtering discharge groundwater on the concentrations of these parameters.



9.0 CONCLUSIONS

Pinchin provides the following conclusions arising out of the Hydrogeology Assessment activities to date:

- The Site is located in the South Slope physiographic region, which is described as a Drumlinized Till Plain physiographic landform, covered by clayey to silty till deposits and underlain by the Upper Ordovician Georgian Bay Formation consisting of shale and limestone.
- The Site is located in the Etobicoke Creek Watershed, which is under the jurisdiction of Toronto and Region Conservation Authority (TRCA). No open water body is located on or near the Site. Etobicoke Creek is located approximately 300 m northeast the Site.
- In general, the soil stratigraphy at the Site comprises fill material under pavement structure and/or topsoil, which is underlain by sand and silt followed by bedrock. Shale bedrock was encountered at depths ranging from approximately 3.2 to 6.2 mbgs;
- Water level measurements completed between December 2021 and February 2022 indicated that the measured static groundwater levels ranged from 2.5 to 4.5 mbgs, with groundwater level elevations ranging from 129.03 to 129.62 masl. The groundwater flow direction was inferred to be generally towards the northeast;
- The hydraulic conductivities (K-values) estimated from five monitoring well locations ranged from a high of 4.0×10^{-4} cm/sec (BH/MW4) to a low of 3.3×10^{-5} cm/sec (BH/MW3), with a geometric mean of 1.1×10^{-4} cm/sec;
- The short-term dewatering rate that was estimated for the construction phase, incorporating a Safety Factor of 2, is 70,014 L/day for dewatering from groundwater, with an estimated maximum discharge of 235,194 L over a 24-hour period from groundwater and a high-precipitation storm rate of 30 mm/day.
- The long-term dewatering rate estimated for the proposed building operations phase is 46,034 L/day;
- A PTTW will not be required either for the short-term or long-term dewatering. However, an EASR registration will be required for the short-term construction dewatering; and
- A groundwater quality assessment completed as per Peel Region Sewer Use Bylaw indicated that the water generated at the Site could not be discharged to the local sewer system without appropriate treatment for TSS, and potentially, manganese and TKN.



10.0 RECOMMENDATIONS

Pinchin present the following recommendations to support detailed design of the proposed development:

- 1) Sampling and analysis of a filtered groundwater sample for metals and TKN is recommended to evaluate the effect of filtering discharge groundwater on the concentrations of these parameters.

11.0 LIMITATIONS

Conclusions derived are specific to the immediate area of study and cannot be extrapolated extensively away from sample or testing locations. Samples have been analyzed for a limited number of parameters, and the absence of information relating to a specific contaminant does not indicate that it is not present.

This report was prepared for the exclusive use of the Client and the City of Mississauga, subject to the terms, conditions and limitations contained within the duly authorized proposal for this project. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted.

If additional parties require reliance on this report, written authorization from Pinchin will be required.

Pinchin disclaims responsibility of consequential financial effects on transactions or property values, or requirements for follow-up actions and costs. No other warranties are implied or expressed. Furthermore, this report should not be construed as legal advice. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law.

Pinchin makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

Pinchin will not be responsible for any consequential or indirect damages. Pinchin will only be liable for damages resulting from negligence or wilful misconduct of Pinchin. All claims by the Client shall be deemed relinquished if not made within two years after last date of services provided.



Hydrogeological Assessment

1785 Bloor Street, Mississauga, Ontario

1785 Bloor Holdings Inc.

May 25, 2022

Pinchin File: 291885.002

FINAL

Information provided by Pinchin is intended for Client and City of Mississauga use only. Pinchin will not provide results or information to any party other than the Client, unless the Client, in writing, requests information to be provided to a third party or unless disclosure by Pinchin is required by law. Any use by a third party, of reports or documents authored by Pinchin, or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted.

12.0 CLOSING REMARKS

We trust that the information provided in this letter meets your requirements. If you have any questions, or require additional information, please do not hesitate to contact either of the undersigned.

Yours truly,

Pinchin Ltd.

Prepared by:

Reviewed by:

Bujing Guan, M.A.Sc., P.Geo.

Hydrogeologist

437.993.1832

bguan@pinchin.com

Craig S. Kelly, B.Sc., P.Geo.

Senior Geoscientist

289.971.8372

cxkelly@pinchin.com



May 25, 2022

Encl.: Figures

Table 1 – Monitoring Well Construction Details

Table 2 – Water Level Summary Table

Appendix I – Site Development/Design Plans

Appendix II – Water Well Records

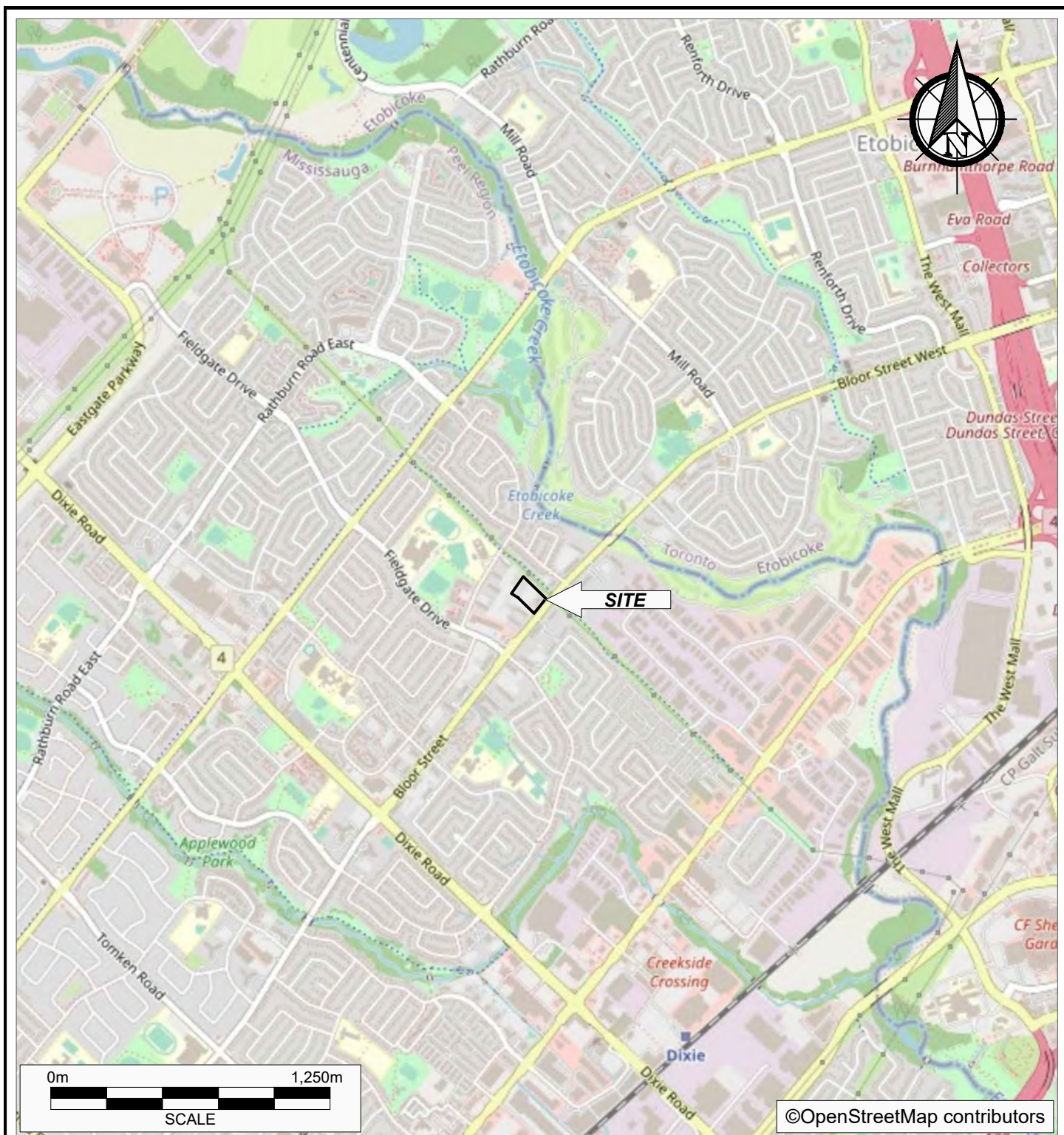
Appendix III – Borehole Logs


Appendix IV – Rising Head Hydraulic Conductivity Test Curves

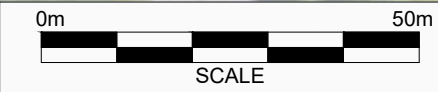
Appendix V – Laboratory Analytical Results

291885.002 FINAL HG Assessment 1785 Bloor Street Mississauga ON May 25 2022.docx

Figures and Tables



	PROJECT NAME			HYDROGEOLOGICAL ASSESSMENT		
	CLIENT NAME			1785 BLOOR HOLDINGS INC.		
	PROJECT LOCATION			1785 BLOOR STREET, MISSISSAUGA, ONTARIO		
	FIGURE NAME			KEY MAP		FIGURE NO. 1
	SCALE AS SHOWN	PROJECT NO. 291885.002		DATE MARCH 2022		



LEGEND

— SITE BOUNDARY

SITE BUILDING

BOREHOLE/MONITORING WELL LOCATION

CROSS-SECTION LINE

LEGEND IS COLOUR DEPENDENT.
NON-COLOUR COPIES MAY ALTER
INTERPRETATION.

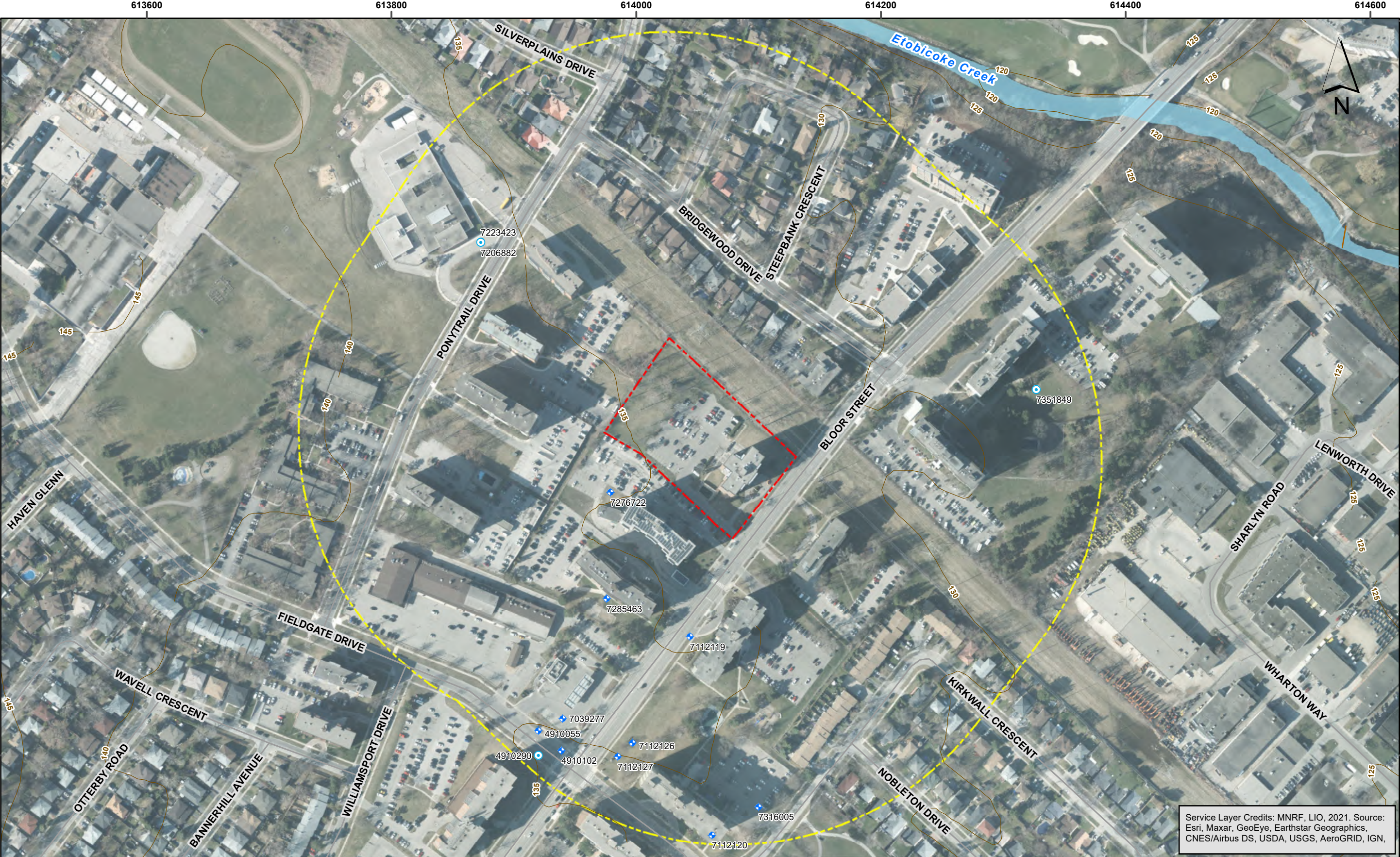
PROJECT NAME:
HYDROGEOLOGICAL
ASSESSMENT

CLIENT NAME:
1785 BLOOR HOLDINGS
INC.

PROJECT LOCATION:
1785 BLOOR STREET,
MISSISSAUGA, ONTARIO

FIGURE NAME:
BOREHOLE/MONITORING WELL
LOCATION PLAN

PROJECT NUMBER: 291885.002	SCALE: AS SHOWN
DRAWN BY: KP	REVIEWED BY: BG
DATE: MARCH 2022	FIGURE NUMBER: 2



Service Layer Credits: MNRF, LIO, 2021. Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN,



PROJECT NAME: Hydrogeological Assessment
CLIENT NAME: 1785 Bloor Holdings Inc.
PROJECT LOCATION: 1785 Bloor Street, Mississauga, Ontario
FIGURE NAME: Ontario Water Well Records (250 m Radius)

PROJECT NO. 291885.002
DATE: February 2022
SCALE: 1:3,000
FIGURE NO. 3

- LEGEND**
- Site Boundary
 - 250 m Radius
 - Watercourse
 - Roadway
 - Contours (5 m)
 - Ontario Water Well Records
 - Test Hole/Monitoring/Observation Well
 - Abandoned Well or Well with no details

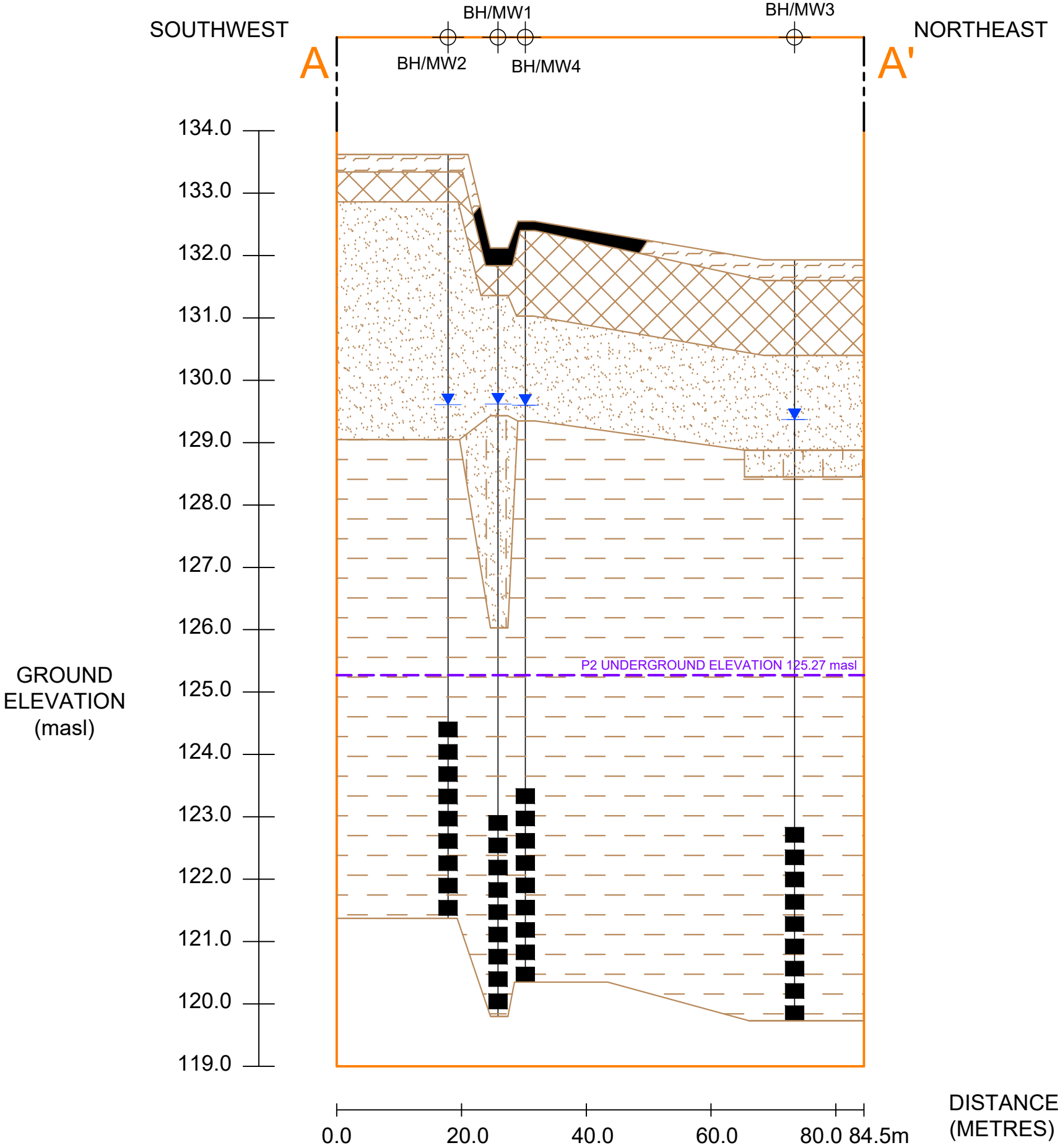
NOTES

- All features and measurements are approximate and subject to field verification. This map is for planning purposes only
- Use dimensions as shown, do not scale drawing
- This map is not to be used for legal purposes

0 30 60 120 Metres

Coordinate System: NAD 1983 CSRS UTM Zone 17N
Projection: Transverse Mercator
Datum: North American 1983 CSRS

DRAWN BY: MH REVIEWED BY: BG REVISION: 1



- LEGEND**
- SITE BOUNDARY
 - BOREHOLE/MONITORING WELL LOCATION
 - TOPSOIL
 - ASPHALT
 - SAND
 - SANDY SILT
 - SHALE
 - WELL CASING/ BENTONITE
 - MEASURED GROUNDWATER ELEVATION (DECEMBER 22, 2021)
 - WELL SCREEN

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INTERPRETATION.



PROJECT NAME:
HYDROGEOLOGICAL
ASSESSMENT

CLIENT NAME:
1785 BLOOR HOLDINGS
INC.

PROJECT LOCATION:
1785 BLOOR STREET,
MISSISSAUGA, ONTARIO

FIGURE NAME:
CROSS-SECTION
A-A'

PROJECT NUMBER:
291885.002

SCALE:
AS SHOWN

DRAWN BY:
KP

REVIEWED BY:
BG

DATE:
MARCH 2022

FIGURE NUMBER:
4



LEGEND

- SITE BOUNDARY
- SITE BUILDING
- BOREHOLE/MONITORING WELL LOCATION
- [#] GROUNDWATER ELEVATION in masl
- GROUNDWATER CONTOUR ELEVATION in masl
- GROUNDWATER FLOW DIRECTION
- masl METRES ABOVE SEA LEVEL

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INTERPRETATION.

PROJECT NAME:
HYDROGEOLOGICAL
ASSESSMENT

CLIENT NAME:
1785 BLOOR HOLDINGS
INC.

PROJECT LOCATION:
1785 BLOOR STREET,
MISSISSAUGA, ONTARIO

FIGURE NAME:
GROUNDWATER ELEVATION AND
INFERRED FLOW DIRECTION
(DECEMBER 22, 2021)

PROJECT NUMBER: 291885.002	SCALE: AS SHOWN
DRAWN BY: KP	REVIEWED BY: BG
DATE: MARCH 2022	FIGURE NUMBER: 5



Table 1

MONITORING WELL CONSTRUCTION DETAILS

1785 Holdings Inc.

1785 Bloor Street, Mississauga, Ontario

Monitoring Well	Ground Surface Elevation (masl)	Top of Pipe Elevation (masl)	Borehole Depth (mbgs)	Well Construction Details					
				Stick-Up Height (metres)	Well Diameter (centimetres)	Screen Slot Size	Monitoring Well Screen Interval (mbgs/mbfs)	Screen length (metres)	Screened Soil
BH/MW1	132.12	132.02	12.30	-0.10	5.1	010	9.1 - 12.2	3.1	shale
BH/MW2	133.62	133.50	12.20	-0.12	5.1	010	9.1 - 12.2	3.1	shale
BH/MW3	131.93	131.83	12.20	-0.10	5.1	010	9.1 - 12.2	3.1	shale
BH/MW4	132.55	132.45	12.20	-0.10	5.1	010	9.1 - 12.2	3.1	shale

Notes:

masl = metres above sea level

mbgs = metres below ground surface



TABLE 2
GROUNDWATER ELEVATION DATA
 1785 Holdings Inc.
 1785 Bloor Street, Mississauga, Ontario

Monitoring Well	Ground Surface Elevation (masl)	Top of Pipe Elevation (masl)	Monitoring Well Screen Interval (mbgs)	December 8, 2021			December 22, 2021			January 4, 2022		
				Groundwater Level to Top of Pipe (mTOP)	Groundwater Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level to Top of Pipe (mTOP)	Groundwater Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level to Top of Pipe (mTOP)	Groundwater Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)
BH/MW1	132.12	132.02	9.1 - 12.2	2.48	2.58	129.54	2.40	2.50	129.62	2.44	2.54	129.58
BH/MW2	133.62	133.50	9.1 - 12.2	4.03	4.15	129.47	3.89	4.01	129.61	3.94	4.06	129.56
BH/MW3	131.93	131.83	9.1 - 12.2	2.52	2.62	129.31	2.46	2.56	129.37	2.40	2.50	129.43
BH/MW4	132.55	132.45	9.1 - 12.2	2.96	3.06	129.49	2.85	2.95	129.60	2.90	3.00	129.55

Notes:

masl = metres above sea level
 mbgs = metres below ground surface



TABLE 2
GROUNDWATER ELEVATION DATA
 1785 Holdings Inc.
 1785 Bloor Street, Mississauga, Ontario

Monitoring Well	Ground Surface Elevation (masl)	Top of Pipe Elevation (masl)	Monitoring Well Screen Interval (mbgs)	January 21, 2022			February 1, 2022			February 15, 2022		
				Groundwater Level to Top of Pipe (mTOP)	Groundwater Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level to Top of Pipe (mTOP)	Groundwater Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)	Groundwater Level to Top of Pipe (mTOP)	Groundwater Below Ground Surface (mbgs)	Calculated Groundwater Elevation (masl)
BH/MW1	132.12	132.02	9.1 - 12.2	2.74	2.84	129.28	2.90	3.00	129.12	-	-	-
BH/MW2	133.62	133.50	9.1 - 12.2	4.23	4.35	129.27	4.38	4.50	129.12	4.32	4.44	129.18
BH/MW3	131.93	131.83	9.1 - 12.2	2.62	2.72	129.21	2.80	2.90	129.03	2.74	2.84	129.09
BH/MW4	132.55	132.45	9.1 - 12.2	3.19	3.29	129.26	3.33	3.43	129.12	3.27	3.37	129.18

Notes:

masl = metres above sea level
 mbgs = metres below ground surface

APPENDIX I
Conceptual Site Plan



No.	DATE	ISSUED
-----	------	--------

ALL DRAWINGS ARE THE PROPERTY OF CH2M HILL AND THEY ARE NOT TO BE REPRODUCED OR COPIED OR SUMMARIZED WITHOUT THE WRITTEN PERMISSION OF CH2M HILL.

DRAWINGS ARE INTENDED TO CONVEY SCOPE OF WORK AND INDICATE GENERAL AND APPROXIMATE LOCATION, ARRANGEMENT AND SIZE OF MATERIALS AND PRODUCTS.

ALL CONSTRUCTION TO BE ACCORDING TO BEST COMMON PRACTICE AND IN ACCORDANCE TO THE DESIGN BUILD CODE IN EFFECT AT THE TIME.

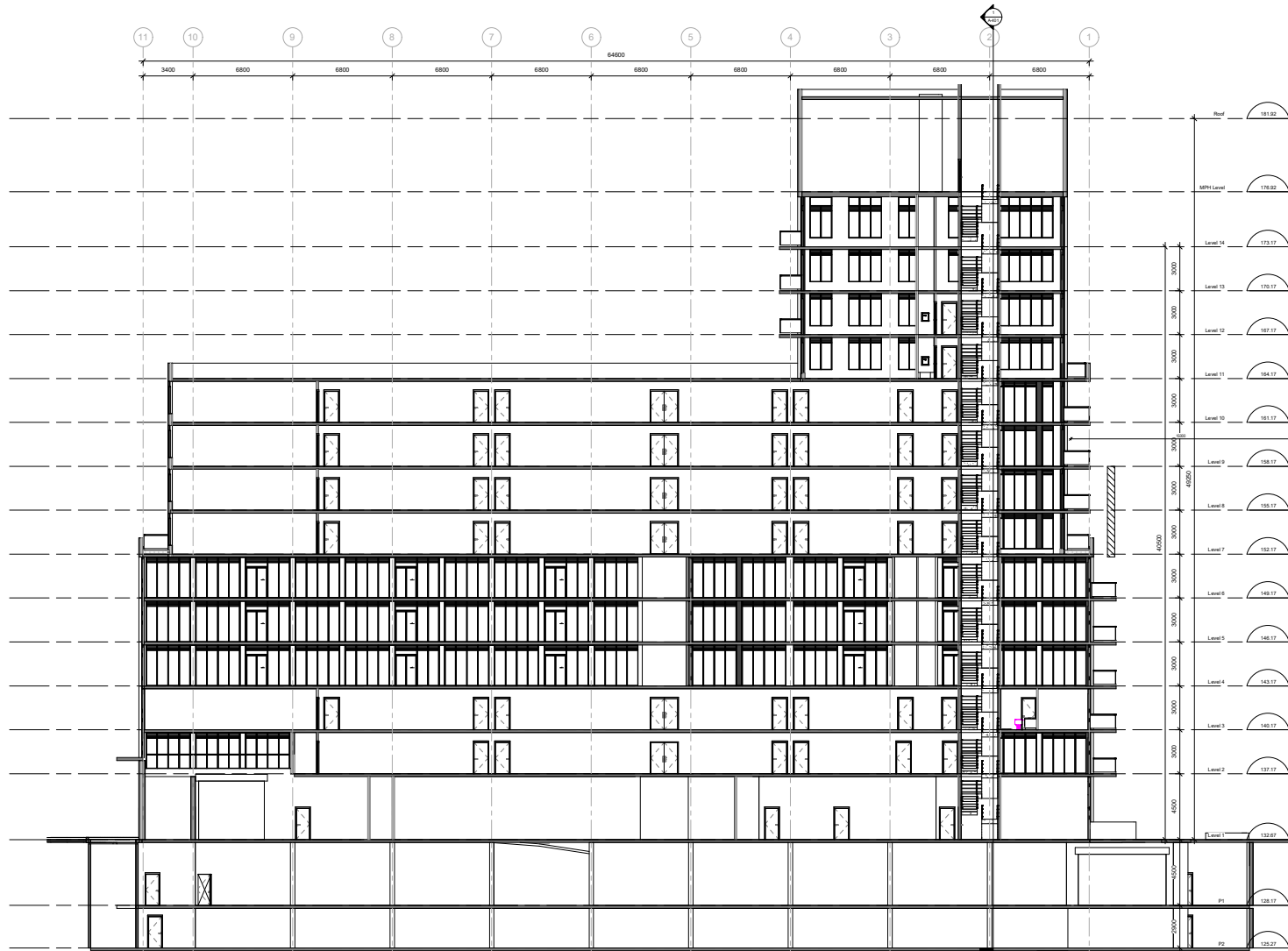
QUEST

1785 Bloor Holdings Inc.
181 Eglinton Avenue East, Suite
204, Toronto, ON M4P 1J4
A0049C99

1785 Bloor St.
1785 Bloor Street, Mississauga,
ON L4X 1S8

Site Plan

PROJECT NUMBER	DATE
21045	
SCALE	PLOTTED DATE
1 : 200	2022-03-02 10:19:34



1 Longitudinal Building Section
1:100

No. DATE ISSUED

ALL DIMENSIONS AND THE REQUIREMENTS OF CANADIAN AND U.S. BUILDING CODES SHALL BE OBSERVED. THE ARCHITECT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE ARCHITECT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CLIENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

CLIENT
1785 Bloor Holdings Inc.
181 EGLINTON AVENUE EAST, SUITE 204
TORONTO, ON M4P 1J4
416.593.1276

1785 Bloor St.
1785 Bloor Street, Mississauga,
ON L4X 1B8

DRAWING
Building Sections

PROJECT NUMBER	DATE
21045	2020-08-10
SCALE	1:100
DATE	2020-08-10

APPENDIX II
Water Well Records

MECP Water Well Records

Well#: 4910055

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	FSND			0 m	6 m
GREY	FSND			6 m	9 m

Observation Well

Well#: 4910102 Observation well

Well#: 4910290 Abandoned well

Well#: 7039277

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SILT	CLAY	SAND	0 m	3 m
GREY	SAND	SILT		3 m	4.5 m
GREY	SAND			4.5 m	6 m

Observation well

Well#: 7112119

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND	LOOS		0 m	1.5 m
GREY	SILT	SAND	SOFT	1.5 m	5.18 m
GREY	FSND	SILT	HARD	5.18 m	6.71 m

Monitoring/Test Hole

Well#: 7112120

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND	LOOS		0 m	1.5 m
GREY	SILT	SAND	SOFT	1.5 m	4.57 m
GREY	FSND	SILT	WBRG	4.57 m	5.8 m

Monitoring/Test Hole

Well#: 7112126

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND	LOOS		0 m	1.5 m
GREY	SILT	SAND	SOFT	1.5 m	3.6 m
GREY	FSND	SAND	SOFT	3.6 m	5.5 m

Monitoring/Test Hole

Well#: 7112127

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND	LOOS		0 m	2.44 m
GREY	SILT	SAND	SOFT	2.44 m	4 m
GREY	FSND	SAND	HARD	4 m	4.88 m

Monitoring/Test Hole

Well#: 7206882; no well details

Well#: 7223423; no well details

Well#: 7276722

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	FILL		DRY	0 ft	7 ft
GREY	SAND	SILT	DRY	7 ft	10 ft
	SAND		WBRG	10 ft	20 ft

Observation Well

Well#: 7285463

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND		WBRG	0 ft	2.5 ft
BRWN	SAND		WBRG	2.5 ft	5 ft
GREY	SAND		WBRG	5 ft	10 ft
BLCK	SAND		WBRG	10 ft	17 ft

Observation Well

Well#: 7316005

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
				0 ft	1 ft
BRWN	CLAY	SILT	SAND	1 ft	25 ft
GREY	TILL			25 ft	

Test Hole

Well#: 7351849; no well details

APPENDIX III
Borehole Logs



Log of Borehole: BH1

Project #: 291885.001

Logged By: KS

Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 29, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE								
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength Δ kPa Δ 100 200	Water Content 10 20	Soil Vapour Concentration (ppm)	Laboratory Analysis
0		Ground Surface	132.12										
		Asphalt Asphalt pavement	131.84		SS	1	40	13					
		Fill Brown sand and gravel, compact, moist	131.36		SS	2	50	21					
1		Brown to gray, mottled, silty sand trace gravel, compact, moist											
		Sand Brown fine sand some gravel trace clay, compact, moist	130.60		SS	3	50	40					
2		trace broken cobbles, dense											
		trace sand and gravel	129.84		SS	4	40	40					
			129.43										
3		Sandy Silt Grey sandy silt some gravel and clay, dense, moist			SS	5	50	42					
4													
5					SS	6	60	56					
6			126.03										
		Shale Grey weathered shale			SS	7	60	68					
7			124.50										

Contractor: Strata Drilling Inc.

Grade Elevation: 132.12 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 132.02 masl

Well Casing Size: 2"

Sheet: 1 of 2



Log of Borehole: BH1

Project #: 291885.001

Logged By: KS

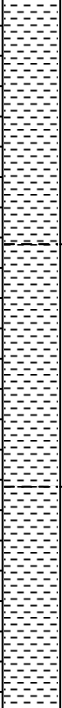
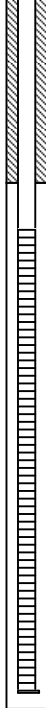
Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 29, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE											
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □			Shear Strength Δ kPa Δ 100 200		Water Content 10 20	Soil Vapour Concentration (ppm)	Laboratory Analysis
8		Bedrock - Cored RQD = 35%			SS	8	98									
9		RQD = 30 %	122.88													
10					SS	9	100									
11		RQD = 20 %	121.28			SS	10	95								
12			119.80													
13		End of Borehole		Water level measured to be at 2.5 mbgs on November 17, 2021												
14																
15																

Contractor: Strata Drilling Inc.

Grade Elevation: 132.12 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 132.02 masl

Well Casing Size: 2"

Sheet: 2 of 2



Log of Borehole: BH2

Project #: 291885.001

Logged By: KS

Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 28, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE									
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength Δ kPa Δ 100 200	Water Content 10 20	Soil Vapour Concentration (ppm)	Laboratory Analysis	
0		Ground Surface	133.62											
		Topsoil Dark brown silt some sand trace clay (with roots), very loose, very moist	133.34		SS	1	40	3						
1		Fill Brown silt some clay, very loose, very moist	132.86		SS	2	50	14						
		Sand Grey to brown fine sand some gravel, trace clay and silt, compact, very moist	132.09		SS	3	70	42						
2		Light brown trace silt and gravel, dense, moist	131.33		SS	4	80	52						
		Very dense			SS	5	70	75						
3														
4														
			129.05											
5		Shale Grey weathered shale			SS	6	50	>50						
6														
					SS	7	20	>50						
7														
			125.92			8		>50						

Contractor: Strata Drilling Inc.

Grade Elevation: 133.62 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 133.50 masl

Well Casing Size: 2"

Sheet: 1 of 2



Log of Borehole: BH2

Project #: 291885.001

Logged By: KS

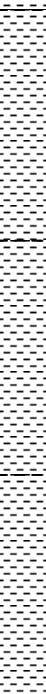
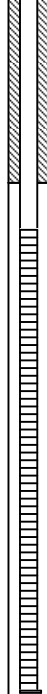
Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 28, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE														
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value			Shear Strength		Water Content		Soil Vapour Concentration (ppm)	Laboratory Analysis		
									20	40	60	Δ	kPa	Δ	10	20			
8		Bedrock - Cored RQD = 25%			SS	8	20	>50											
					RC	9	99												
9			124.40																
			RQD = 5 %																
10							RC	10	99										
11		RQD = 45 %	122.85																
12			121.37																
13		End of Borehole		Water level measured to be at 1.4 mbgs on November 25, 2021															
14																			
15																			

Contractor: Strata Drilling Inc.

Grade Elevation: 133.62 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 133.50 masl

Well Casing Size: 2"

Sheet: 2 of 2



Log of Borehole: BH3

Project #: 291885.001

Logged By: KS

Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 28, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE									
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength Δ kPa Δ 100 200	Water Content 10 20	Soil Vapour Concentration (ppm)	Laboratory Analysis	
0		Ground Surface	131.93											
		Topsoil Dark brown silt trace sand and clay (with roots), very loose, very moist	131.60		SS	1	50	3						
		Fill Brown silt some clay trace sand, very loose, very moist	131.16 131.01		SS	2	50	7						
1		Loose Sand some silt trace clay and gravel, trace rootlets, loose, very moist	130.40		SS	3	60	29						
2		Sand Brown, fine sand trace gravel and silt compact, moist	129.64		SS	4	50	42						
		Grey, some gravel trace silt (with occasional cobbles), dense, very moist	128.88		SS	5	50	35						
3		Sandy Silt Brown to grey sandy silt trace clay and gravel, dense, moist	128.45											
4		Shale Grey weathered shale												
5						SS	6	50	54					
6						SS	7	10	>50					
7			124.18											

Contractor: Strata Drilling Inc.

Grade Elevation: 131.93 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 131.83 masl

Well Casing Size: 2"

Sheet: 1 of 2



Log of Borehole: BH3

Project #: 291885.001

Logged By: KS


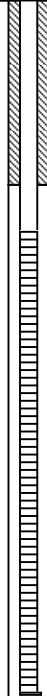
Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 28, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE								
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □	Shear Strength △ kPa △ 100 200	Water Content 10 20	Soil Vapour Concentration (ppm)	Laboratory Analysis
8		Bedrock - Cored RQD = N/A (rock core stuck in barrel)	124.18		SS	8	10	>50					
9					RC	9	-						
10		RQD = 40 %	122.61			RC	10	99					
11		RQD = 50 %	121.01			RC	11	93					
12			119.73										
13		End of Borehole		Water level measured to be at 2.5 mbgs on December 17, 2021									
14													
15													

Contractor: Strata Drilling Inc.

Grade Elevation: 131.93 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 131.83 masl

Well Casing Size: 2"

Sheet: 2 of 2



Log of Borehole: BH4

Project #: 291885.001

Logged By: KS

Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 27, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE													
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value □ 20 40 60 □			Shear Strength Δ kPa Δ 100 200		Water Content 10 20		Soil Vapour Concentration (ppm)	Laboratory Analysis	
0		Ground Surface	132.55															
		Asphalt Asphalt pavement			SS	1	10	4										
		Fill Brown sand and gravel, very loose, very moist																
1			131.03		SS	2	40	2										
		Sand Brown sand trace to some gravel and silt, dense, wet			SS	3	40	30										
2			130.26															
		(with cobbles), very dense, saturated			SS	4	10	>50										
3			129.35															
		Shale Grey weathered shale			SS	5	20	>50										
4																		
5					SS	6	20	>50										
6			126.45															
		Bedrock - Cored RQD = N/A (Inadequate sample recovery)																
7					RC	7	10											
			124.95															

Contractor: Strata Drilling Inc.

Grade Elevation: 132.55 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 132.45 masl

Well Casing Size: 2"

Sheet: 1 of 2



Log of Borehole: BH4

Project #: 291885.001

Logged By: KS

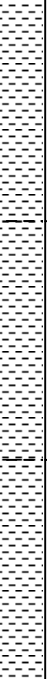
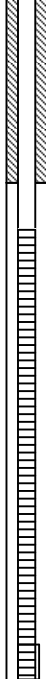
Project: Preliminary Geotechnical Investigation

Client: 1785 Bloor Holdings Inc.

Location: 1785 Bloor Street, Mississauga, Ontario

Drill Date: October 27, 2021

Project Manager: RM

SUBSURFACE PROFILE					SAMPLE													
Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value			Shear Strength		Water Content		Soil Vapour Concentration (ppm)	Laboratory Analysis	
									20	40	60	Δ	kPa	Δ	10			20
8		RQD = 30 %			RC	8	93											
9		RQD = 35 %	123.46		RC	9	93											
10			121.88															
11		RQD = 40 %			RC	10	95											
12		End of Borehole	120.41	water level measured to be at 3.1 mbgs on November 17, 2021														
13																		
14																		
15																		

Contractor: Strata Drilling Inc.

Grade Elevation: 132.55 masl

Drilling Method: Hollow Stem Auger / Split Spoon Sampler

Top of Casing Elevation: 132.45 masl

Well Casing Size: 2"

Sheet: 2 of 2

APPENDIX IV

Rising Head Hydraulic Conductivity Test Curves

Slug Test: BH/MW1**Project No.: 291885.002****Project Location: 1785 Bloor Street, Mississauga, Ontario**

Data Source: based on Manual Measurements as per Rising Head Method dated December 8, 2021

Conducted by: Yorgan Pitt

Interpreted by: Bujing Guan

H = Initial Water Head prior to test

Processing Date: 2/17/2022

Ho = Water Head at time = 0

Screen Depth (mbgs): 9.1 - 12.2

h = Water Head/Level at time t

Screened Soil: shale

Well Diameter: 2"

L = 305 cm

Static Water Level (mbgs): 2.58

R = 10.2 cm

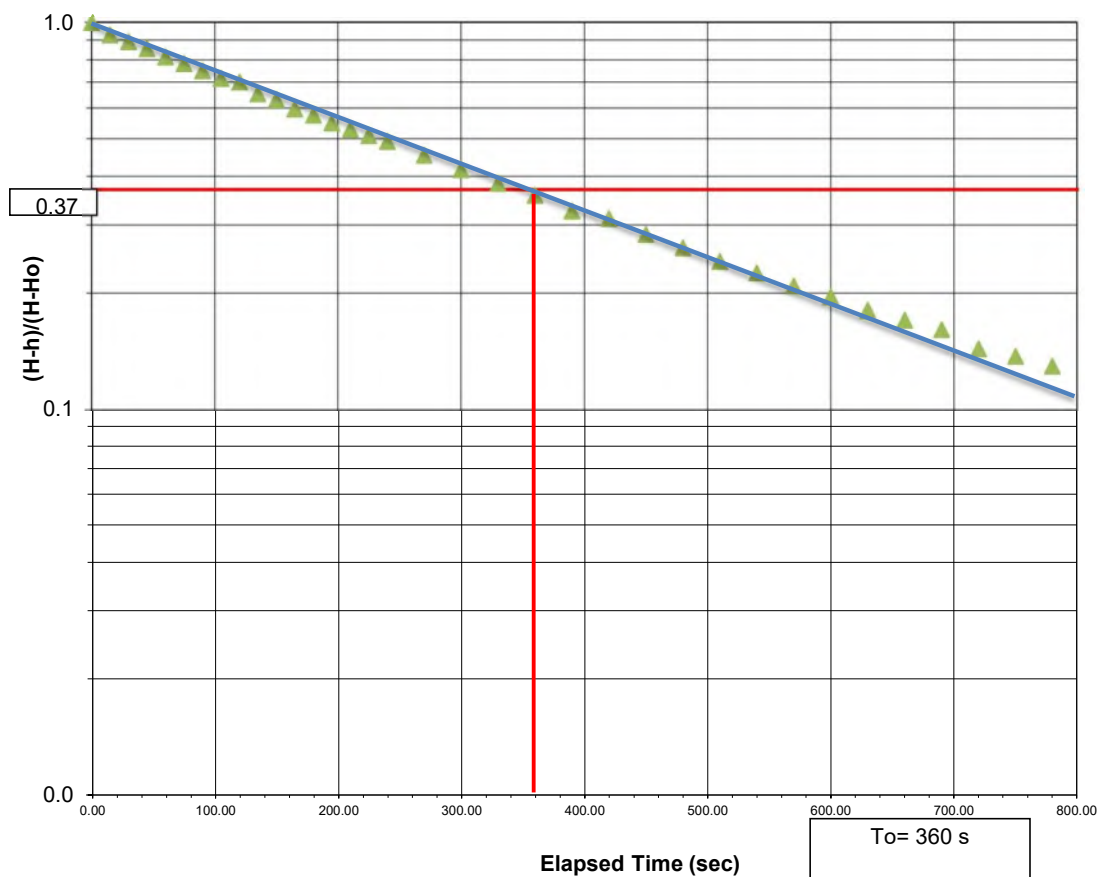
Initial Reading (mTOP) 2.48

r = 2.54 cm

Test Start Reading (H0) (mTOP) 4.4

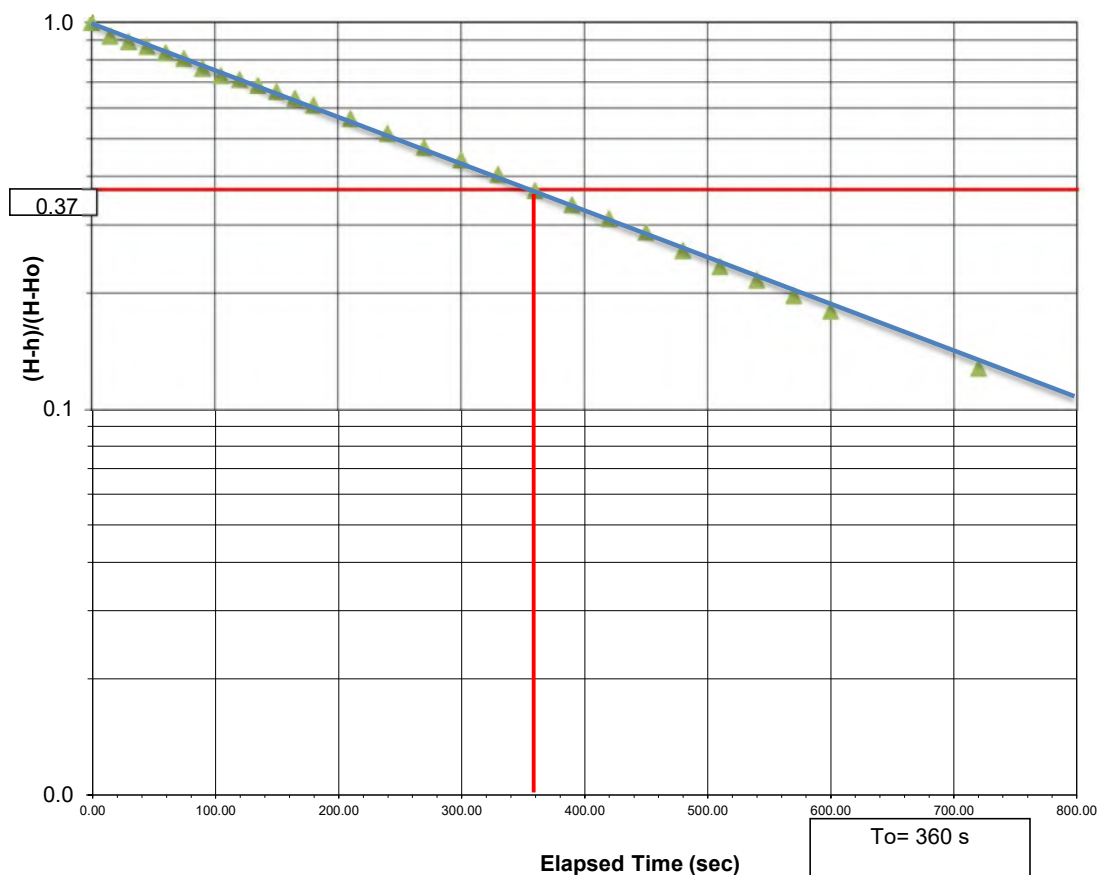
To = 360 sec

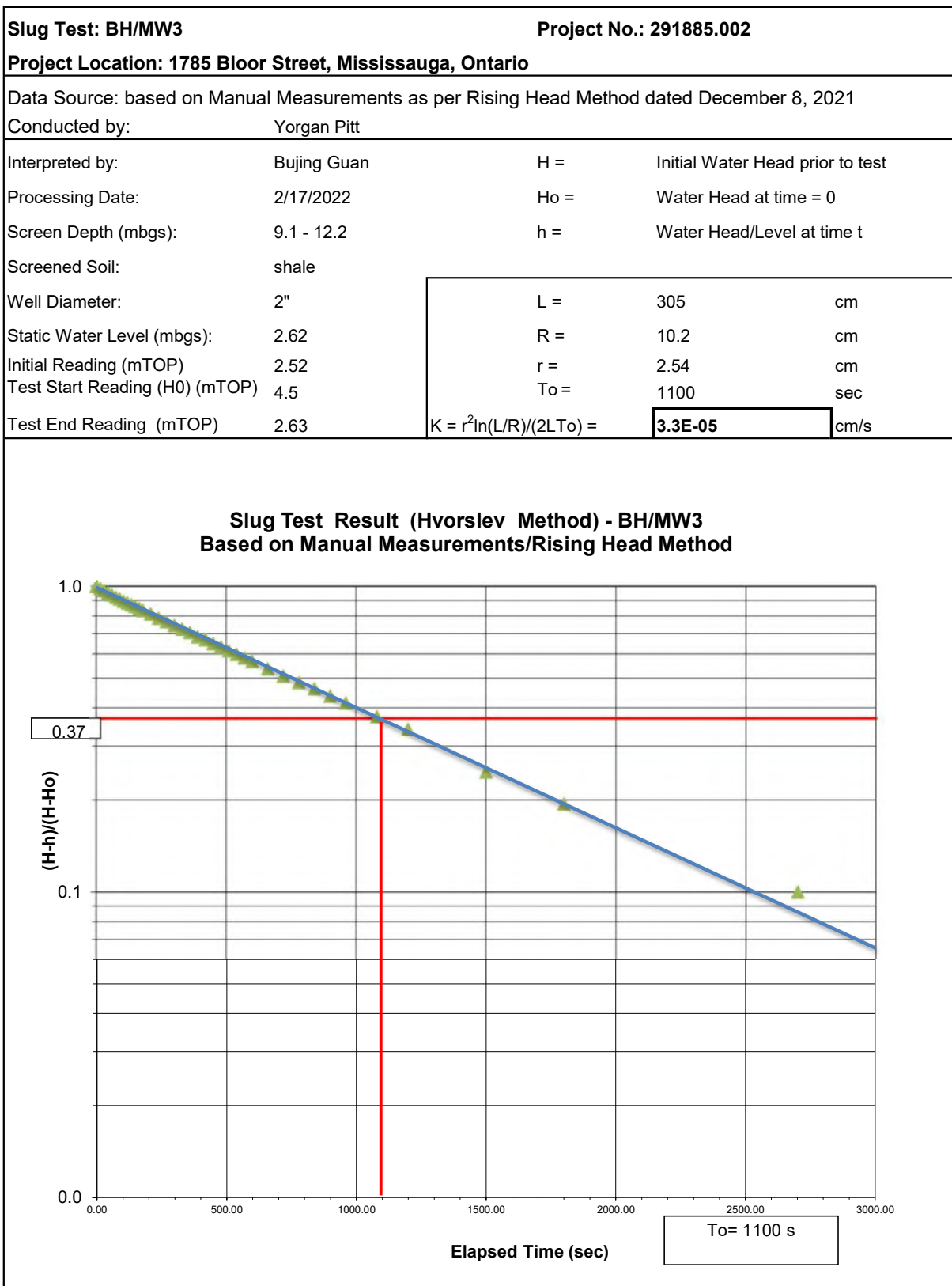
Test End Reading (mTOP) 2.477

 $K = r^2 \ln(L/R) / (2LT_o) = 1.0E-04$ cm/s**Slug Test Result (Hvorslev Method) - BH/MW1
Based on Manual Measurements/Rising Head Method**

Slug Test: BH/MW2		Project No.: 291885.002	
Project Location: 1785 Bloor Street, Mississauga, Ontario			
Data Source: based on Manual Measurements as per Rising Head Method dated December 8, 2021			
Conducted by:		Yorgan Pitt	
Interpreted by:	Bujing Guan	H =	Initial Water Head prior to test
Processing Date:	2/17/2022	Ho =	Water Head at time = 0
Screen Depth (mbgs):	9.1 - 12.2	h =	Water Head/Level at time t
Screened Soil:	shale		
Well Diameter:	2"	L =	305 cm
Static Water Level (mbgs):	4.15	R =	10.2 cm
Initial Reading (mTOP)	4.03	r =	2.54 cm
Test Start Reading (H0) (mTOP)	6	To =	360 sec
Test End Reading (mTOP)	4.031	$K = r^2 \ln(L/R)/(2LT_o) =$	1.0E-04 cm/s

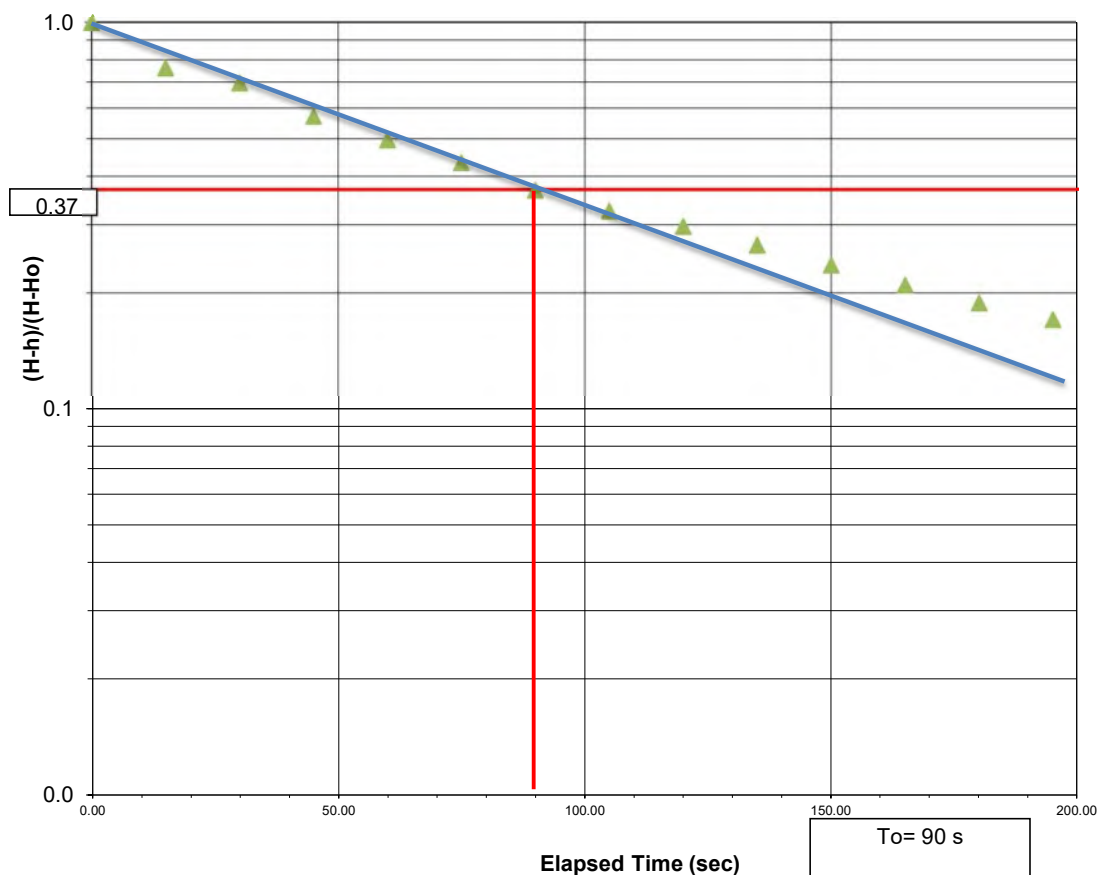
Slug Test Result (Hvorslev Method) - BH/MW2
Based on Manual Measurements/Rising Head Method





Slug Test: BH/MW4		Project No.: 291885.002	
Project Location: 1785 Bloor Street, Mississauga, Ontario			
Data Source: based on Manual Measurements as per Rising Head Method dated December 8, 2021			
Conducted by:		Yorgan Pitt	
Interpreted by:	Bujing Guan	H =	Initial Water Head prior to test
Processing Date:	2/17/2022	Ho =	Water Head at time = 0
Screen Depth (mbgs):	9.1 - 12.2	h =	Water Head/Level at time t
Screened Soil:	shale		
Well Diameter:	2"	L =	305 cm
Static Water Level (mbgs):	3.06	R =	10.2 cm
Initial Reading (mTOP)	2.96	r =	2.54 cm
Test Start Reading (H0) (mTOP)	5	To =	90 sec
Test End Reading (mTOP)	2.957	$K = r^2 \ln(L/R)/(2LT_o) =$	4.0E-04 cm/s

Slug Test Result (Hvorslev Method) - BH/MW4
Based on Manual Measurements/Rising Head Method



APPENDIX V
Laboratory Analytical Results



Your Project #: 291885.002
Your C.O.C. #: 862577-01-01

Attention: Craig Kelly

Pinchin Ltd
2360 Meadowpine Blvd
Unit # 2
Mississauga, ON
CANADA L5N 6S2

Report Date: 2022/01/28
Report #: R6980341
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C216825

Received: 2022/01/21, 13:12

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
ABN Compounds in Water by GC/MS	1	2022/01/23	2022/01/25	CAM SOP-00301	EPA 8270 m
Carbonaceous BOD	1	2022/01/22	2022/01/27	CAM SOP-00427	SM 23 5210B m
Total Cyanide	1	2022/01/24	2022/01/24	CAM SOP-00457	OMOE E3015 5 m
Fluoride	1	2022/01/22	2022/01/24	CAM SOP-00449	SM 23 4500-F C m
Mercury in Water by CVAA	1	2022/01/25	2022/01/25	CAM SOP-00453	EPA 7470A m
Total Metals Analysis by ICPMS	1	N/A	2022/01/26	CAM SOP-00447	EPA 6020B m
E.coli, (CFU/100mL)	1	N/A	2022/01/21	CAM SOP-00552	MOE LSB E3371
Total Nonylphenol in Liquids by HPLC	1	2022/01/24	2022/01/26	CAM SOP-00313	In-house Method
Nonylphenol Ethoxylates in Liquids: HPLC	1	2022/01/24	2022/01/26	CAM SOP-00313	BV Labs Method
Animal and Vegetable Oil and Grease	1	N/A	2022/01/26	CAM SOP-00326	EPA1664B m,SM5520B m
Total Oil and Grease	1	2022/01/26	2022/01/26	CAM SOP-00326	EPA1664B m,SM5520B m
Polychlorinated Biphenyl in Water	1	2022/01/24	2022/01/25	CAM SOP-00309	EPA 8082A m
pH	1	2022/01/22	2022/01/24	CAM SOP-00413	SM 4500H+ B m
Phenols (4AAP)	1	N/A	2022/01/24	CAM SOP-00444	OMOE E3179 m
Sulphate by Automated Colourimetry	1	N/A	2022/01/24	CAM SOP-00464	EPA 375.4 m
Total Kjeldahl Nitrogen in Water	1	2022/01/24	2022/01/25	CAM SOP-00938	OMOE E3516 m
Mineral/Synthetic O & G (TPH Heavy Oil) (1)	1	2022/01/26	2022/01/26	CAM SOP-00326	EPA1664B m,SM5520F m
Total Suspended Solids	1	2022/01/25	2022/01/26	CAM SOP-00428	SM 23 2540D m
Volatile Organic Compounds in Water	1	N/A	2022/01/24	CAM SOP-00228	EPA 8260C m

Remarks:

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

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

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



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Received: 2022/01/21, 13:12

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

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

(1) Note: TPH (Heavy Oil) is equivalent to Mineral / Synthetic Oil & Grease

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Antonella Brasil, Senior Project Manager

Email: Antonella.Brasil@bureauveritas.com

Phone# (905)817-5817

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



PEEL SANITARY & STORM SEWER (53-2010)

Bureau Veritas ID				RRA847			
Sampling Date				2022/01/21 11:30			
COC Number				862577-01-01			
	UNITS	Criteria	Criteria-2	MW4 1785 BLOOR ST	RDL	MDL	QC Batch
Calculated Parameters							
Total Animal/Vegetable Oil and Grease	mg/L	-	150	<0.50	0.50	0.10	7793712
Inorganics							
Total Carbonaceous BOD	mg/L	15	300	<2	2	0.2	7795152
Fluoride (F-)	mg/L	-	10	1.4	0.10	0.020	7795461
Total Kjeldahl Nitrogen (TKN)	mg/L	1	100	1.5	0.10	0.060	7797026
pH	pH	6.0:9.0	5.5:10.0	8.07			7795457
Phenols-4AAP	mg/L	0.008	1	<0.0010	0.0010	0.00030	7796368
Total Suspended Solids	mg/L	15	350	580	10	2.0	7795188
Dissolved Sulphate (SO4)	mg/L	-	1500	44	1.0	0.10	7795602
Total Cyanide (CN)	mg/L	0.02	2	<0.0050	0.0050	0.00010	7796829
Petroleum Hydrocarbons							
Total Oil & Grease	mg/L	-	-	0.60	0.50	0.10	7800391
TPH - Heavy Oils	mg/L	-	15	0.50	0.50	0.10	7800393
Miscellaneous Parameters							
Nonylphenol Ethoxylate (Total)	mg/L	-	0.2	<0.025	0.025	0.005	7797119
Nonylphenol (Total)	mg/L	-	0.02	<0.001	0.001	0.0002	7797103
Metals							
Mercury (Hg)	mg/L	0.0004	0.01	<0.00010	0.00010	0.000050	7798098
Total Aluminum (Al)	ug/L	-	50000	520	4.9	2.0	7800756
Total Antimony (Sb)	ug/L	-	5000	<0.50	0.50	0.30	7800756
Total Arsenic (As)	ug/L	20	1000	<1.0	1.0	0.50	7800756
Total Cadmium (Cd)	ug/L	8	700	<0.090	0.090	0.090	7800756
Total Chromium (Cr)	ug/L	80	5000	<5.0	5.0	5.0	7800756
Total Cobalt (Co)	ug/L	-	5000	<0.50	0.50	0.10	7800756
Total Copper (Cu)	ug/L	50	3000	1.3	0.90	0.50	7800756
Total Lead (Pb)	ug/L	120	3000	<0.50	0.50	0.10	7800756
Total Manganese (Mn)	ug/L	50	5000	69	2.0	0.50	7800756
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: The Regional Municipality of Peel Storm Sewer Discharge. By-Law Number 53-2010.							
Criteria-2: The Regional Municipality of Peel Sanitary Sewer Discharge. By-Law Number 53-2010.							



PEEL SANITARY & STORM SEWER (53-2010)

Bureau Veritas ID				RRA847			
Sampling Date				2022/01/21 11:30			
COC Number				862577-01-01			
	UNITS	Criteria	Criteria-2	MW4 1785 BLOOR ST	RDL	MDL	QC Batch
Total Molybdenum (Mo)	ug/L	-	5000	0.72	0.50	0.20	7800756
Total Nickel (Ni)	ug/L	80	3000	1.4	1.0	0.50	7800756
Total Phosphorus (P)	ug/L	-	10000	<100	100	30	7800756
Total Selenium (Se)	ug/L	20	1000	<2.0	2.0	0.50	7800756
Total Silver (Ag)	ug/L	120	5000	<0.090	0.090	0.070	7800756
Total Tin (Sn)	ug/L	-	5000	<1.0	1.0	0.50	7800756
Total Titanium (Ti)	ug/L	-	5000	11	5.0	4.0	7800756
Total Zinc (Zn)	ug/L	40	3000	<5.0	5.0	3.0	7800756
Semivolatile Organics							
Bis(2-ethylhexyl)phthalate	ug/L	8.8	12	<2.0	2.0	0.10	7795837
Di-N-butyl phthalate	ug/L	15	80	<2.0	2.0	0.10	7795837
Volatile Organics							
Benzene	ug/L	2	10	<0.40	0.40	0.040	7795169
Chloroform	ug/L	2	40	<0.40	0.40	0.10	7795169
1,2-Dichlorobenzene	ug/L	5.6	50	<0.80	0.80	0.10	7795169
1,4-Dichlorobenzene	ug/L	6.8	80	<0.80	0.80	0.10	7795169
cis-1,2-Dichloroethylene	ug/L	5.6	4000	<1.0	1.0	0.10	7795169
trans-1,3-Dichloropropene	ug/L	5.6	140	<0.80	0.80	0.10	7795169
Ethylbenzene	ug/L	2	160	<0.40	0.40	0.020	7795169
Methylene Chloride(Dichloromethane)	ug/L	5.2	2000	<4.0	4.0	0.20	7795169
Methyl Ethyl Ketone (2-Butanone)	ug/L	-	8000	<20	20	1.0	7795169
Styrene	ug/L	-	200	<0.80	0.80	0.10	7795169
1,1,2,2-Tetrachloroethane	ug/L	17	1400	<0.80	0.80	0.10	7795169
Tetrachloroethylene	ug/L	4.4	1000	<0.40	0.40	0.10	7795169
Toluene	ug/L	2	270	<0.40	0.40	0.020	7795169
Trichloroethylene	ug/L	8	400	<0.40	0.40	0.10	7795169
p+m-Xylene	ug/L	-	-	<0.40	0.40	0.020	7795169
o-Xylene	ug/L	-	-	<0.40	0.40	0.020	7795169
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: The Regional Municipality of Peel Storm Sewer Discharge.							
By-Law Number 53-2010.							
Criteria-2: The Regional Municipality of Peel Sanitary Sewer Discharge.							
By-Law Number 53-2010.							



PEEL SANITARY & STORM SEWER (53-2010)

Bureau Veritas ID				RRA847			
Sampling Date				2022/01/21 11:30			
COC Number				862577-01-01			
	UNITS	Criteria	Criteria-2	MW4 1785 BLOOR ST	RDL	MDL	QC Batch
Total Xylenes	ug/L	4.4	1400	<0.40	0.40	0.020	7795169
PCBs							
Total PCB	ug/L	0.4	1	<0.05	0.05	0.01	7796928
Microbiological							
Escherichia coli	CFU/100mL	200	-	<10	10	N/A	7794100
Surrogate Recovery (%)							
2,4,6-Tribromophenol	%	-	-	76			7795837
2-Fluorobiphenyl	%	-	-	54			7795837
2-Fluorophenol	%	-	-	33			7795837
D14-Terphenyl	%	-	-	93			7795837
D5-Nitrobenzene	%	-	-	74			7795837
D5-Phenol	%	-	-	27			7795837
Decachlorobiphenyl	%	-	-	72			7796928
4-Bromofluorobenzene	%	-	-	97			7795169
D4-1,2-Dichloroethane	%	-	-	111			7795169
D8-Toluene	%	-	-	97			7795169
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: The Regional Municipality of Peel Storm Sewer Discharge.							
By-Law Number 53-2010.							
Criteria-2: The Regional Municipality of Peel Sanitary Sewer Discharge.							
By-Law Number 53-2010.							
N/A = Not Applicable							



Bureau Veritas Job #: C216825
Report Date: 2022/01/28

Pinchin Ltd
Client Project #: 291885.002
Sampler Initials: YP

PEEL SANITARY & STORM SEWER (53-2010)

Bureau Veritas ID				RRA847			
Sampling Date				2022/01/21 11:30			
COC Number				862577-01-01			
	UNITS	Criteria	Criteria-2	MW4 1785 BLOOR ST Lab-Dup	RDL	MDL	QC Batch
Inorganics							
Total Cyanide (CN)	mg/L	0.02	2	<0.0050	0.0050	0.00010	7796829
PCBs							
Total PCB	ug/L	0.4	1	<0.05	0.05	0.01	7796928
Surrogate Recovery (%)							
Decachlorobiphenyl	%	-	-	69			7796928
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Lab-Dup = Laboratory Initiated Duplicate							
Criteria: The Regional Municipality of Peel Storm Sewer Discharge. By-Law Number 53-2010.							
Criteria-2: The Regional Municipality of Peel Sanitary Sewer Discharge. By-Law Number 53-2010.							



Bureau Veritas Job #: C216825

Report Date: 2022/01/28

Pinchin Ltd

Client Project #: 291885.002

Sampler Initials: YP

TEST SUMMARY

Bureau Veritas ID: RRA847
Sample ID: MW4 1785 BLOOR ST
Matrix: Water

Collected: 2022/01/21
Shipped:
Received: 2022/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
ABN Compounds in Water by GC/MS	GC/MS	7795837	2022/01/23	2022/01/25	Anh Lieu
Carbonaceous BOD	DO	7795152	2022/01/22	2022/01/27	Surleen Kaur Romana
Total Cyanide	SKAL/CN	7796829	2022/01/24	2022/01/24	Nimarta Singh
Fluoride	ISE	7795461	2022/01/22	2022/01/24	Surinder Rai
Mercury in Water by CVAA	CV/AA	7798098	2022/01/25	2022/01/25	Gagandeep Rai
Total Metals Analysis by ICPMS	ICP/MS	7800756	N/A	2022/01/26	Azita Fazaeli
E.coli, (CFU/100mL)	PL	7794100	N/A	2022/01/21	Farhana Rahman
Total Nonylphenol in Liquids by HPLC	LC/FLU	7797103	2022/01/24	2022/01/26	Dennis Boodram
Nonylphenol Ethoxylates in Liquids: HPLC	LC/FLU	7797119	2022/01/24	2022/01/26	Dennis Boodram
Animal and Vegetable Oil and Grease	BAL	7793712	N/A	2022/01/26	Automated Statchk
Total Oil and Grease	BAL	7800391	2022/01/26	2022/01/26	Mitul Patel
Polychlorinated Biphenyl in Water	GC/ECD	7796928	2022/01/24	2022/01/25	Svitlana Shaula
pH	AT	7795457	2022/01/22	2022/01/24	Surinder Rai
Phenols (4AAP)	TECH/PHEN	7796368	N/A	2022/01/24	Louise Harding
Sulphate by Automated Colourimetry	KONE	7795602	N/A	2022/01/24	Avneet Kour Sudan
Total Kjeldahl Nitrogen in Water	SKAL	7797026	2022/01/24	2022/01/25	Massarat Jan
Mineral/Synthetic O & G (TPH Heavy Oil)	BAL	7800393	2022/01/26	2022/01/26	Mitul Patel
Total Suspended Solids	BAL	7795188	2022/01/25	2022/01/26	Shaneil Hall
Volatile Organic Compounds in Water	GC/MS	7795169	N/A	2022/01/24	Ancheol Jeong

Bureau Veritas ID: RRA847 Dup
Sample ID: MW4 1785 BLOOR ST
Matrix: Water

Collected: 2022/01/21
Shipped:
Received: 2022/01/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Cyanide	SKAL/CN	7796829	2022/01/24	2022/01/24	Nimarta Singh
Polychlorinated Biphenyl in Water	GC/ECD	7796928	2022/01/24	2022/01/25	Svitlana Shaula



Bureau Veritas Job #: C216825
Report Date: 2022/01/28

Pinchin Ltd
Client Project #: 291885.002
Sampler Initials: YP

GENERAL COMMENTS

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

Package 1	4.7°C
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Sample RRA847 [MW4 1785 BLOOR ST] : VOC Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.



Bureau Veritas Job #: C216825
Report Date: 2022/01/28

QUALITY ASSURANCE REPORT

Pinchin Ltd
Client Project #: 291885.002
Sampler Initials: YP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7795169	4-Bromofluorobenzene	2022/01/24	98	70 - 130	101	70 - 130	99	%				
7795169	D4-1,2-Dichloroethane	2022/01/24	105	70 - 130	101	70 - 130	100	%				
7795169	D8-Toluene	2022/01/24	100	70 - 130	100	70 - 130	98	%				
7795837	2,4,6-Tribromophenol	2022/01/24	88	10 - 130	86	10 - 130	77	%				
7795837	2-Fluorobiphenyl	2022/01/24	67	30 - 130	69	30 - 130	70	%				
7795837	2-Fluorophenol	2022/01/24	45	10 - 130	51	10 - 130	53	%				
7795837	D14-Terphenyl	2022/01/24	95	30 - 130	95	30 - 130	94	%				
7795837	D5-Nitrobenzene	2022/01/24	82	30 - 130	83	30 - 130	80	%				
7795837	D5-Phenol	2022/01/24	33	10 - 130	34	10 - 130	36	%				
7796928	Decachlorobiphenyl	2022/01/25	56 (1)	60 - 130	72	60 - 130	66	%				
7795152	Total Carbonaceous BOD	2022/01/27					<2	mg/L	4.4	30	92	85 - 115
7795169	1,1,2,2-Tetrachloroethane	2022/01/24	95	70 - 130	93	70 - 130	<0.40	ug/L	NC	30		
7795169	1,2-Dichlorobenzene	2022/01/24	94	70 - 130	95	70 - 130	<0.40	ug/L	NC	30		
7795169	1,4-Dichlorobenzene	2022/01/24	110	70 - 130	113	70 - 130	<0.40	ug/L	NC	30		
7795169	Benzene	2022/01/24	90	70 - 130	92	70 - 130	<0.20	ug/L	NC	30		
7795169	Chloroform	2022/01/24	96	70 - 130	96	70 - 130	<0.20	ug/L	NC	30		
7795169	cis-1,2-Dichloroethylene	2022/01/24	96	70 - 130	97	70 - 130	<0.50	ug/L	NC	30		
7795169	Ethylbenzene	2022/01/24	88	70 - 130	91	70 - 130	<0.20	ug/L	NC	30		
7795169	Methyl Ethyl Ketone (2-Butanone)	2022/01/24	118	60 - 140	108	60 - 140	<10	ug/L	NC	30		
7795169	Methylene Chloride(Dichloromethane)	2022/01/24	110	70 - 130	107	70 - 130	<2.0	ug/L	NC	30		
7795169	o-Xylene	2022/01/24	88	70 - 130	91	70 - 130	<0.20	ug/L	NC	30		
7795169	p+m-Xylene	2022/01/24	93	70 - 130	97	70 - 130	<0.20	ug/L	1.3	30		
7795169	Styrene	2022/01/24	100	70 - 130	103	70 - 130	<0.40	ug/L	NC	30		
7795169	Tetrachloroethylene	2022/01/24	86	70 - 130	89	70 - 130	<0.20	ug/L	NC	30		
7795169	Toluene	2022/01/24	89	70 - 130	90	70 - 130	<0.20	ug/L	NC	30		
7795169	Total Xylenes	2022/01/24					<0.20	ug/L	1.3	30		
7795169	trans-1,3-Dichloropropene	2022/01/24	108	70 - 130	96	70 - 130	<0.40	ug/L	NC	30		
7795169	Trichloroethylene	2022/01/24	101	70 - 130	103	70 - 130	<0.20	ug/L	NC	30		
7795188	Total Suspended Solids	2022/01/26					<10	mg/L	0	25	98	85 - 115
7795457	pH	2022/01/24			102	98 - 103			0.36	N/A		
7795461	Fluoride (F-)	2022/01/24	107	80 - 120	100	80 - 120	<0.10	mg/L	NC	20		

BUREAU
VERITAS

Bureau Veritas Job #: C216825

Report Date: 2022/01/28

QUALITY ASSURANCE REPORT(CONT'D)

Pinchin Ltd

Client Project #: 291885.002

Sampler Initials: YP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7795602	Dissolved Sulphate (SO ₄)	2022/01/24	120	75 - 125	100	80 - 120	<1.0	mg/L	0.13	20		
7795837	Bis(2-ethylhexyl)phthalate	2022/01/25	79	30 - 130	95	30 - 130	<2.0	ug/L	NC	40		
7795837	Di-N-butyl phthalate	2022/01/25	98	30 - 130	102	30 - 130	<2.0	ug/L	NC	40		
7796368	Phenols-4AAP	2022/01/24	102	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20		
7796829	Total Cyanide (CN)	2022/01/24	105	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20		
7796928	Total PCB	2022/01/25	52 (2)	60 - 130	63	60 - 130	<0.05	ug/L	NC	40		
7797026	Total Kjeldahl Nitrogen (TKN)	2022/01/25	103	80 - 120	98	80 - 120	<0.10	mg/L	0	20	98	80 - 120
7797103	Nonylphenol (Total)	2022/01/26	98	50 - 130	125	50 - 130	<0.001	mg/L	NC	40		
7797119	Nonylphenol Ethoxylate (Total)	2022/01/26	99	50 - 130	92	50 - 130	<0.025	mg/L	4.6	40		
7798098	Mercury (Hg)	2022/01/25	119	75 - 125	94	80 - 120	<0.00010	mg/L	NC	20		
7800391	Total Oil & Grease	2022/01/26			98	85 - 115	<0.50	mg/L	1.3	25		
7800393	TPH - Heavy Oils	2022/01/26			95	85 - 115	<0.50	mg/L	2.1	25		
7800756	Total Aluminum (Al)	2022/01/26	115	80 - 120	100	80 - 120	<4.9	ug/L	1.1	20		
7800756	Total Antimony (Sb)	2022/01/26	104	80 - 120	100	80 - 120	<0.50	ug/L				
7800756	Total Arsenic (As)	2022/01/26	102	80 - 120	101	80 - 120	<1.0	ug/L	NC	20		
7800756	Total Cadmium (Cd)	2022/01/26	99	80 - 120	100	80 - 120	<0.090	ug/L	NC	20		
7800756	Total Chromium (Cr)	2022/01/26	100	80 - 120	98	80 - 120	<5.0	ug/L	NC	20		
7800756	Total Cobalt (Co)	2022/01/26	99	80 - 120	97	80 - 120	<0.50	ug/L	7.7	20		
7800756	Total Copper (Cu)	2022/01/26	98	80 - 120	100	80 - 120	<0.90	ug/L	2.5	20		
7800756	Total Lead (Pb)	2022/01/26	92	80 - 120	94	80 - 120	<0.50	ug/L	5.5	20		
7800756	Total Manganese (Mn)	2022/01/26	98	80 - 120	99	80 - 120	<2.0	ug/L	3.7	20		
7800756	Total Molybdenum (Mo)	2022/01/26	105	80 - 120	98	80 - 120	<0.50	ug/L	5.9	20		
7800756	Total Nickel (Ni)	2022/01/26	95	80 - 120	97	80 - 120	<1.0	ug/L	5.0	20		
7800756	Total Phosphorus (P)	2022/01/26	108	80 - 120	114	80 - 120	<100	ug/L				
7800756	Total Selenium (Se)	2022/01/26	99	80 - 120	101	80 - 120	<2.0	ug/L	NC	20		
7800756	Total Silver (Ag)	2022/01/26	95	80 - 120	98	80 - 120	<0.090	ug/L	NC	20		
7800756	Total Tin (Sn)	2022/01/26	102	80 - 120	100	80 - 120	<1.0	ug/L				
7800756	Total Titanium (Ti)	2022/01/26	101	80 - 120	95	80 - 120	<5.0	ug/L				



Bureau Veritas Job #: C216825
Report Date: 2022/01/28

QUALITY ASSURANCE REPORT(CONT'D)

Pinchin Ltd
Client Project #: 291885.002
Sampler Initials: YP

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7800756	Total Zinc (Zn)	2022/01/26	97	80 - 120	104	80 - 120	<5.0	ug/L	4.1	20		

N/A = Not Applicable

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

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) The recovery for the flagged target analyte was below the control limit as stipulated by Ontario Regulation 153, however, this recovery is still within Bureau Veritas Laboratories' performance based limits. Results reported for this specific analyte with spike recoveries within this range are still valid but may have an associated low bias.



FUNDAMENTAL LABORATORY ACCEPTANCE GUIDELINE

Invoice To:

Pinchin Ltd
ATTN: Accounts Payable
2360 Meadowpine Blvd
Unit # 2
Mississauga, ON
CANADA L5N 6S2
Client Contact:
Craig Kelly

Bureau Veritas Job #: C216825
Date Received: 2022/01/21
Your C.O.C. #: 862577-01-01
Your Project #: 291885.002
Bureau Veritas Project Manager: Antonella Brasil
Quote #: C20345

No discrepancies noted.

Report Comments

Received Date:	<u>2022/01/21</u>	Time:	<u>13:12</u>	By:	_____
Inspected Date:	_____	Time:	_____	By:	_____
FLAG Created Date:	_____	Time:	_____	By:	_____



Bureau Veritas Job #: C216825
Report Date: 2022/01/28

Pinchin Ltd
Client Project #: 291885.002
Sampler Initials: YP

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

Ewa Pranjić, M.Sc., C.Chem, Scientific Specialist

Farhana Rahman, Senior Analyst

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



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

CHAIN OF CUSTODY RECORD

Page of

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name: #3103 Pinchin Ltd		Company Name: Craig Kelly		Quotation #: C20345		Bureau Veritas Job #:	
Attention: Accounts Payable		Attention: Craig Kelly		P.O. #:		Bottle Order #:	
Address: 2360 Meadowpine Blvd Unit # 2		Address:		Project: 291885.002		COC #:	
Mississauga ON L5N 6S2		Tel: (905) 363-1352 Fax:		Project Name:		Project Manager:	
Tel: (905) 363-0678 Fax: (905) 363-0681		Email: cxkelly@pinchin.com		Site #:		Antonnella Brasil	
Email: ap@pinchin.com		Email:		Sampled By:		C#862577-01-01	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY					
Regulation 153 (2011)		Other Regulations		Special Instructions	
<input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Medium/Fine		<input type="checkbox"/> CCME <input checked="" type="checkbox"/> Sanitary Sewer Bylaw			
<input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse		<input type="checkbox"/> Reg 558 <input checked="" type="checkbox"/> Storm Sewer Bylaw			
<input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other <input type="checkbox"/> For RSC		<input type="checkbox"/> MISA Municipality Peel			
<input type="checkbox"/> Table		<input type="checkbox"/> PWQO <input type="checkbox"/> Reg 406 Table			
Include Criteria on Certificate of Analysis (Y/N)? <input checked="" type="checkbox"/>					
Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr / V Peel Sanitary & Storm Sewer (53-2010) <input checked="" type="checkbox"/>
1 MW4	1785 Bloor St	Jan 21 2022	11:30	GW	
2					
3					
4					
5					
6					
7					
8					
9					
10					

* RELINQUISHED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)		Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only	
Yongun P.H. [Signature]		22/01/21	13:00	[Signature]		22/01/21	13:12		Time Sensitive	Temperature (°C) on Receipt
									Intact	Custody Seal Present
									Yes	No

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

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

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

White: Bureau Veritas Yellow: Client

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

Bureau Veritas Canada (2019) Inc.



Exceedance Summary Table – Peel Region Storm 2010
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
MW4 1785 BLOOR ST	RRA847-10	Total Kjeldahl Nitrogen (TKN)	1	1.5	0.10	mg/L
MW4 1785 BLOOR ST	RRA847-09	Total Manganese (Mn)	50	69	2.0	ug/L
MW4 1785 BLOOR ST	RRA847-06	Total Suspended Solids	15	580	10	mg/L

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

Exceedance Summary Table – Peel Region Sanitary 2010
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
MW4 1785 BLOOR ST	RRA847-06	Total Suspended Solids	350	580	10	mg/L

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