



**ENGINEERING**



**LABORATORY**



**HYDROGEOLOGICAL INVESTIGATION**



**PROPOSED NEW DEVELOPMENT,  
6333 HURONTARIO STREET, MISSISSAUGA,  
ONTARIO**

Prepared for:

**Dymon Group of Companies**

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**Project Name:** Hydrogeological Investigation for Proposed Development

**Project Address:** 6333 Hurontario Street, Mississauga, Ontario

**Project Number:** FE-P 20-10655-H

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## 1. INTRODUCTION

Fisher Engineering Ltd (Fisher) was commissioned by Dymon Group of Companies to carry out a Hydrogeological Investigation at the property municipally addressed as 6333 Hurontario Street in Mississauga, Ontario, hereinafter referred to as the 'Site'.

The purpose of the Hydrogeological Investigation was to evaluate groundwater conditions with respect to the redevelopment of the site.

The report has been prepared specifically and solely for the proposed development regarding hydrogeological aspects for design and construction.

The Hydrogeological Review has been prepared in accordance with the Ontario Water Resources Act and Ontario Regulation 387/04.

Updates in relation to the previous versions of the report are summarized as follows:

- Architect drawings by Global Architect Inc, dated October 25, 2022, show two underground levels with TOS for P2 at 6.401m below ground floor level of 198.85m asl.
- The lowest slab, P2 level, is now proposed at **192.445m asl**.
- Building **footprint is 4570m<sup>2</sup> instead of the previous 4,255m<sup>2</sup>**.
- Construction groundwater dewatering flowrate of **63.69 m<sup>3</sup>/day instead of 61.85 m<sup>3</sup>/day** previously estimated.
- Permanent groundwater discharge rate of **32.45 m<sup>3</sup>/day instead of 37.28m<sup>3</sup>/day** was estimated for two underground levels.

## 2. SITE AND PROJECT DESCRIPTIONS

### Site Settings

The site is located at the east side of Hurontario Street, approximately 400m north of Highway 401, in a commercial/industrial area, and is bounded by Hurontario Street to the west and commercial/industrial properties to the north, east and south. Hurontario Street is taken as running in a north-south direction for the purpose of this report. The property has an approximate area of 7983m<sup>2</sup> and is rectangular in shape.



At the time of the investigation, the site was occupied by a two-storey dwelling along with a large repair garage. Concrete block retaining walls were observed along the east property line and at the southeast boundary. A small shed was noted at the southeast corner while the southern portion of the property was covered with gravel/paved and used for the parking of trucks/trailers. The remaining areas were mainly covered with grass along with mature trees at the eastern section.

### **Topography**

Site grades were mainly flat and sloping generally from east to west. Ground elevation changes from approximately 199.13m at the east boundary to 196.25m asl at the west boundary as shown on the undated topographic survey plan by Speight, Van Nostrand & Gibson Limited.

### **Proposed Development**

It was understood that the proposed development will consist of the construction of new self-storage facilities with two underground levels. Finished Floor Elevations (FFE) were given as 198.85m for the ground floor with P1 and P2 3.353m and 3.048m respectively below (195.35m & 192.449m asl). The proposed building has a footprint of 4570m<sup>2</sup>. An average footing elevation of 189m asl, for conventional footings, was assumed based on the recommendations for higher bearing capacity in the geotechnical engineering report.

## **3. PREVIOUS INVESTIGATIONS**

Fisher Environmental carried out a Geotechnical Investigation and Phase 2 Environmental Site Assessment (Ph 2 ESA) and submitted reports dated August 2019. Five boreholes were drilled to depths of 5.03m to 6.55m bgs. Three of the boreholes were instrumented as monitoring wells (MW1, MW2 and MW3). The reports showed that groundwater levels vary between 0.64m and 1.69m bgs (elevations of 196.44m to 197.25m asl).

Fisher Engineering conducted a hydrogeological investigation, for a proposed building with no underground levels, and submitted a report under project number FE-P 20-10463, dated September 2020. Information from the boreholes used for the previous investigations are included in this latest report.



Further investigation was conducted by Fisher Engineering, including the drilling of deeper boreholes and installation of monitoring wells, to account for changes in the building design which included two underground parking levels.

Description of field and laboratory investigation carried out on the site at various times are included in the following sections.

#### 4. SCOPE OF HYDROGEOLOGICAL INVESTIGATION

The Hydrogeological Investigation works were required to:

- 1) Establish groundwater conditions for the design of dewatering works, if required, prior to construction of the proposed building.
- 2) Determine the need for permanent drainage and
- 3) Conduct calculations/analyses of the groundwater quantity and quality to be used for the necessary permits applications prior to proceeding with construction dewatering and design of permanent drainage, if necessary.

The scope of this work generally consisted of the following:

- **Drilling/locating Monitoring Wells.** Drilling of, and locating existing, monitoring wells and reviewing / compiling the borehole logs and onsite / laboratory testing.
- **Data Evaluation.** Evaluating the results of soil types, groundwater static levels, ground surface elevation, groundwater quality, flow direction and other available hydrogeological data for the Site and their potential impact on the proposed development.
- **Hydraulic Conductivity Tests.** Conduct single well response tests in five (5) monitoring wells and record groundwater level drawdown and recovery to model/calculate hydraulic conductivity.
- **Groundwater Quality Analysis.** Carry out laboratory analyses on soil and groundwater to determine compliance with the Ontario Reg. Mun of Peel Sanitary Bylaw #53-2010 and Peel Storm Sewer By-law #53-201 (Apr 2011).
- **Hydrogeological Report.** Prepare and submit a report detailing the findings and recommendations of the Hydrogeological Investigation.



## 5. FIELD AND LABORATORY WORKS

Subsurface exploration for the initial Hydrogeological Investigation was conducted on September 8, 2020 and consisted of the drilling of four (4) boreholes to depths of 5.03m below existing grades. All boreholes were instrumented as monitoring wells (MW101 to MW104) for groundwater monitoring and testing. Four (4) deeper boreholes (BH201 to BH204) were drilled on November 2 and 3, 2020 to depths from 11.13m to 12.65m bgs. Three (3) of the boreholes were instrumented as monitoring wells (MW201, MW203 & MW204). A clean silica sand pack was placed around the well screens and isolated with bentonite to depths below existing grade as shown in the borehole details in Appendix B.

A Truck Mounted Drill rig equipped with solid stem augers, supplied by Terra Firma Services, was used for all drilling work.

### Laboratory Analyses

Three (3) representative soil samples from BH104 and eight (8) samples from BH201 & BH203 were selected and submitted to Fisher Environmental laboratory for grain size distribution and moisture content analyses. The laboratory results, which are presented in Appendix C, are consistent with the field descriptions for subsurface soils discussed in Section 6.0.

One groundwater sample from MW103 was submitted to ALS Environmental laboratory for analysis of water quality under the Ontario Reg. Mun of Peel Sanitary Bylaw #53-2010 and Peel Storm Sewer By-law #53-201 (Apr 2011). The results are presented in Appendix D.

The soil samples recovered during the investigation were stored in the Fisher Environmental laboratory for a period of 30 days after submitting the reports and were discarded thereafter.

### Site Survey

Elevations at borehole/monitoring well locations were interpolated from an undated survey plan prepared by Speight, Van Nostrand & Gibson Limited which was provided to Fisher during the investigation.



## 6. PAVEMENT AND SOIL CONDITIONS

Surface and subsurface conditions encountered at borehole locations are presented in Appendix B - Log of Boreholes and are summarized in the following. The logs include stratification at borehole locations along with detailed soil description. Variations in soil stratification may occur and should be expected between borehole locations and elsewhere on the site.

- **FILL/Disturbed Soil** – Asphalt was found at the surface of BH101, BH103 and BH202 with thickness of 50mm to 80mm respectively. The asphalt layer was underlain by granular fill mixed with sandy silt and pieces of concrete. Brown to dark brown silt to sandy silt fill with some gravel and with black seams were found at the surface of BH102, BH104 and BH202. The moist fill/disturbed soil was in a loose to compact state and extended to depths of 1.22m to 1.68m below prevailing grade (elevations of 195.82m to 197.49m asl). Depth and elevation of the fill encountered in all boreholes are presented in Table 1.

**Table 1: Fill depths and Elevations**

Borehole No.	BH101	BH102	BH103	BH104	BH201	BH202	BH203	BH204
Surface Elevation (m asl)	198.86	197.40	198.32	197.50	198.55	198.45	197.75	197.45
Depth of Borehole (m bgs)	5.03	5.03	5.03	5.03	12.65	11.13	11.13	12.65
Elevation at Bottom of Borehole (m asl)	193.83	192.37	193.29	192.47	185.90	187.32	186.62	184.80
Depth of Fill (m bgs)	1.37	1.22	1.52	1.68	1.37	1.37	1.22	1.37
Elevation at Bottom of Fill (m asl)	197.49	196.18	196.80	195.82	197.18	197.08	196.53	196.08

- **BROWN SANDY SILT TILL** – Brown, moist, loose to very dense sandy silt till with trace gravel and trace clay was found below the fill/disturbed soils in all boreholes. Occasional wet seams were encountered interbedded in the sandy silt till.
- **GREY SANDY SILT TILL** – Grey, moist, compact to very dense sandy silt till with trace gravel was found generally below the brown sandy silt till. BH101 to BH104 terminated in the grey to brown (BH101) and grey sandy silt till at 5.03m bgs (elevations of 192.37m to 193.83m asl).



- **GREY SANDY to CLAYEY SILT TILL** – Grey, moist, compact/stiff to dense/very stiff sandy to clayey silt till were found at depths generally from 6m to approximately 9.3m.
- **GREY SANDY SILT TILL/SILT TILL** – Grey, moist, dense to very dense silt till/sandy silt till were encountered below the grey sandy to clayey silt till and extended to depths of 10.87m (BH201) and 10.67m (BH203 & BH204). Borehole BH202 was terminated in the grey silt/sandy silt till at approximate depth of 10.67m. Occasional wet sand seams were interbedded in the silt till.
- **REDDISH BROWN WEATHERED SHALE** – Reddish brown, slightly moist, hard, weathered shale was found below the silt till in BH201, BH203 & BH204 at depths of 10.97m, 10.67m and 10.67m respectively (elevations of 187.58m, 187.06m & 186.78m asl). BH201, BH203 and BH204 terminated in the weathered shale at approximate depths of 11.13m to 12.65m.

## 7. HYDROGEOLOGICAL STUDY

Hydrogeological study for the subject site was conducted based on the boreholes/wells' exploration, observation and site/laboratory testing. Groundwater details from seven newly installed monitoring wells were used in the Hydrogeological Study. The wells were constructed with 3.05 (10') long, 51mm diameter PVC slotted screen pipes and risers as shown in Appendix B. Clean silica sand packs were placed around each well screen which was isolated with bentonite extending to slightly below existing grade.

### 7.1 Hydrogeological Conditions

Review of the available surficial geological and hydrogeological information for the area shows that the soils comprise generally of Glacial Ice Deposits consisting predominantly of Young Till, clayey silt till and sandy silt till (Quaternary Geology, Toronto and Surrounding Area, Ontario Geological Survey Map 2204, 1998). Underlying bedrock is represented by red shale, limestone, dolostone and siltstone of the Queenston Formation and is generally less than 10m below existing grade.

The subsoils and hydrogeological conditions were observed and recorded during the previous Geotechnical and current Hydrogeological Investigations. Based on the boreholes/wells' exploration, the subsoils at the Site were dominated by a layer of brown, moist, loose to dense sandy silt till beneath the fill/disturbed soil layers. A layer of grey, moist, compact to very dense sandy silt till underlaid the grey sandy silt till. Sandy to clayey silt till and silt till were encountered at further depths overlying reddish



brown weathered shale. Occasional water bearing seams were observed interbedded in the sandy silt till at various depths below existing grades.

All monitoring wells used for the investigation were purged/developed and groundwater levels measured a few days later. Measured groundwater depths and elevations are summarized in Table 2.

**Table 2: Groundwater Levels and Elevations**

Well No.	Elev. at Ground (m)	Depth of Well/BH		On Completion		27-Jun-19		18-Sep-20		07-Nov-20	
		m bgs	m asl	GW level, m bgs	GW Ele, m asl	GW level, m bgs	GW Ele, m asl	GW level, m bgs	GW Ele, m asl	GW level, m bgs	GW Ele, m asl
MW201	198.55	9.15	189.40	7.62	190.93	n/a	n/a	n/a	n/a	3.52	195.03
BH202	198.45	11.13	187.32	10.67	187.78	n/a	n/a	n/a	n/a	n/a	n/a
MW203	197.75	10.67	187.08	9.76	187.99	n/a	n/a	n/a	n/a	3.75	194.00
MW204	197.45	7.62	189.83	4.57	192.88	n/a	n/a	n/a	n/a	1.61	195.85
MW101	198.86	4.57	194.29	4.12	194.74	n/a	n/a	2.10	196.76	2.21	196.65
MW102	197.40	4.57	192.83	4.27	193.13	n/a	n/a	2.86	194.54	1.18	196.22
MW103	198.32	4.57	193.75	4.12	194.20	n/a	n/a	2.01	196.31	1.65	196.67
MW104	197.50	4.57	192.93	Dry	-	n/a	n/a	2.25	195.25	1.67	195.83
MW1	198.40	6.10	192.30	Dry	-	1.69	196.71	n/a	n/a	n/a	n/a
MW2	197.08	6.10	190.98	Dry	-	0.64	196.44	n/a	n/a	n/a	n/a
MW3	198.32	6.10	192.22	Dry	-	1.07	197.25	n/a	n/a	n/a	n/a

The following general comments regarding groundwater conditions are based on the groundwater level data and the site investigation:

- Standing water was observed in BH101, BH102 and BH103 at depths of 4.12m, 4.27m and 4.12m respectively on completion of drilling and at 4.57m to 10.67m bgs in BH201 to BH204.
- Groundwater levels were measured at 1.18m to 2.86m below existing grade in the shallow wells, MW101 to MW102 (elevations varying from 194.54m to 196.22m asl). Groundwater levels in the deeper wells, MW201, MW203 and MW204 were between 1.61m and 3.75m bgs (194.0m and 195.85m asl). Groundwater levels reported at depths of 0.64m to 1.69m (elevations of 196.44m to 197.25m asl) during previous investigations, are believed to be perched/seepage water.



- No defined aquifer was encountered within the investigated depths on the site.
- Given the proposed development, the recommended average conventional footing elevations would be approximately 189m asl (for two UG levels). Therefore, conventional footings would extend below the elevation of groundwater observed during the investigation.
- The nearest body of surface water is the Credit River located approximately 3.5km west of the site. Smaller, unnamed bodies of water were observed within 1km of the Site on historical maps of the area.

## 7.2 Hydraulic Conductivity K Modeling Results

### Single Well Response Tests

Single well response tests (SWRT) were conducted in MW101, MW102 and MW103 on September 18, 2020 and in MW201 and MW204 on November 7, 2020. The water bearing media, consisting of silt seams/pockets embedded in the predominantly sandy silt till, were assumed to be unconfined, homogenous, isotropic and of uniform thickness. It was also assumed that the wells fully penetrated the water bearing seams/pockets. Data from the single well response tests were used to calculate the hydraulic conductivity values using Luthin's method.

Details of the hydraulic conductivity analyses derived from single well response tests are presented in Appendix E and summarized in Table 3.

**Table 3: Summary of Single Well Response Tests and Hydraulic Conductivity Results**

Test Wells	Well Surface Elevation (m asl)	Groundwater Depth (m)	Screen Elevation (m asl)	Variance of water head created (m)	30 Minutes / Recovery Percentage	Hydraulic Conductivity, K (Luthin's Method)	
						m/s	m/day
MW101	198.86	2.10	194.29 – 197.34	1.65	30 min / 39%	$1.36 \times 10^{-6}$	0.118
MW102	197.40	2.86	192.83 – 195.88	0.90	30 min / 12%	$1.06 \times 10^{-7}$	0.009
MW103	198.32	2.01	193.75 – 196.80	1.67	30 min / 39%	$1.36 \times 10^{-6}$	0.118
MW201	198.55	3.52	189.40 – 192.45	4.84	30 min / 22%	$7.57 \times 10^{-7}$	0.065
MW204	197.45	1.61	189.83 – 192.88	6.35	30 min / 50%	$3.03 \times 10^{-6}$	0.261



*The relatively high conductivity values observed are likely due to the wells being screened in the occasional wet silt seams observed in the boreholes during drilling.*

The average hydraulic conductivity was used in the calculation of dewatering volumes.

## **8. CONSTRUCTION DEWATERING & PERMANENT DRAINAGE**

### **8.1 Construction Dewatering**

Average P2 finished floor elevation was taken as 192.449m asl and underside of footing assumed as 189m asl based on the geotechnical recommendations for higher bearing capacity. A building footprint of 4570m<sup>2</sup> was used in the calculation of dewatering quantities.

Based on the highest groundwater levels, observed during the previous and current investigations, the recommended average footing elevations will likely be below the groundwater levels. The groundwater levels should therefore be lowered to at least 1m below the base of the footings to prevent hydraulic uplift/piping during construction. An average groundwater level of **1.89m (196.11m asl)** was used to calculate construction dewatering flowrates.

Based on the calculations, shown in Appendix F, a construction groundwater dewatering flowrate of **63.69 m<sup>3</sup>/day (63,690 L/day)** was obtained for an excavation area of 4570m<sup>2</sup>. A factor of safety of 1.5 should be applied to the construction dewatering rate to give **95.54 m<sup>3</sup>/day (95,540 L/day)**. Based on the soil and groundwater conditions observed during the investigation construction dewatering should be achievable by pumping from sump pits from within the excavation area.

#### Seasonal High Groundwater Levels

The field investigation was carried out during the summer and fall. The average groundwater level from previous investigations, carried out in the rainy season, is 1.13m with the highest level at 0.64m bgs (196.44m asl). The higher levels are believed to be perched or seepage water. Groundwater levels measured in June 2019 and November 2020 for the shallow wells, less than 8m deep, were taken as representative of the seasonal highwater levels at the Site. An average groundwater level of 1.32m bgs (196.68m asl) was used to calculate permanent drainage rates.

#### Accounting for Accumulated Precipitation





Provisions should be made to pump any accumulated water from the excavation areas during construction, particularly following a period of heavy rainfall. For example, 25mm rainfall in 24 hrs may result in accumulation of approximately 106m<sup>3</sup> in the excavated area (predominantly sandy silt till). Considering that some of this water will infiltrate into the underlying soils and some will be lost otherwise, a conservative accumulated volume of **40 m<sup>3</sup>/day** may be assumed for extreme rainfall events. Accumulated precipitation may be stored on site for subsequent disposal to an MECP-licensed facility. If the water is to be discharged into the public sewer system, then an application for the discharge of private water will have to be made to the City of Mississauga (storm) or the Region of Peel (sanitary). The water quality, at the time of the application, will need to be ascertained to ensure compliance with the Ontario Reg. Mun of Peel Sanitary Bylaw #53-2010 and Peel Storm Sewer By-law #53-201 (Apr 2011).

**Maximum construction discharge** rates, taking into consideration accumulated precipitation volumes and seasonal high groundwater levels, are **103.69 m<sup>3</sup>/day (103,690 L/day), unfactored and 135.54 m<sup>3</sup>/day (135,540 L/day) factored.**

#### **Permanent Drainage**

The average groundwater level at the site during the rainy season (1.32m bgs) along with the lowest P2 slab level (192.449m asl) were used to calculate permanent drainage rates. A permanent discharge rate of **32.45 m<sup>3</sup>/day (32,450 L/day)** was estimated for two underground level with a building footprint of 4,570m<sup>2</sup>. A factor of safety of 1.5 should be applied to give discharge rate of **48.68 m<sup>3</sup>/day (48,680 L/day)** which should be used for planning purposes.

It should also be noted that any loading dock which is below, or within 1m of the observed highest groundwater level should also be provided with under slab drainage unless designed as watertight. It is further recommended that the subsurface portion of the elevator shaft be designed as watertight.

An application for permission to discharge to the public sewer system will be required if it is intended that the permanent drainage system will discharge to the public sewer system. An agreement for discharge will not be required if the subsurface portions of the building are designed as watertight.

#### **Permission to take water (PTTW)**

As the calculated construction dewatering flow rate is greater than 50,000 L/day, registration on the MECP Environmental Activity and Sector Registry (EASR) for Water Taking will be required. An application for



permission to take water (PTTW) will not be required as the discharge rates are less than 400,000 L/day and 50,000 L/day for construction dewatering and permanent drainage respectively.

## 8.2 Groundwater Quality

The results (September 2020) of analyses for water quality under the Ontario Reg. Mun of Peel Sanitary Bylaw #53-2010 and Peel Storm Sewer By-law #53-201 (Apr 2011), show compliance with all parameters except those listed in Table 4.

**Table 4: Results from Sewer Use Bylaw tests**

Parameters	Guide Limits		Results
	Table 1	Table 2	MW103
Total suspended solids, mg/L	350	15	167
Manganese, mg/L	5	0.05	0.511

Based on the results in Table 4, the groundwater will need to be treated before it can be discharged into the public storm sewer system. The groundwater, in its current form, may be discharged to the public sanitary sewer system without treatment.

It should also be noted that testing of groundwater at the depths observed during the investigation would not be representative of the water that might accumulate during a high rainfall event. Any accumulation of precipitation occurring in the excavation during construction, that may require offsite discharge, will have to be tested at the time of the event to determine the quality of water for discharge.

## 8.3 Dewatering Influence Zone

Based on the preceding calculations for dewatering quantities during excavation/footing construction, the groundwater drawdown influence zones are up to 18.65m from the edge of the excavation in the mainly sandy silt till. As the rate of recharge is expected to be fairly low, it may be possible to carry out localized construction dewatering by pumping from sump pits. Consequently, there should be no impact on surrounding structures due to construction dewatering.



## 8.4 Hydrogeological Impact

During the investigation, it was determined that there will not be any negative impact to the natural environment, City of Mississauga/Peel Region Sewer works nor surrounding properties due to construction dewatering because of the depth at which groundwater was observed and the short influence zone in the mainly sandy silt till. No groundwater induced depression at surface level is expected. Consequently, it is not expected that construction will impact public infrastructure, the natural environment nor will there be any settlement issues.

## 9. DISCUSSION

1. Hydraulic conductivity values from single well response tests vary between  $1.06 \times 10^{-7}$  m/s (0.009 m/day) and  $3.03 \times 10^{-6}$  m/s (0.261 m/day). An average value was used for calculating dewatering rates.
2. A maximum construction groundwater dewatering flowrate of **63.69 m<sup>3</sup>/day** was estimated for two underground levels. Permanent drainage rate of **32.45 m<sup>3</sup>/day** was estimated. A factor of safety of 1.5 should be applied to the construction dewatering and permanent drainage rates.
3. Based on the groundwater levels and flowrates, observed during the investigation, pumping from sump pits may be adequate for construction dewatering.
4. It should be noted that if it is intended that any accumulated water/groundwater, following periods of heavy rainfall, be discharged into the public sewer, then a permit to discharge would be required along with laboratory analyses to ensure compliance with Ontario Reg. Mun of Peel Sanitary Bylaw #53-2010 and Peel Storm Sewer By-law #53-201 (Apr 2011).
5. Based on the groundwater elevations observed during the investigation, registration on the EASR for water taking will be required. An application for PTTW is not necessary under the current conditions.



## 10. LIMITATIONS

This report is limited in scope to those items specifically referenced in the text. The discussions and recommendations presented in this report are intended only as guidance for the named client, design engineers and those directly associated with the implementation and monitoring of the project. The information on which these recommendations are based is subject to confirmation by engineering personnel at the time of construction. Localized variations in the subsoil conditions may be present between and beyond the boreholes and should be verified during construction.

As more specific subsurface information becomes available during excavations on the Site, this report should be updated. Contractors bidding on or undertaking the work should decide on their own investigations, as well as their own interpretations of the factual borehole results. This concern specifically applies to the classification of the subsurface soil and the potential reuse of these soils on/off Site. Contractors should draw their own conclusions as to how the near surface and subsurface conditions may affect them.



## **APPENDIX A – SITE AND LOCATION PLANS**





**LEGEND**



400 Esna Park Dr., #15  
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 L3R 3K2  
 Tel: 905 475-7755  
 Fax: 905 475-7718

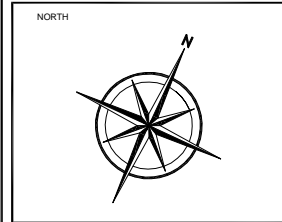


PROJECT NAME AND ADDRESS  
 HYDROGEOLOGICAL  
 INVESTIGATION  
 6333 HURONTARIO STREET,  
 MISSISSAUGA, ON

PROJECT NO.  
 FE-P20-10463  
 DATE  
 SEPTEMBER 2020  
 SCALE  
 As shown

FIGURE: A1  
 Site Location Map.





LEGEND

	MONITORING WELL SEPTEMBER 2020
	MONITORING WELL / BOREHOLE NOVEMBER 2020
	MONITORING WELL / BOREHOLE 2019
	SITE BOUNDARY

PROJECT NAME AND ADDRESS  
 FURTHER GEOTECHNICAL &  
 HYDROGEOLOGICAL  
 INVESTIGATIONS  
 6333 HURONTARIO STREET,  
 MISSISSAUGA, ONTARIO

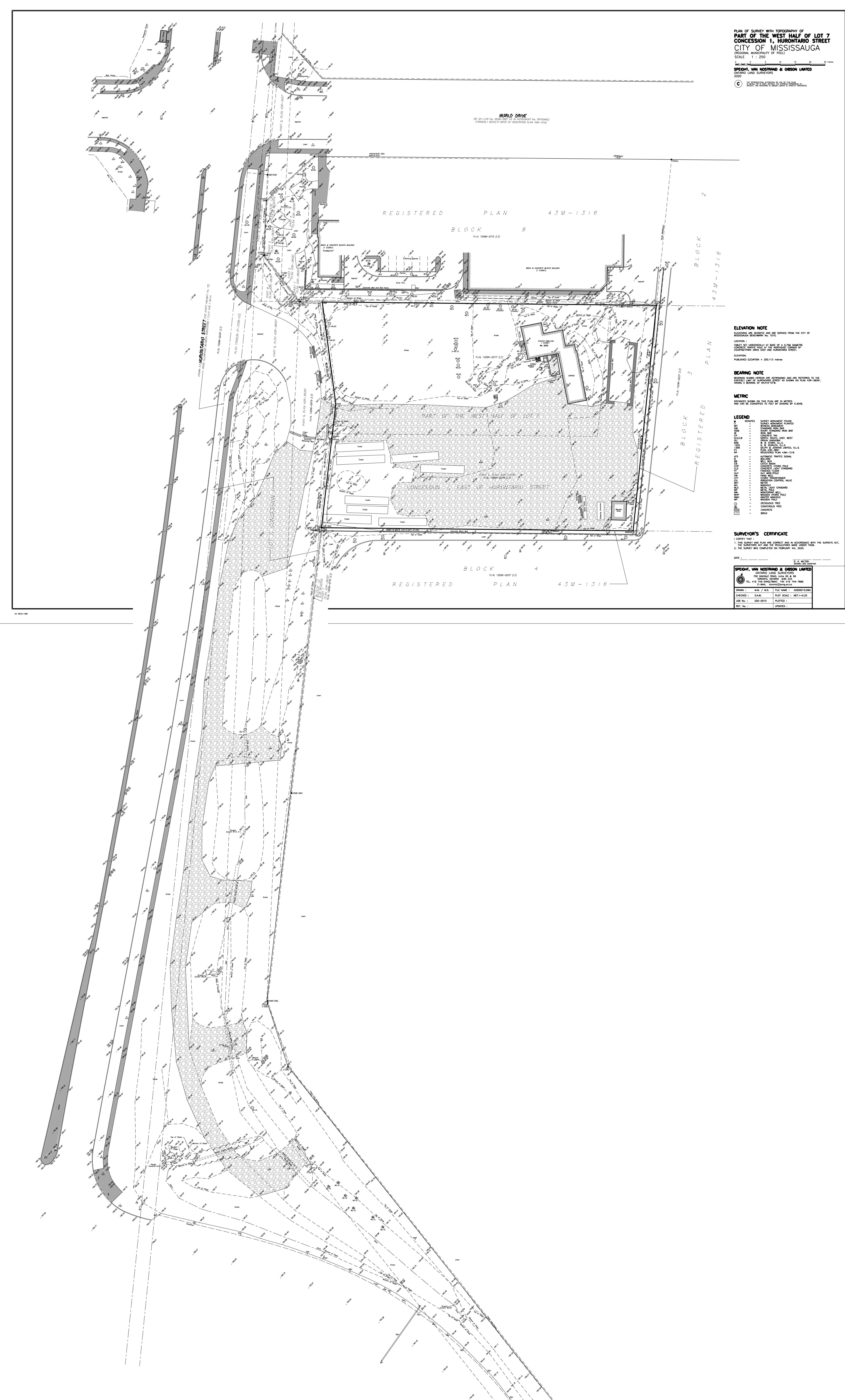
FIGURE A2:  
 SITE PLAN WITH BOREHOLE AND  
 MONITORING WELL LOCATIONS

PROJECT NO. FE-P 20-10654/55	SHEET NO. <b>A2</b>
DATE NOVEMBER 2020	
SCALE AS SHOWN	



PLAN OF SURVEY WITH TOPOGRAPHY OF  
 PART OF THE WEST HALF OF LOT 7  
 CONCESSION 1, HURONTARIO STREET  
 CITY OF MISSISSAUGA  
 REGIONAL MUNICIPALITY OF P.E.I.  
 SCALE 1 : 250

SPICHLER, VAN NOSTRAND & OGDON LIMITED  
 OGDON LAND SURVEYORS  
 2020



**ELEVATION NOTE**  
 ELEVATIONS ARE INDICATED BY THE DATE FROM THE CITY OF MISSISSAUGA RECORDS AND ARE DERIVED FROM THE CITY OF MISSISSAUGA RECORDS AT THE DATE OF THE SURVEY. THE ELEVATION OF THE SURFACE OF THE HURONTARIO STREET AT THE DATE OF THE SURVEY IS 200.113 METERS.

**BEARING NOTE**  
 BEARINGS GIVEN HEREIN ARE REFERRED TO THE TRUE MERIDIAN AND ARE REFERRED TO THE SURFACE OF THE EARTH. THE SURFACE OF THE EARTH IS ASSUMED TO BE FLAT. THE SURFACE OF THE EARTH IS ASSUMED TO BE FLAT. THE SURFACE OF THE EARTH IS ASSUMED TO BE FLAT.

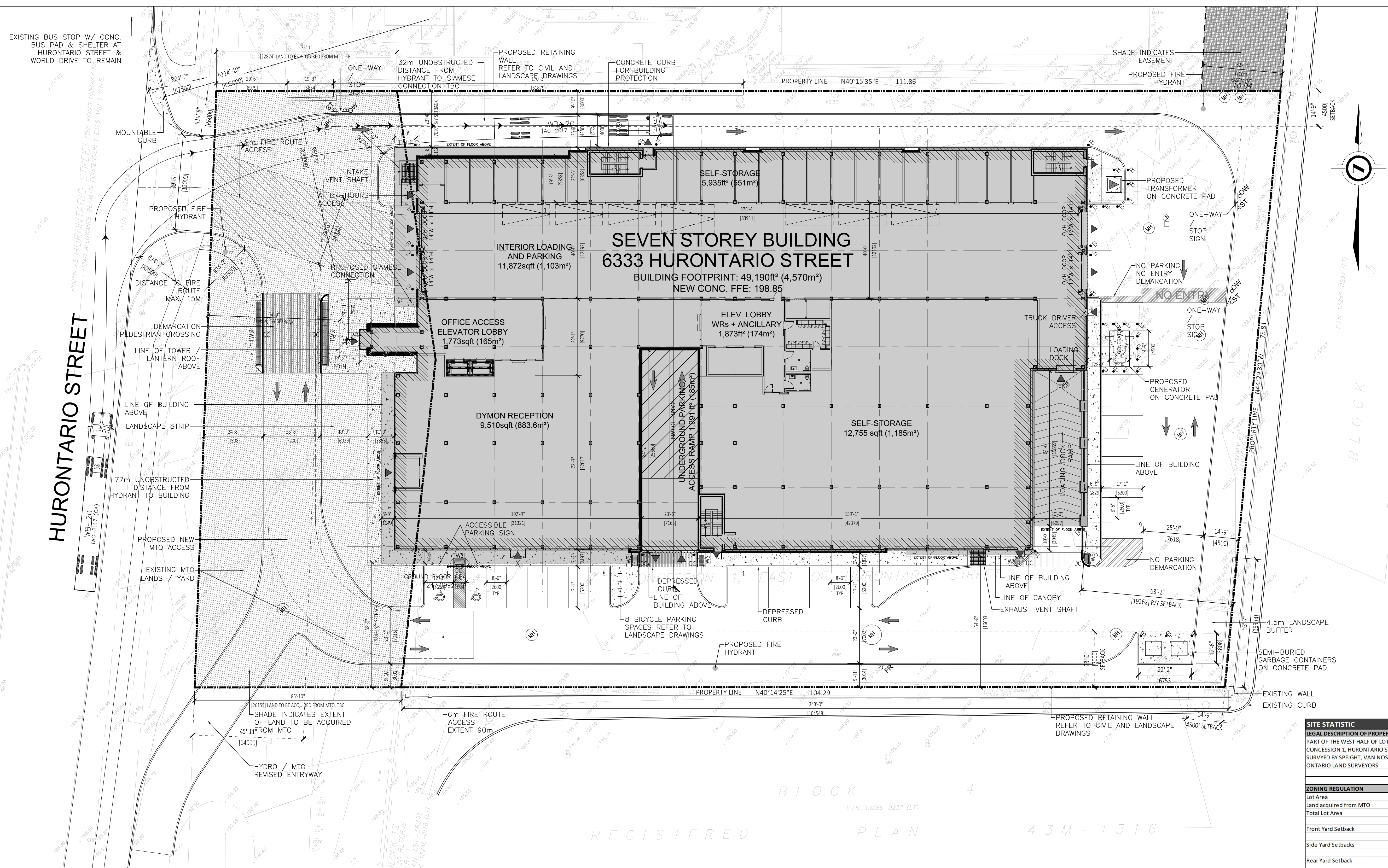
**METRIC**  
 DIMENSIONS GIVEN ON THIS PLAN ARE IN METERS AND ARE TO BE CONSIDERED AS SUCH.

- LEGEND**
- 1. SURFACE TOPOGRAPHY
  - 2. PROPERTY BOUNDARIES
  - 3. CONVEYANCE BOUNDARIES
  - 4. EASEMENTS
  - 5. CURB AND GUTTER
  - 6. DRIVEWAY
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  - 100. DRIVEWAY

**SURVEYOR'S CERTIFICATE**  
 I, THE SURVEYOR, HEREBY CERTIFY THAT THE SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEY ACT, 2001 AND THE REGULATIONS MADE THEREUNDER.

SPICHLER, VAN NOSTRAND & OGDON LIMITED	
OGDON LAND SURVEYORS	
1111 SHEPPARD AVENUE EAST, SUITE 1000	
SCARBOROUGH, ONTARIO M1A 2S4	
TEL: (416) 291-1111 FAX: (416) 291-1112	
WWW.SVLIMITED.COM	
DATE: 2020-07-15	FILE NAME: 43M-1316
DRAWN BY: J. VAN NOSTRAND	PLOT SCALE: 1:250
CHECKED BY: J. VAN NOSTRAND	PROJECT: 43M-1316
APP. NO.: 200-0000	ISSUED: 2020-07-15





### LEGEND

- PROPOSED BUILDING LOCATION
- EXISTING NEIGHBORING BUILDINGS
- LANDSCAPED AREA
- CONCRETE/ SIDEWALK
- BARRIER FREE PARKING CLEARANCE
- CURB
- DEPRESSED CURB
- TW/SI TACTILE WALKING SURFACE INDICATOR
- NEW TREE/ VEGETATION (REFER TO LANDSCAPE PLAN FOR TYPE, SIZE AND LOCATION)
- EXISTING TREE (VEGETATION IS FOR REFERENCE ONLY, REFER TO LANDSCAPE PLAN)
- BARRIER FREE PARKING
- INTERIOR PARKING
- CATCH BASIN
- SIAMSESE CONNECTION
- ENTRANCE/ EXIT LOCATION
- TRANSFORMER
- FENCE & GATE
- MAN HOLE / CATCH BASIN
- LIGHT POLE (HYDRO)
- FIRE HYDRANT
- NLS (NEW LIGHT STANDARD, REFER TO ELECTRICAL)
- BOLLARD
- EXISTING CONCRETE/SIDEWALK
- DENOTES PAINTED LINES
- DENOTES FIRE ROUTE ACCESS
- PRINCIPAL ENTRANCE
- ONE-WAY SIGN
- NO ENTRY SIGN
- FIRE ROUTE ACCESS / NO PARKING SIGN
- TRAFFIC DIRECTION

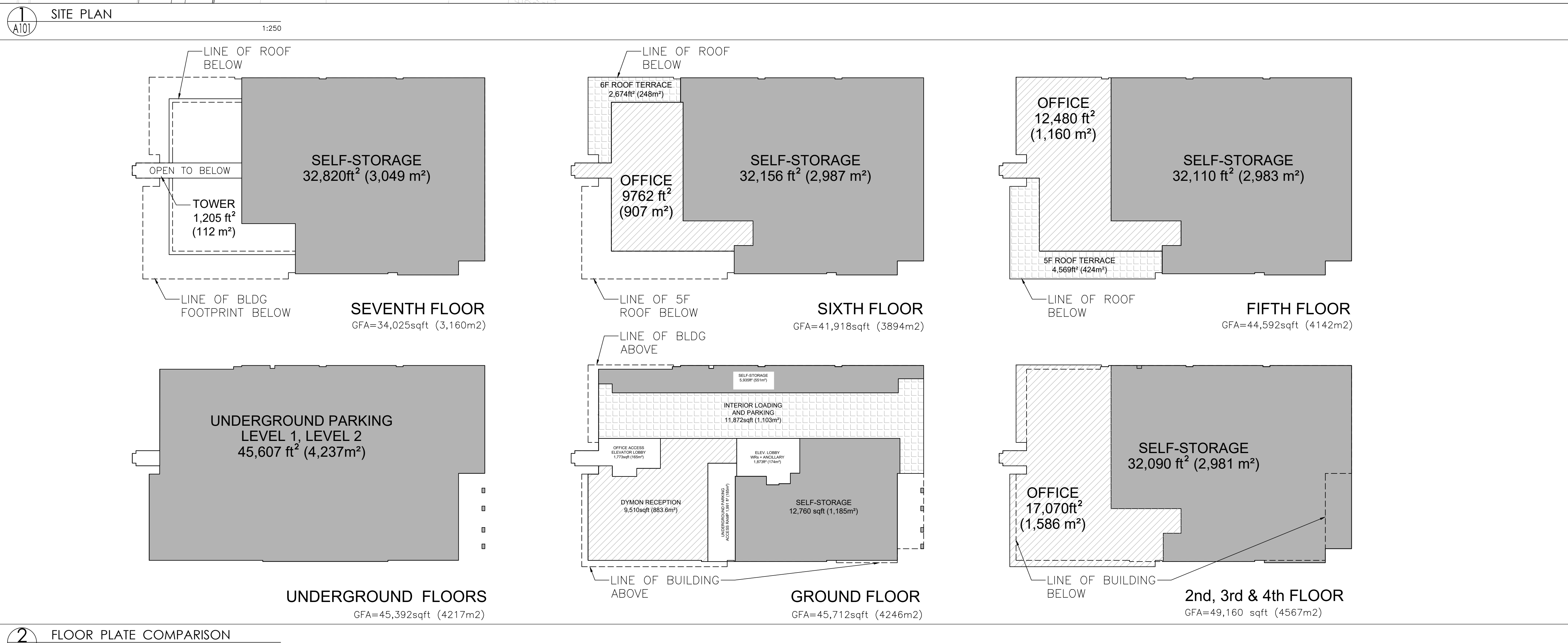
SCALE 1 : 250

BOUNDARY INFORMATION FROM SURVEY BY: SPEIGHT, VAN NOSTRAND & GIBSON LIMITED ONTARIO LAND SURVEYORS COMPLETED ON FEBRUARY 4th, 2020

#### SITE STATISTIC

**LEGAL DESCRIPTION OF PROPERTY**  
PART OF THE WEST HALF OF LOT 7  
CONCESSION 1, HURONTARIO STREET  
SURVEYED BY SPEIGHT, VAN NOSTRAND & GIBSON LIMITED  
ONTARIO LAND SURVEYORS

ZONING REGULATIONS	PROPOSED	REQUIRED
Lot Area	7,983.8m	[85,937sf] N/A
Land acquired from MTD	2,027.25m	[21,821sf]
Total Lot Area	10,011.05m	[107,757sf]
Front Yard Setback	16.6m	14.0m
Side Yard Setbacks	7.1m	4.5m (North) 7.0m (South)
Rear Yard Setback	15.8m	4.5m
Building Height	31.3m	N/A
Average grading to top of roof		
Self-Storage Warehouse, Reception and Retail	25 at grade 0.6 spaces per sm of GFA	132
Third-party Office	188 Including 6 at grade, 88 at underground Level 1 and 94 at underground Level 2	223
Accessible Parking Space	9 9 included in count above (2 at grade, 2 interior loading, 6 at underground Level 1 & 2)	9
Landscaped abutting Hurontario St	7.5m (Average)	N/A
Landscaped abutting North boundary	3.0m	N/A
Landscaped abutting East boundary	4.5m	N/A
Landscaped abutting South boundary	3.0m	N/A
Bicycle Parking Space Retail	8 exterior (short term) 10 interior at underground levels	8
Loading	1 exterior 1 interior Loading and Parking	4
Drive Aisle Width	7.0m (two-way) 4.0m (one-way)	7.0m
Paved Area	3,364.0m	[36,210sf]
Landscaped Area	2,238.0m	[24,090sf]
		33.60%
		22.36%
<b>Building Area</b>		
Drive thru Loading, Reception & Retail + GF ramp	2,171.6m	[23,375sf]
Self-storage Ground to 7th Floor	19,703.2m	[212,251sf]
Office Ground to 7th Floor	6,988.6m	[75,225sf]
Parking Underground Level 1 & 2	8,434.1m	[90,784sf]
<b>Total Building</b>	<b>37,294.5m</b>	<b>[401,435sf]</b>
<b>Gross Floor Area (GFA)</b>		
Building Footprint (Includes Int. Loading & Parking and Loading Dock, and Ramp down to Underground Level 1)	4,567.1m	[49,160sf]
		45.0% of lot areas
Stairs Ground floor to 7th	602.0m	[6,480sf]
Elevators Ground floor to 7th	323.3m	[3,480sf]
Stairs Underground Level 1 & 2	133.8m	[1,440sf]
Elevators Lobby Underground Level 1 & 2	293.9m	[3,142sf]
Mechanical & Electrical & Service Areas	333.0m	[3,584sf]
Elevators Lobby/ Ancillary Space Ground floor Self-storage	342.2m	[3,683sf]
Interior Loading & Parking and Loading Dock	1,102.9m	[11,873sf]
Dymon Reception & Retail	883.5m	[9,510sf]
		2%
<b>Total Self-storage Ground to 7th (***)</b>	<b>18,774.9m</b>	<b>[202,091sf]</b>
		50%
<b>Total Office Ground to 7th Floor (***)</b>	<b>6,823.7m</b>	<b>[73,450sf]</b>
		18%
<b>Total Feature Stair/Tower 7th Floor (***)</b>	<b>111.5m</b>	<b>[1,200sf]</b>
		0.3%
<b>Total GFA 7-storey Building</b>	<b>37,294.5m</b>	<b>[401,435sf]</b>
		100%
<b>Total GFA (***)</b>	<b>36,191.6m</b>	<b>[389,563sf]</b>
<b>Total GFA Underground Level 1 &amp; 2 (****)</b>	<b>7,675.5m</b>	<b>[82,618sf]</b>
(***) Excludes Elevators and Stairs (2nd to 7th floor)		
(****) Excludes Interior Loading & Parking and Loading Dock		



## GLOBAL architect inc.

6 Leswyn Road Toronto, Ontario, M6A 1K2 tel (416)256-4440 fax (416)256-4449

Design Architect: TACT Architecture Inc. 660R College Street (Rear Lane) Toronto ON, M6G 1B8 tel: (416) 516-1949

Planning, Urban Design & Landscape Architect: MHBC Planning, Urban Design & Landscape Architecture 7050 Weston Road, Suite 230, Woodbridge ON, L4L 8G7 tel: (905) 761-5588

Civil Engineer: C.F. Crozier & Associates Consulting Engineers 211 Yonge Street, Suite 301, Toronto ON, M5B 1M4 tel: (416) 477-3392

Structural Engineer: Dorian Engineering Consultants Inc. 7560 Airport Road, Unit 13, Mississauga ON, L4T 4H4 tel: (905) 671-4377

Mechanical Engineer: Brumar Engineering Services Ltd. 25-120 West Beaver Creek, Richmond Hill ON, L4B 1L2 tel: (905) 771-7798

Electrical Engineer: Hudson Engineering Ltd. 2901 Steeles Ave W Unit 26, Toronto ON M3J 3A5 tel: (416) 663-5470

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME, REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING WORK. ALL DRAWINGS, PRINTS AND SPECIFICATIONS ARE THE PROPERTY OF THE ARCHITECT AND MUST BE RETURNED TO HIM ON COMPLETION OF WORK. LATEST APPROVED DRAWINGS ONLY TO BE USED FOR CONSTRUCTION. PRINTS ARE NOT TO BE SCALED.

## DYMON STORAGE

**DYMON CAPITAL CORP.**  
2-1830 WALKLEY ROAD  
OTTAWA ON, K1H 8K3

PROJECT NAME: 7 STOREY SELF STORAGE, OFFICE & RETAIL  
6333 HURONTARIO STREET  
MISSISSAUGA ON

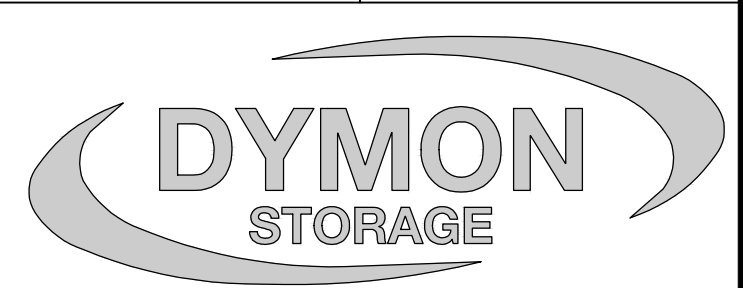
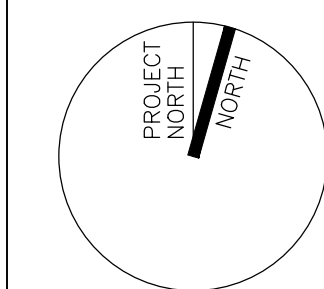
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CHECKED BY: R.P.  
DATE: October 24, 2022  
SCALE: AS NOTED  
DRAWING TITLE: SITE PLAN

PROJECT NO. 22-08  
DRAWING NO. A101



NO.	DATE	DESCRIPTION
2	OCT 24 / 22	FOR REVIEW & COORDINATION
1	SEPT 21 / 22	FOR REVIEW & COORDINATION

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**DYMON CAPITAL CORP.**  
2-1830 WALKLEY ROAD  
OTTAWA ON, K1H 8K3

PROJECT NAME  
**7 STOREY SELF STORAGE,  
OFFICE & RETAIL**  
6333 HURONTARIO STREET  
MISSISSAUGA ON

DRAWN BY AT

CHECKED BY R.P.

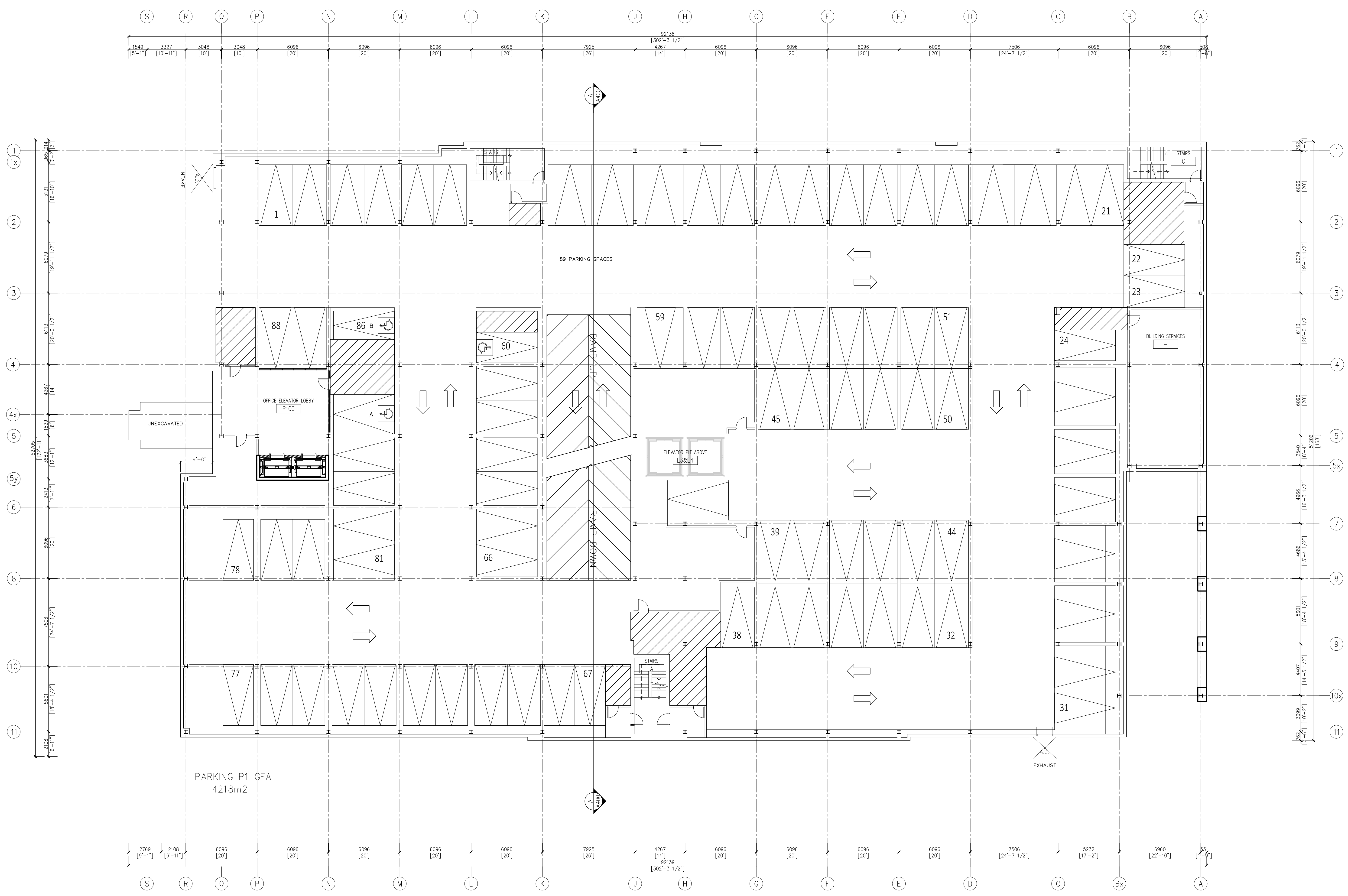
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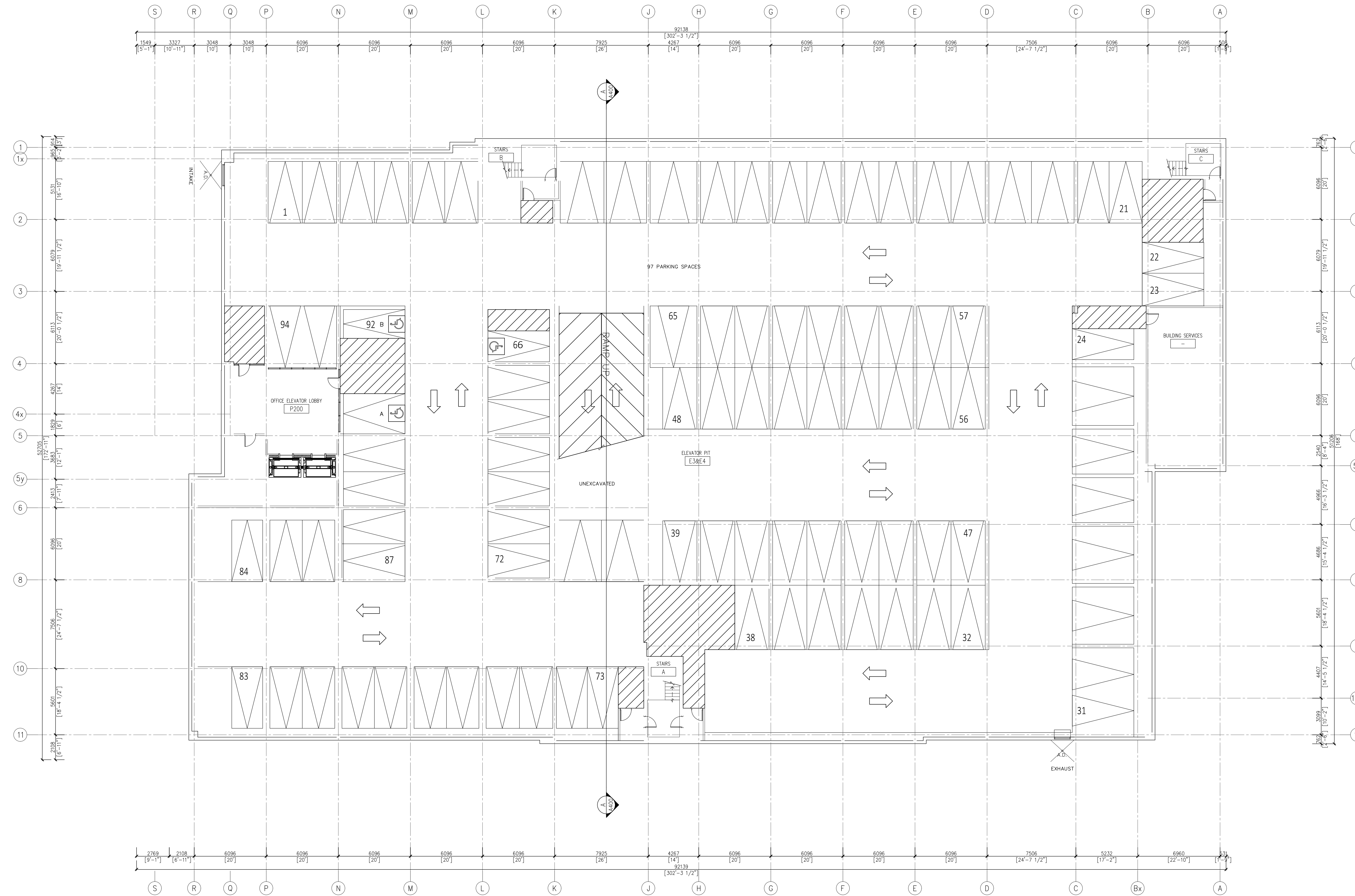
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DRAWING TITLE

**P1 FLOOR PLAN**

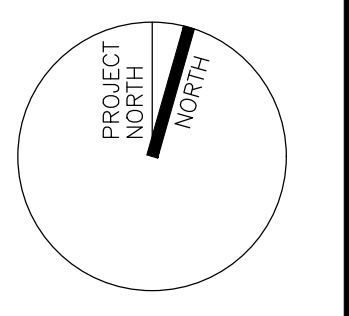
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2	OCT 24/ 22	FOR REVIEW & COORDINATION
1	SEPT 21/ 22	FOR REVIEW & COORDINATION

NO.	DATE	DESCRIPTION
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**DYMON CAPITAL CORP.**  
2-1830 WALKLEY ROAD  
OTTAWA ON, K1H 8K3

PROJECT NAME  
**7 STOREY SELF STORAGE,  
OFFICE & RETAIL**  
6333 HURONTARIO STREET  
MISSISSAUGA ON

DRAWN BY AT

CHECKED BY R.P.

DATE October 24, 2022

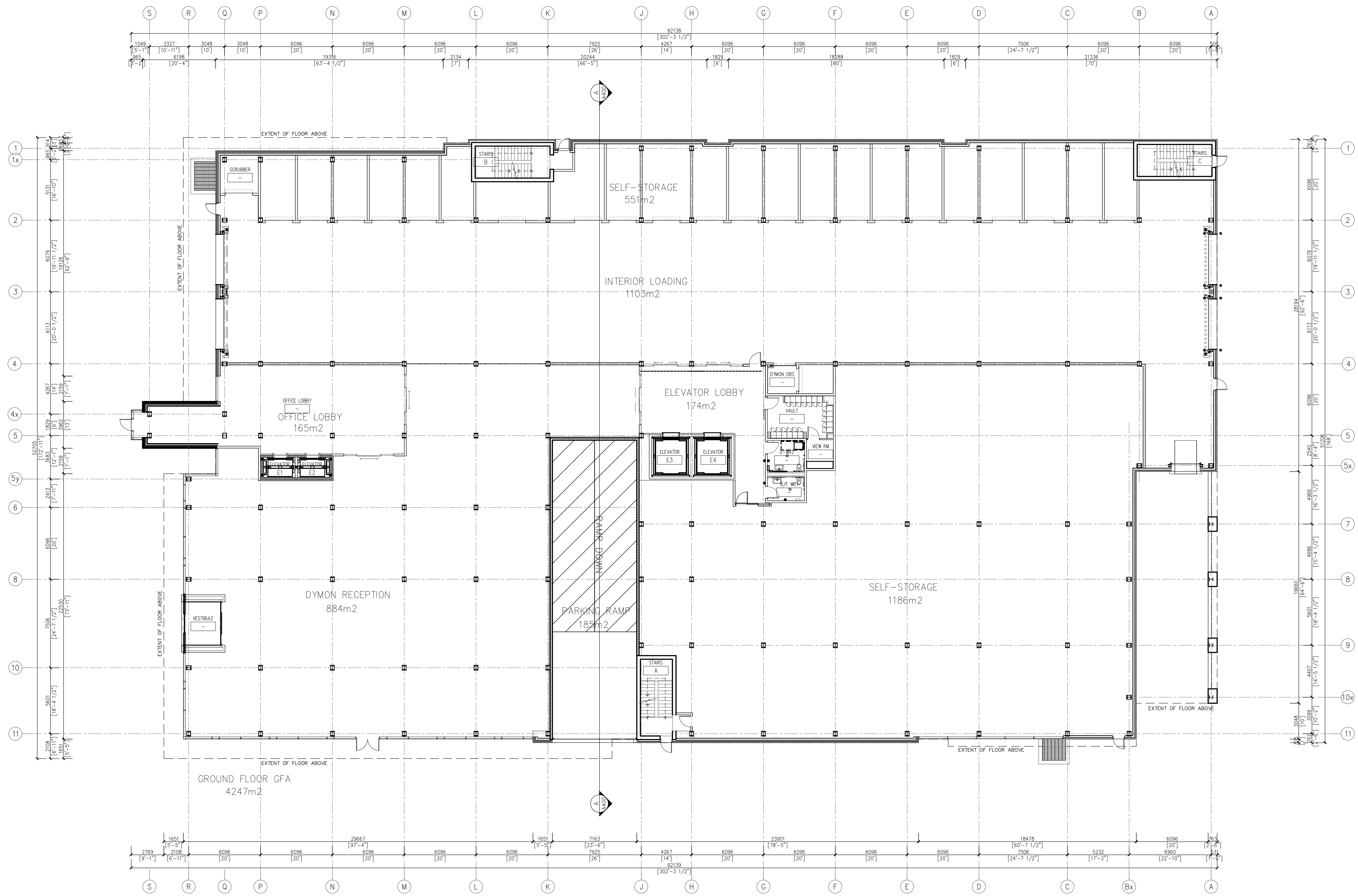
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DRAWING TITLE

**P2 FLOOR PLAN**

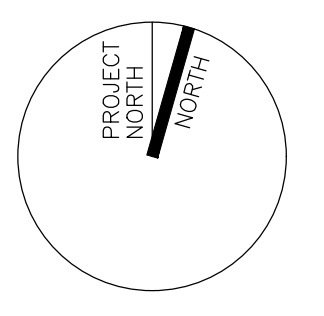
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**22-08 A200.2**



2	OCT 24 / 22	FOR REVIEW & COORDINATION
1	SEPT 21 / 22	FOR REVIEW & COORDINATION

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**DYMON CAPITAL CORP.**  
2-1830 WALKLEY ROAD  
OTTAWA ON, K1H 8K3

PROJECT NAME  
**7 STOREY SELF STORAGE,  
OFFICE & RETAIL**  
6333 HURONTARIO STREET  
MISSISSAUGA ON

DRAWN BY AT

CHECKED BY R.P.

DATE October 24, 2022

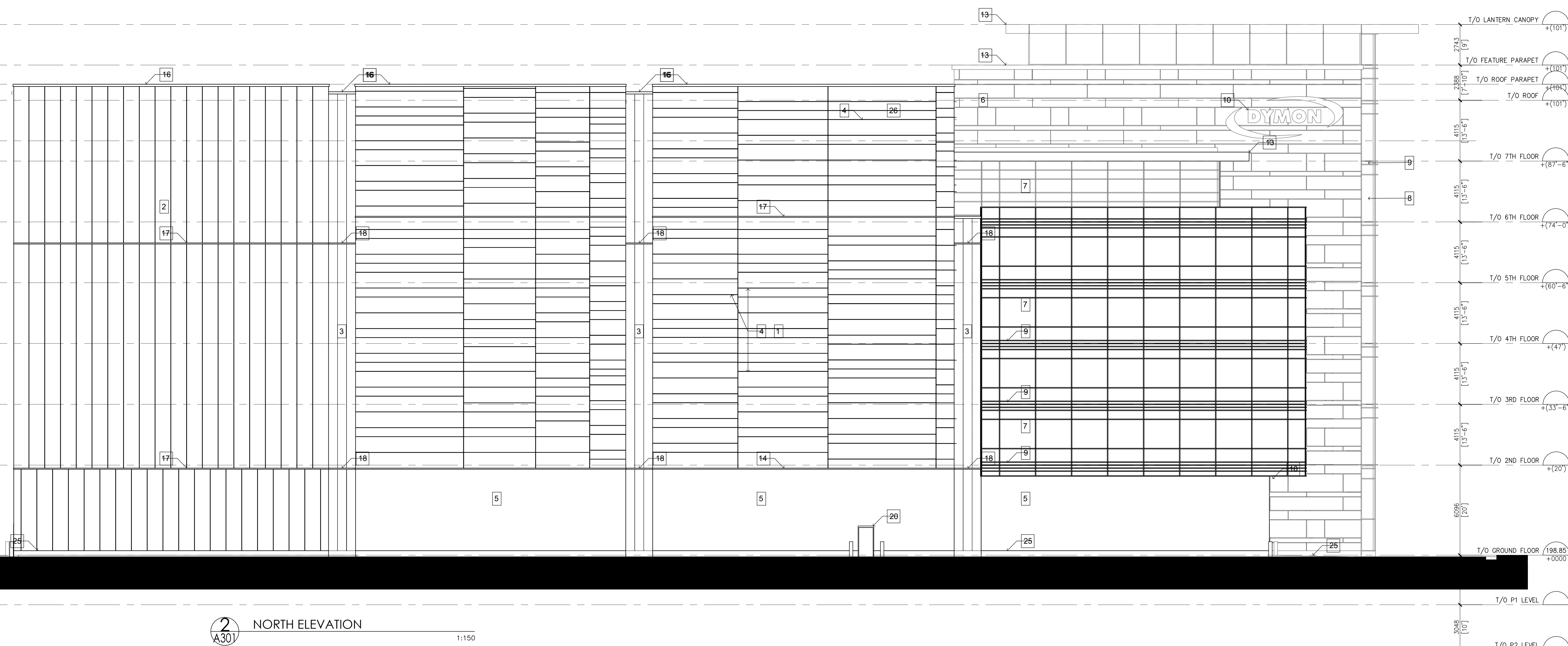
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DRAWING TITLE

**GROUND FLOOR**

PROJECT NO. **22-08** DRAWING NO. **A201**

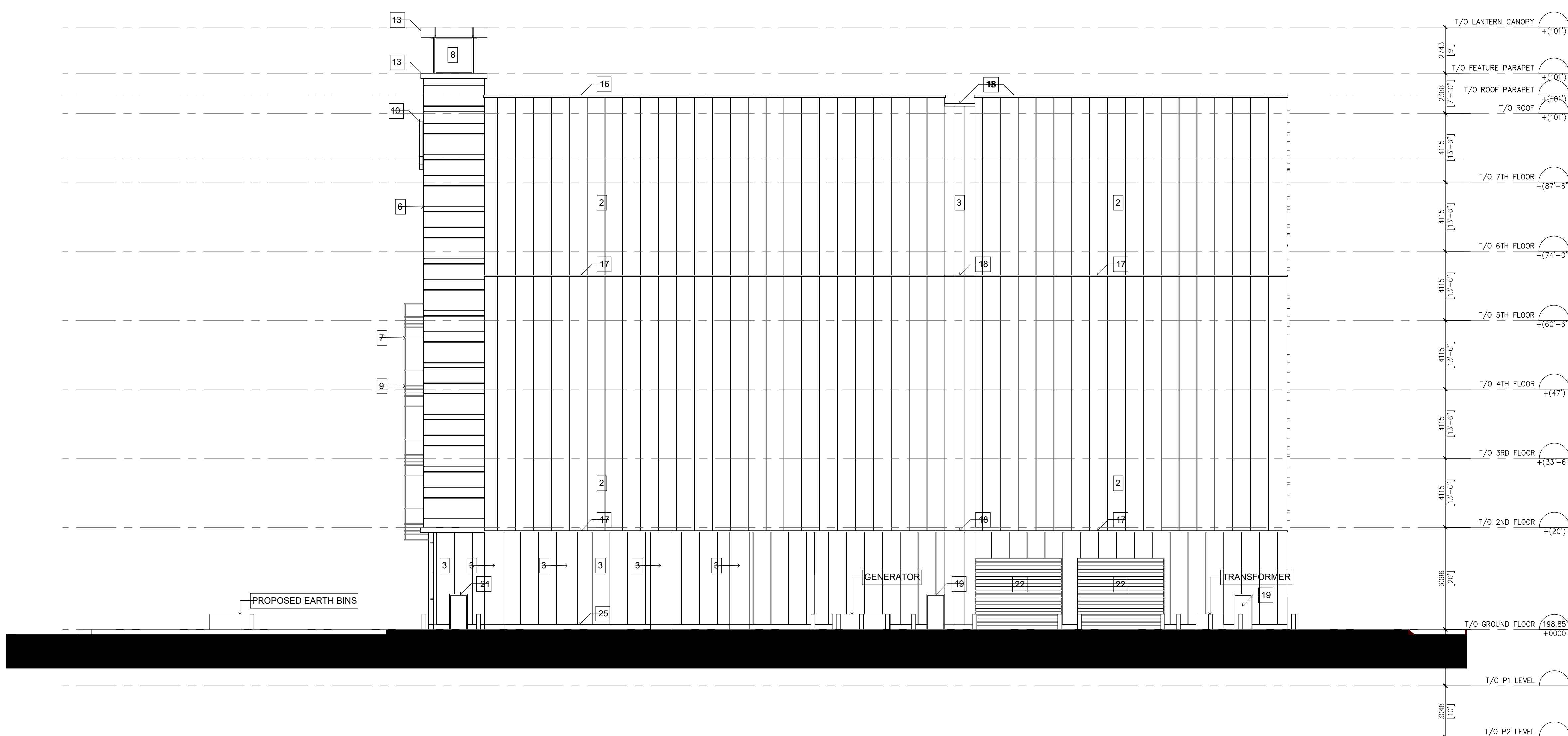




2 NORTH ELEVATION  
1:150

**LEGEND**

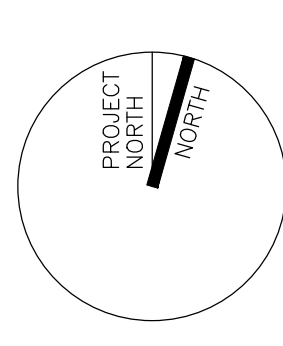
- 1 INSULATED METAL PANEL (IMP) SYSTEM - HORIZONTAL ORIENTATION - ARCHITECTURAL PROFILE - COLOUR: WEATHERED ZINC
- 2 INSULATED METAL PANEL (IMP) SYSTEM - VERTICAL ORIENTATION - LIGHT MESA PROFILE - COLOUR: WEATHERED ZINC
- 3 INSULATED METAL PANEL (IMP) SYSTEM - VERTICAL ORIENTATION (RECESSES & REVEALS) - LIGHT MESA PROFILE - COLOUR: MEDIUM BRONZE
- 4 KINGSPAN KARRIER FIN - STANDARD RECTANGLE FIN COLOUR: WEATHERED ZINC
- 5 3 1/2" ARCHITECTURAL MASONRY UNIT - ARISRAFT ADAIR LIMESTONE - FINISH: FINE DRESSED SEPARATED - RUNNING BOND
- 6 ALUCOL - ALUMINUM COMPOSITE MATERIAL - FINISH: LIGHT WENCE 4mm FR CORE
- 7 CURTAIN WALL GLAZING - FINISH: VISION GLASS
- 8 CURTAIN WALL GLAZING - FINISH: FRITTED WINDOW FILM ON VISION GLASS
- 9 SPANDREL PANEL - COLOUR TO MATCH IMP WEATHERED ZINC
- 10 INTERNALLY LIT SIGNAGE - COLOUR: TBD
- 11 GLASS SIGNAGE BAND - COLOUR: TBD
- 12 BACK-LIT GLASS WITH FRIT PATTERN - COLOUR TO MATCH - 'BOLD BLUE' WITH WHITE FRITTING
- 13 METAL CANOPY - COLOUR TO MATCH IMP WEATHERED ZINC
- 14 CONTINUOUS BENT FLASHING SILL - COLOUR TO MATCH IMP WEATHERED ZINC
- 15 CONTINUOUS BENT METAL CAP - PREFINISHED - COLOUR TO MATCH IMP MEDIUM BRONZE
- 16 FIRESTONE PREFINISHED METAL CAP - FINISH: SLATE GREY (ALL BENT METAL CAP PARAPETS)
- 17 PREFINISHED METAL IMP STACK JOINT COVER TRIM - COLOUR TO MATCH IMP WEATHERED ZINC
- 18 PREFINISHED METAL IMP STACK JOINT COVER TRIM - COLOUR TO MATCH IMP MEDIUM BRONZE
- 19 INSULATED HOLLOW METAL DOOR - COLOUR TO MATCH IMP WEATHERED ZINC
- 20 INSULATED HOLLOW METAL DOOR - COLOUR TO MATCH ARCHITECTURAL MASONRY UNIT ADAIR LIMESTONE
- 21 INSULATED HOLLOW METAL DOOR - COLOUR TO MATCH VERTICAL IMP MEDIUM BRONZE
- 22 HIGH SPEED ROLL-UP O/H DOOR - FINISH: STEEL FRAME WITH POLYCARBONATE VISION SLATS
- 23 INSULATED O/H DOOR - COLOUR TO MATCH IMP WEATHERED ZINC
- 24 INSULATED O/H DOOR - COLOUR TO MATCH IMP MEDIUM BRONZE
- 25 POURED CONCRETE
- 26 ALUMINUM COMPOSITE MATERIAL - HORIZONTAL ORIENTATION - COLOUR: WEATHERED ZINC 4mm FR CORE



1 EAST ELEVATION  
1:150

NO.	DATE	DESCRIPTION
2	OCT 24/ 22	FOR REVIEW & COORDINATION
1	SEPT 21/ 22	FOR REVIEW & COORDINATION

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**DYMON CAPITAL CORP.**  
2-1830 WALKLEY ROAD  
OTTAWA ON, K1H 8K3

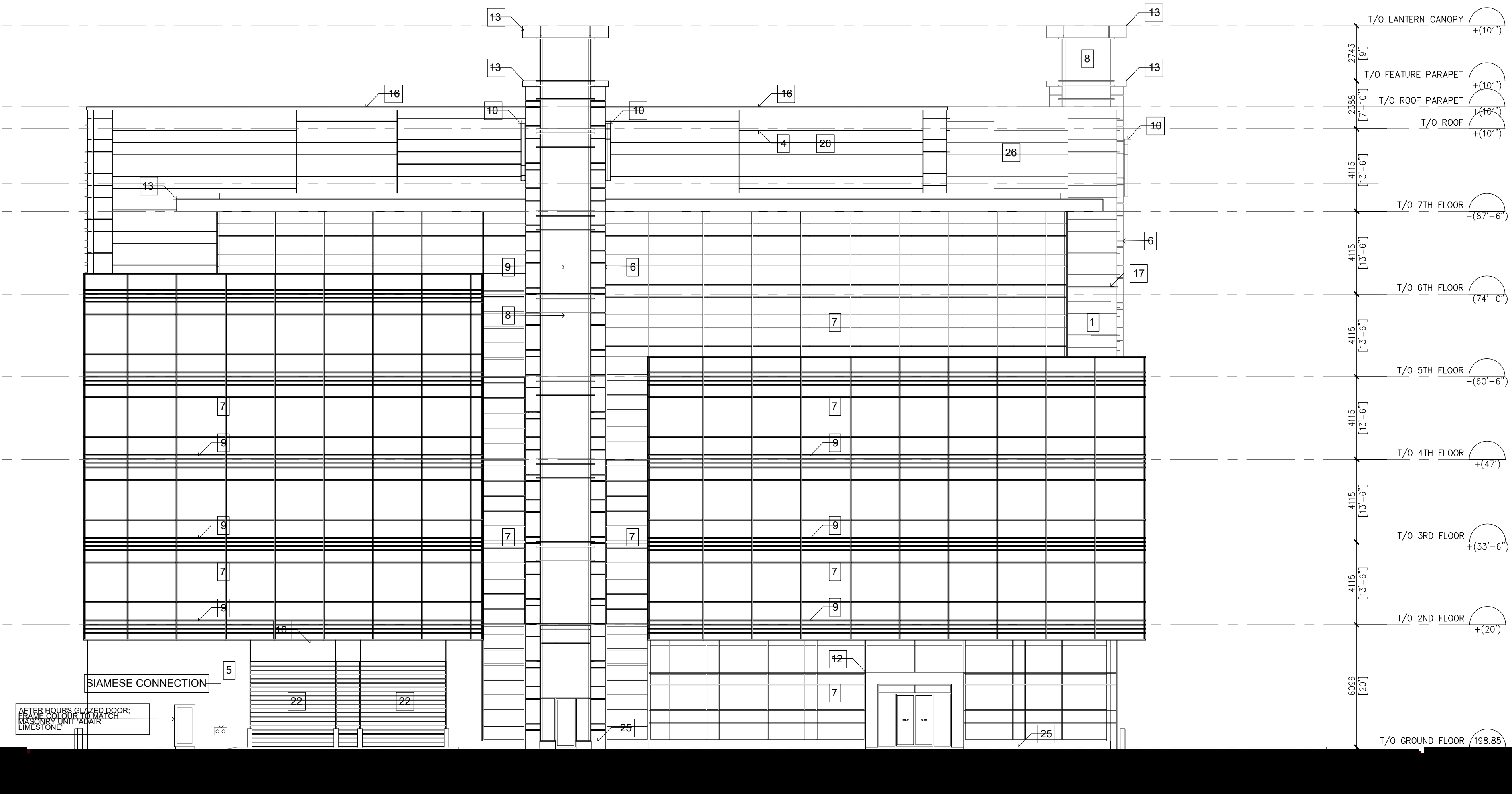
PROJECT NAME  
**7 STOREY SELF STORAGE,  
OFFICE & RETAIL**  
6333 HURONTARIO STREET  
MISSISSAUGA ON

DRAWN BY: AT  
CHECKED BY: R.P.  
DATE: October 25, 2022  
SCALE: 1:150  
DRAWING TITLE

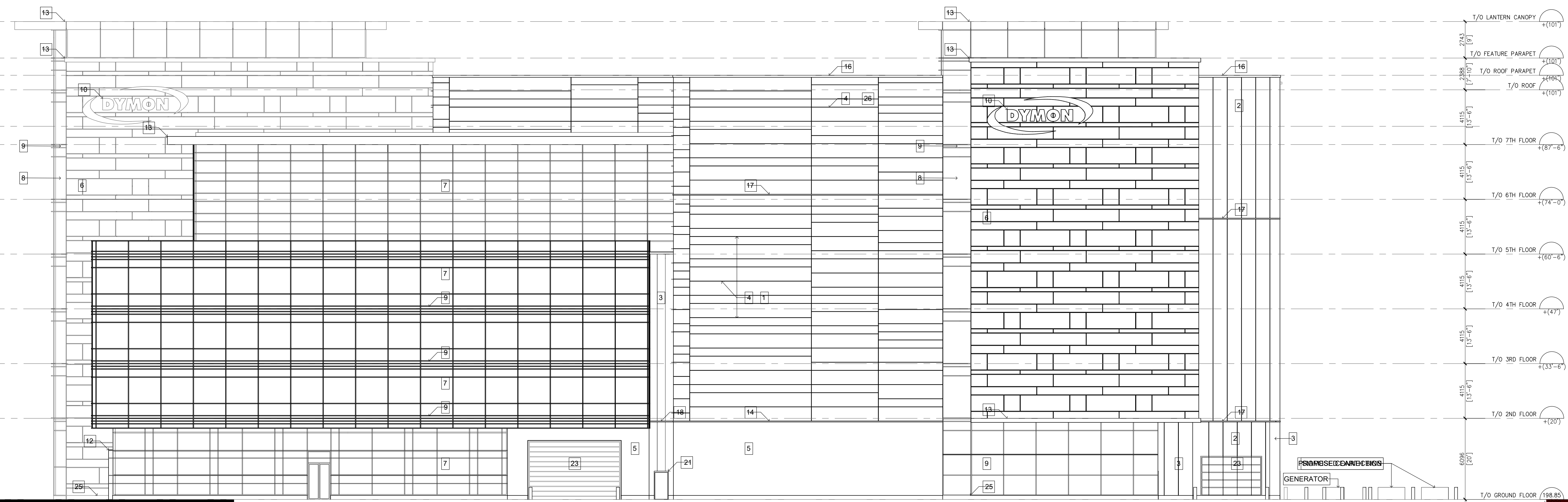
**BLDG ELEVATIONS**  
PROJECT NO. **22-08** DRAWING NO. **A301**

**LEGEND**

- 1 INSULATED METAL PANEL (IMP) SYSTEM - HORIZONTAL ORIENTATION - 'ARCHITECTURAL' PROFILE - COLOUR: 'WEATHERED ZINC'
- 2 INSULATED METAL PANEL (IMP) SYSTEM - VERTICAL ORIENTATION - 'LIGHT MESA' PROFILE - COLOUR: 'WEATHERED ZINC'
- 3 INSULATED METAL PANEL (IMP) SYSTEM - VERTICAL ORIENTATION (RECESSES & REVEALS) - 'LIGHT MESA' PROFILE - COLOUR: 'MEDIUM BRONZE'
- 4 KINGSPAN KARRIER FIN - STANDARD RECTANGLE FIN COLOUR: 'WEATHERED ZINC'
- 5 3 1/2" ARCHITECTURAL MASONRY UNIT - ARISCRAFT ADAIR LIMESTONE - FINISH: FINE DRESSED SEPIA-VEINED - RUNNING BOND
- 6 ALUCOIL - ALUMINUM COMPOSITE MATERIAL - FINISH: 'LIGHT WENGE' 4mm FR CORE
- 7 CURTAIN WALL GLAZING - FINISH: VISION GLASS
- 8 CURTAIN WALL GLAZING - FINISH: FRITTED WINDOW FILM ON VISION GLASS
- 9 SPANDREL PANEL - COLOUR TO MATCH IMP WEATHERED ZINC
- 10 INTERNALLY LIT SIGNAGE - COLOUR: TBD
- 11 GLASS SIGNAGE BAND - COLOUR: TBD
- 12 BACK-LIT GLASS WITH FRIT PATTERN - COLOUR TO MATCH - BOLD BLUE WITH WHITE FRITTING
- 13 METAL CANOPY - COLOUR TO MATCH IMP WEATHERED ZINC
- 14 CONTINUOUS BENT FLASHING SILL - COLOUR TO MATCH IMP WEATHERED ZINC
- 15 CONTINUOUS BENT METAL CAP - PREFINISHED - COLOUR TO MATCH IMP MEDIUM BRONZE
- 16 FIRESTONE PREFINISHED METAL CAP - FINISH: 'SLATE GREY' (ALL BENT METAL CAP PARAPETS)
- 17 PREFINISHED METAL IMP STACK JOINT COVER TRIM - COLOUR TO MATCH IMP WEATHERED ZINC
- 18 PREFINISHED METAL IMP STACK JOINT COVER TRIM - COLOUR TO MATCH IMP MEDIUM BRONZE
- 19 INSULATED HOLLOW METAL DOOR - COLOUR TO MATCH IMP WEATHERED ZINC
- 20 INSULATED HOLLOW METAL DOOR - COLOUR TO MATCH ARCHITECTURAL MASONRY UNIT ADAIR LIMESTONE
- 21 INSULATED HOLLOW METAL DOOR - COLOUR TO MATCH VERTICAL IMP MEDIUM BRONZE
- 22 HIGH SPEED ROLL-UP O/H DOOR - FINISH: STEEL FRAME WITH POLYCARBONATE VISION SLATS
- 23 INSULATED O/H DOOR - COLOUR TO MATCH IMP WEATHERED ZINC
- 24 INSULATED O/H DOOR - COLOUR TO MATCH IMP MEDIUM BRONZE
- 25 POURED CONCRETE
- 26 ALUMINUM COMPOSITE MATERIAL - HORIZONTAL ORIENTATION - COLOUR: 'WEATHERED ZINC' 4mm FR CORE



**2 WEST ELEVATION**  
A302 1:150

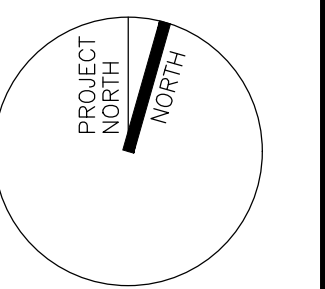


**2 SOUTH ELEVATION**  
A302 1:150

2	OCT 24/ 22	FOR REVIEW & COORDINATION
1	SEPT 21/ 22	FOR REVIEW & COORDINATION

NO.	DATE	DESCRIPTION

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME, REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING WORK. ALL DRAWINGS, PRINTS AND SPECIFICATIONS ARE THE PROPERTY OF THE ARCHITECT AND MUST BE RETURNED TO HIM ON COMPLETION OF WORK. LATEST APPROVED DRAWINGS ONLY TO BE USED FOR CONSTRUCTION. PRINTS ARE NOT TO BE SCALED.



**DYMON CAPITAL CORP.**  
2-1830 WALKLEY ROAD  
OTTAWA ON, K1H 8K3

PROJECT NAME  
**7 STOREY SELF STORAGE, OFFICE & RETAIL**  
6333 HURONTARIO STREET  
MISSISSAUGA ON

DRAWN BY AT

CHECKED BY R.P.

DATE October 25, 2022

SCALE 1:150

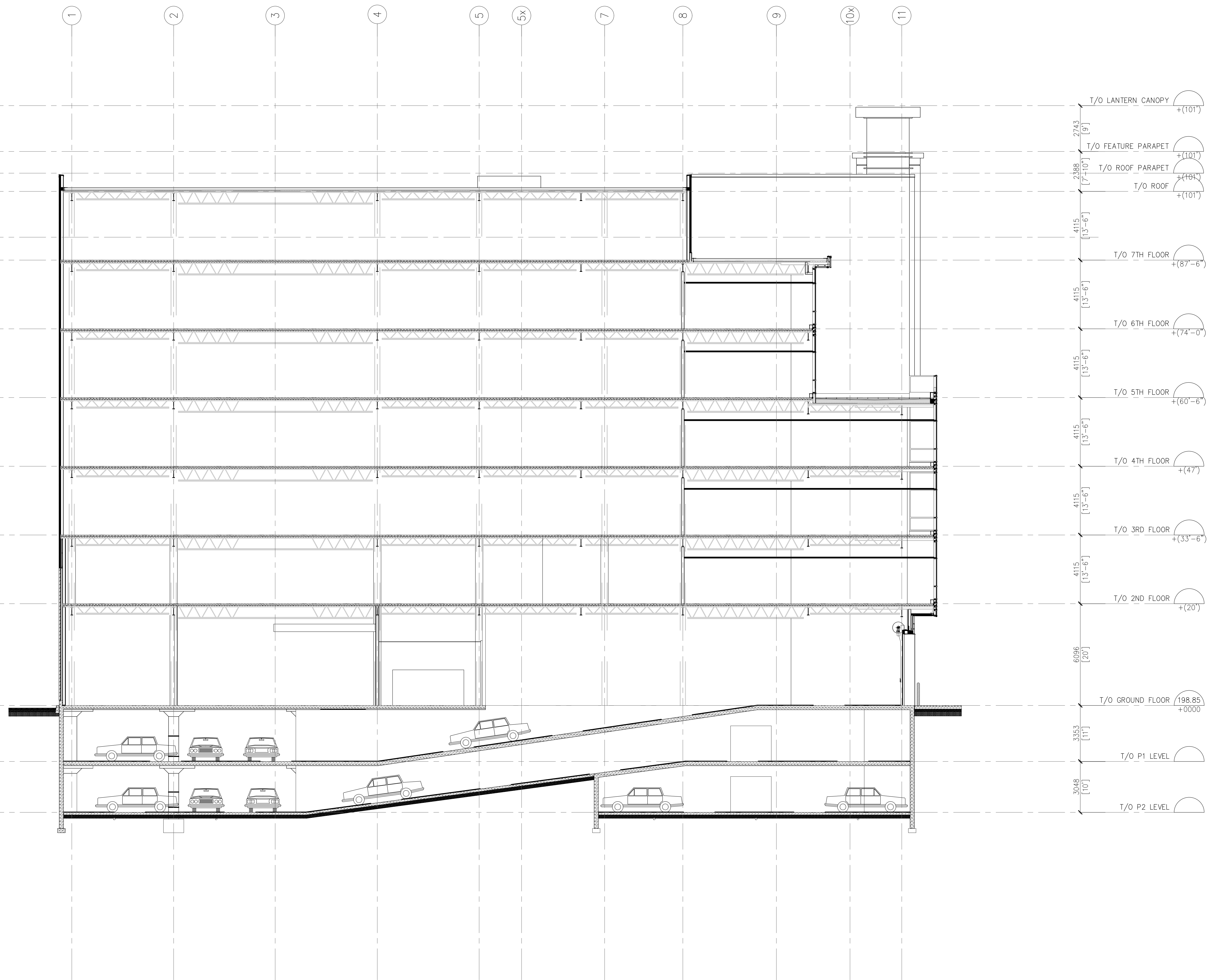
DRAWING TITLE

**BLDG ELEVATIONS**

PROJECT NO. DRAWING NO.

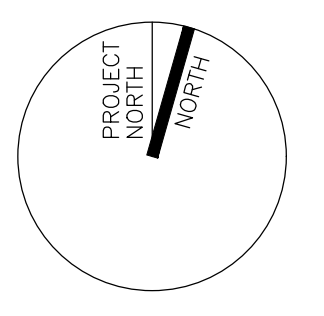
**22-08 A302**





2	OCT 24/ 22	FOR REVIEW & COORDINATION
1	SEPT 21/ 22	FOR REVIEW & COORDINATION

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME, REPORTING ANY DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING WORK.  
ALL DRAWINGS, PRINTS AND SPECIFICATIONS ARE THE PROPERTY OF THE ARCHITECT AND MUST BE RETURNED TO HIM ON COMPLETION OF WORK.  
LATEST APPROVED DRAWINGS ONLY TO BE USED FOR CONSTRUCTION.  
PRINTS ARE NOT TO BE SCALED.



**DYMON CAPITAL CORP.**  
2-1830 WALKLEY ROAD  
OTTAWA ON, K1H 8K3

PROJECT NAME  
**7 STOREY SELF STORAGE,  
OFFICE & RETAIL**  
6333 HURONTARIO STREET  
MISSISSAUGA ON

DRAWN BY AT

CHECKED BY R.P.

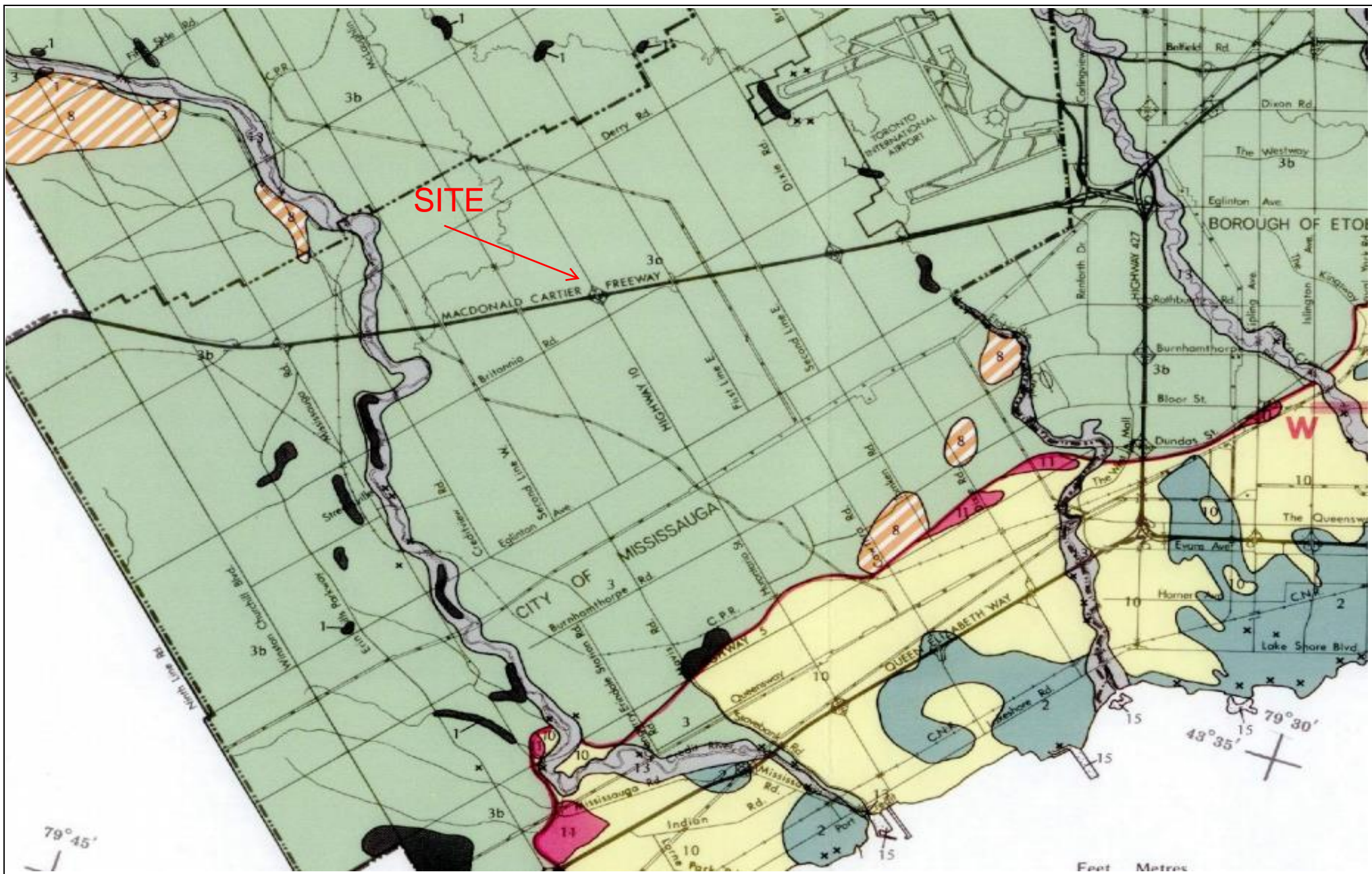
DATE October 25, 2022

SCALE 1:100

DRAWING TITLE

**BLDG SECTION**

PROJECT NO. **22-08** DRAWING NO. **A400**



400 Esna Park Dr., #15  
 Markham, Ontario  
 L3R 3K2  
 Tel: 905 475-7755  
 Fax: 905 475-7718

KEY PLAN



LEGEND

3 Young tills: clayey silt till and sandy silt till

PROJECT NAME AND ADDRESS  
 GEOTECHNICAL &  
 HYDROGEOLOGICAL  
 INVESTIGATIONS  
 6333 HURONTARIO ST,  
 MISSISSAUGA, ON

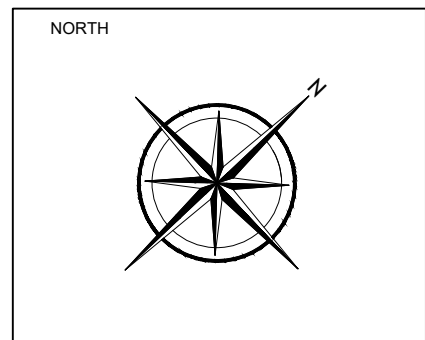
PROJECT NO.  
 FE-P20-10655

DATE  
 DECEMBER 2020

SCALE  
 As shown

FIGURE: A5  
 Surficial  
 Geology Map.





LEGEND

- [Red outline] SITE BOUNDARY
- [Orange circle with crosshair] BOREHOLE/ MONITORING WELL NOVEMBER 2020
- [Blue circle with crosshair] MONITORING WELL SEPTEMBER 2020
- [Red circle with crosshair] BOREHOLE/ MONITORING WELL 2019

PROJECT NAME AND ADDRESS

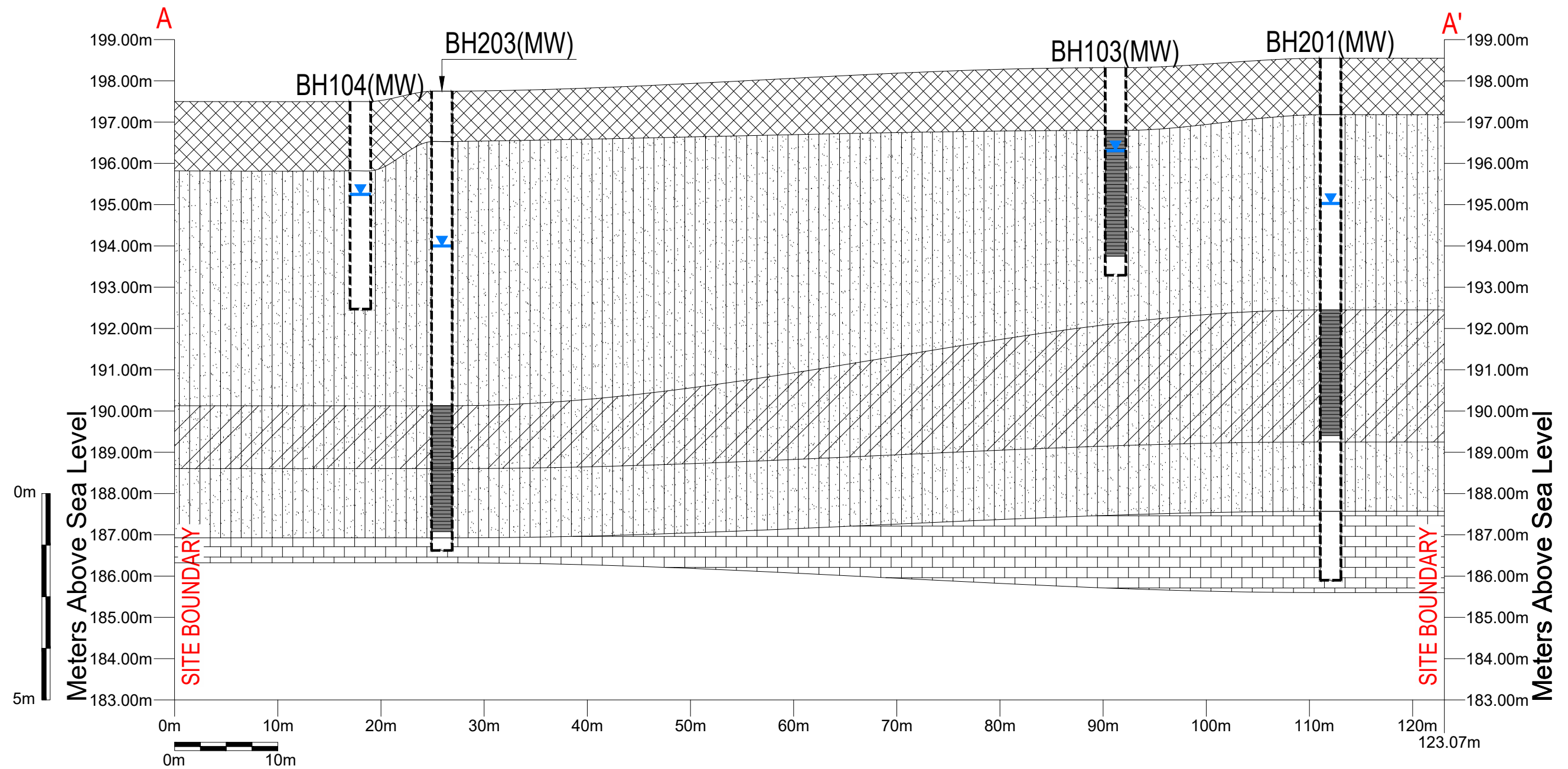
**HYDROGEOLOGICAL INVESTIGATIONS**

6333 Hurontario St  
Mississauga, Ontario

FIGURE A6:  
SITE PLAN WITH APPROXIMATE BOREHOLE LOCATIONS

PROJECT NO. FE-P 20-10463	SHEET NO. <b>A6</b>
DATE November 2020	
SCALE AS SHOWN	





400 Esna Park Dr., #15  
 Markham, Ontario  
 L3R 3K2  
 Tel: 905 475-7755  
 Fax: 905 475-7718

LEGEND

- FILL
- SILT
- SAND
- CLAY
- SHALE

PROJECT NAME AND ADDRESS

**HYDROGEOLOGICAL INVESTIGATIONS**

6333 Hurontario St  
 Mississauga, Ontario

PROJECT NO.

FE-P 20-10463

DATE

November 2020

SCALE

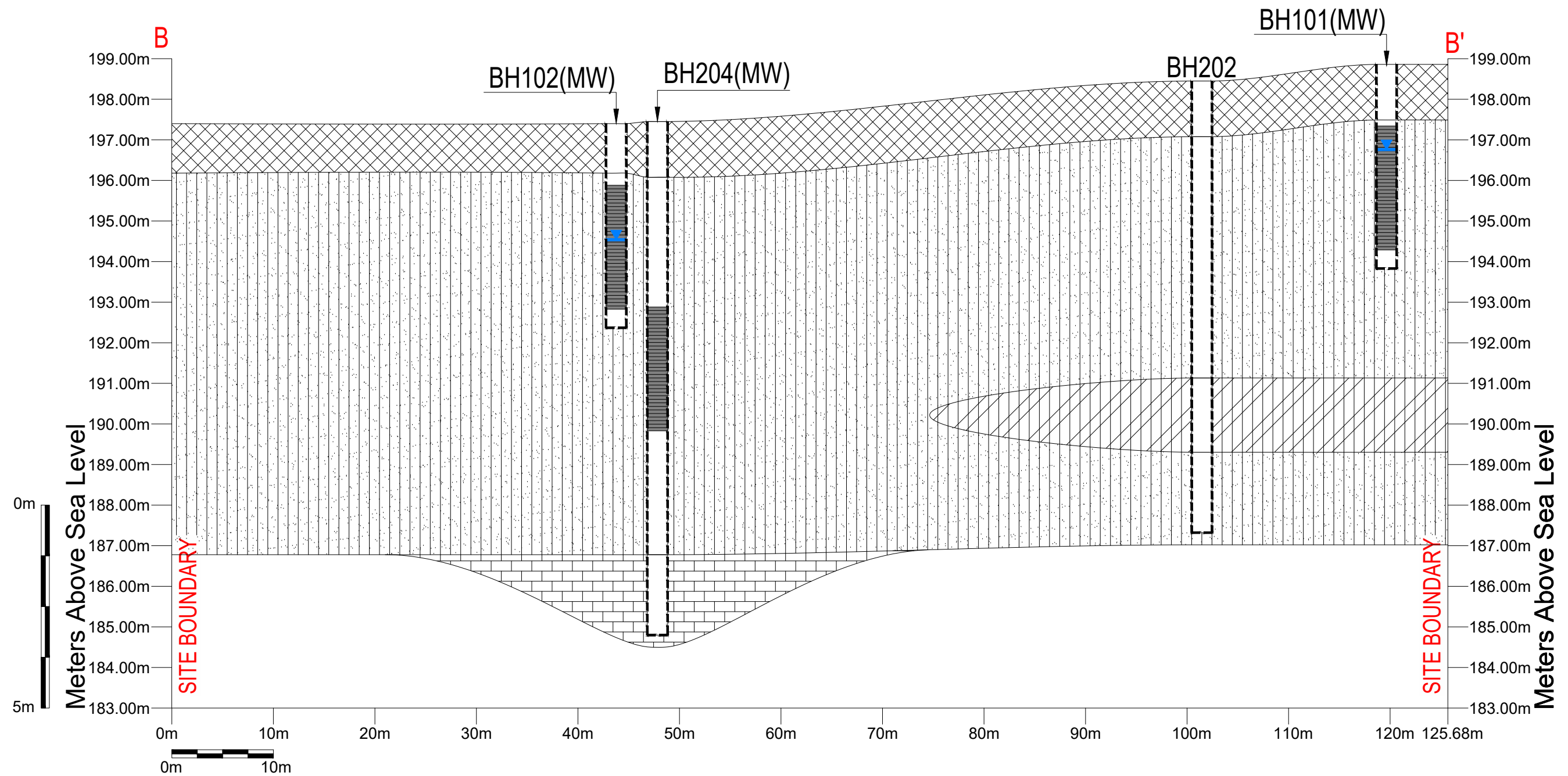
AS SHOWN

FIGURE 2:

CROSS-SECTION A - A'


SHEET NO.

**A6.1**



400 Esna Park Dr., #15  
 Markham, Ontario  
 L3R 3K2  
 Tel: 905 475-7755  
 Fax: 905 475-7718

LEGEND

-  FILL
-  SILT
-  SAND
-  CLAY
-  SHALE

PROJECT NAME AND ADDRESS

HYDROGEOLOGICAL  
 INVESTIGATIONS

6333 Hurontario St  
 Mississauga, Ontario

PROJECT NO.

FE-P 20-10463

DATE

November 2020

SCALE

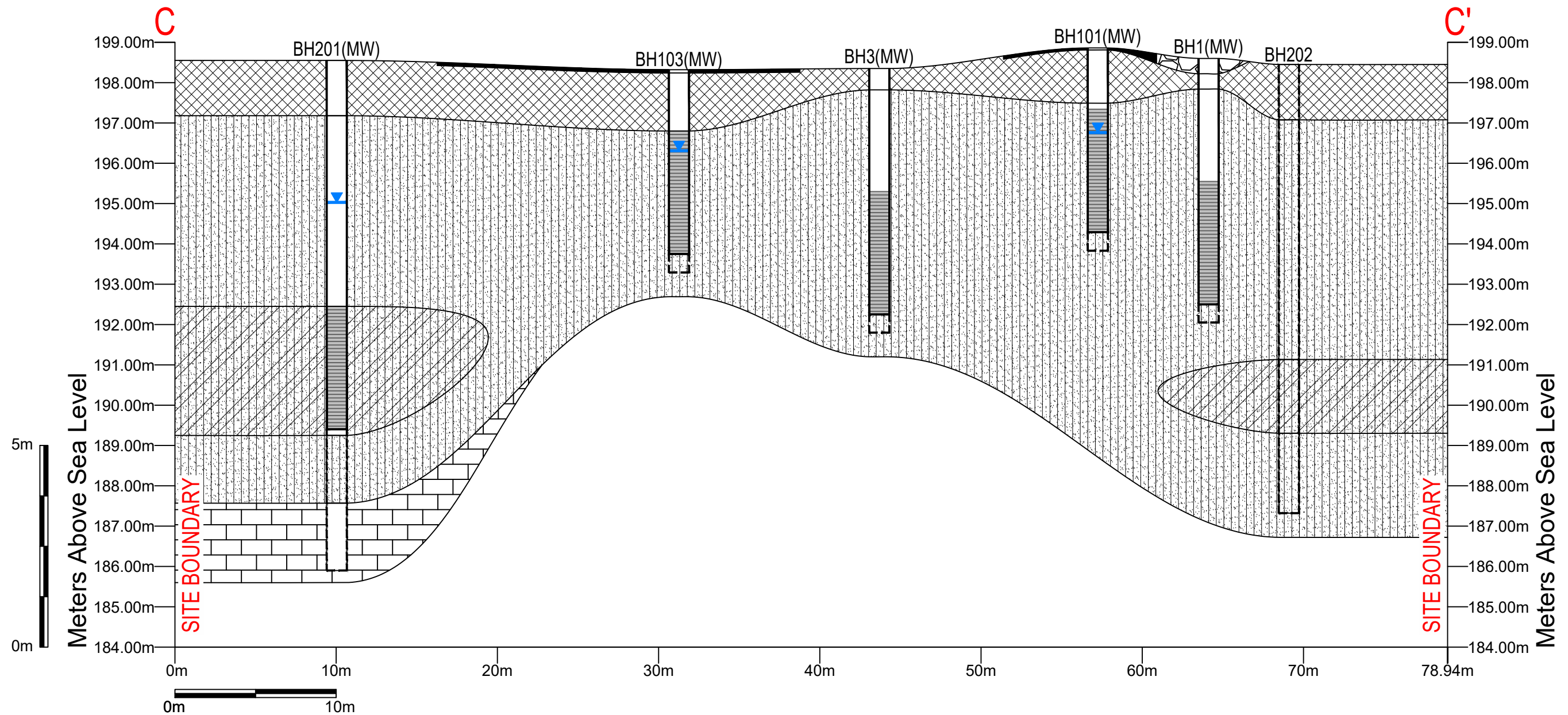
AS SHOWN

FIGURE A6.2:

CROSS-SECTION B - B';

SHEET NO.

A6.2



400 Esna Park Dr., #15  
 Markham, Ontario  
 L3R 3K2  
 Tel: 905 475-7755  
 Fax: 905 475-7718

NORTH

LEGEND

- ASPHALT
- SAND
- SILT
- CLAY
- GRANULAR MATERIAL
- SHALE
- GROUNDWATER POTENTIOMETRIC LEVEL

PROJECT NAME AND ADDRESS

HYDROGEOLOGICAL INVESTIGATION

6333 Hurontario St  
 Mississauga, Ontario

PROJECT NO.

FE-P 20-10463

DATE:

November 2020

SCALE:

AS SHOWN

FIGURE A6.3:

**CROSS-SECTION C - C';**

SHEET NO.

**A6.3**





## APPENDIX B – LOG OF BOREHOLES



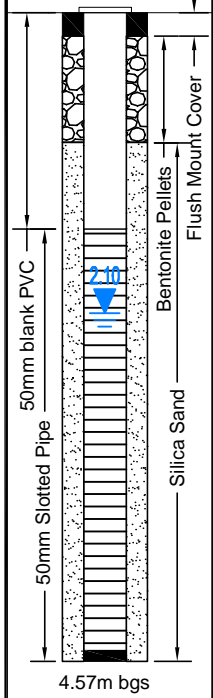
PROJECT NAME: Hydrogeological Investigation

LOCATION: 6333 Hurontario Street, Mississauga, ON

DRILLING METHOD: D-50, Solid Stem

DRILLING DATE: September 8, 2020

DEPTH (feet) DEPTH (metres)	SOIL PROFILE		SAMPLES			PENETRATION TESTING (SPT) ▲				VAPOUR READING (ppm) □				PIEZOMETER OR WELL CONSTRUCTION		
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID:	TYPE NUMBER	P.I.D. Reading	"N" VALUE	20 40 60 80				20 40 60 80				
								SHEAR STRENGTH (Kpa) +				MOISTURE CONTENT (%) ●				
								40	80	120	160	10	20	30	40	
0	GROUND SURFACE (m asl)		198.86													
0	50mm ASPHALT															
2	FILL: granular material mixed with sandy silt, occasional pieces of concrete, brown with black seams, loose.				SS-1											
4			1.37/ 197.49		SS-2	8										
6	BROWN SANDY SILT TILL: trace of clay, trace of gravel, occasional wet seams, moist, compact.				SS-3	17										
8					SS-4											
10					SS-5	26										
12																
14	BROWN TO GREY SANDY SILT TO TILL: trace of gravel, very moist, very dense.		4.27/ 194.59													
16			5.03/ 193.83		SS-6	63										
18	End of Borehole															
20																
22																
24																
26																
28																
30																
32																
10	Groundwater Depth on completion: 4.12m, on September 18, 2020: 2.10m															
	DRAWN: BL					LOGGED: RR					CHECKED: CW					





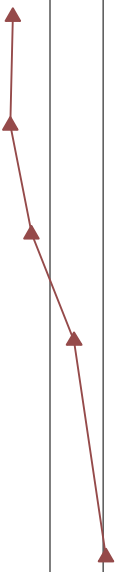
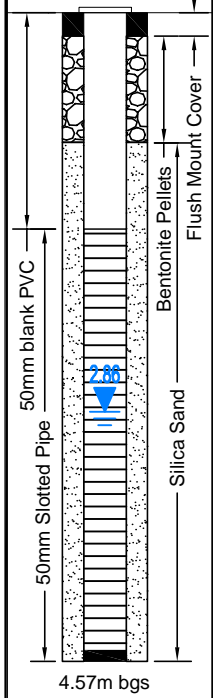
PROJECT NAME: Hydrogeological Investigation

LOCATION: 6333 Hurontario Street, Mississauga, ON

DRILLING METHOD: D-50, Solid Stem

DRILLING DATE: September 8, 2020

DEPTH (feet) DEPTH (metres)	SOIL PROFILE		SAMPLES			PENETRATION TESTING (SPT) ▲				VAPOUR READING (ppm) □				PIEZOMETER OR WELL CONSTRUCTION		
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID:	TYPE NUMBER	P.I.D. Reading	"N" VALUE	SHEAR STRENGTH (Kpa) ⊕				MOISTURE CONTENT (%) ●				
								20	40	60	80	20	40		60	80
0	GROUND SURFACE (m asl)		197.40													
0 - 1.22	FILL: silt to sandy silt, some gravel, dark brown with black seams, moist, loose.	[Cross-hatch pattern]	1.22/ 196.18		SS-1											
1.22 - 4.27	BROWN SANDY SILT TILL: trace of gravel, trace of clay, moist, loose to compact.	[Vertical line pattern]	4.27/ 193.13		SS-2	6										
4.27 - 4.57	GREY SANDY SILT TILL: some gravel, with wet seams, compact to dense, cave in to 4.57m.	[Vertical line pattern]	4.57/ 192.37		SS-3	5										
4.57 - 5.03					SS-4	13										
5.03 - 5.03					SS-5	29										
5.03 - 5.03					SS-6	41										
5.03 - 18	End of Borehole															



Groundwater Depth on completion: 4.27m; on September 18, 2020: 2.86m

DRAWN: BL      LOGGED: RR      CHECKED: CW



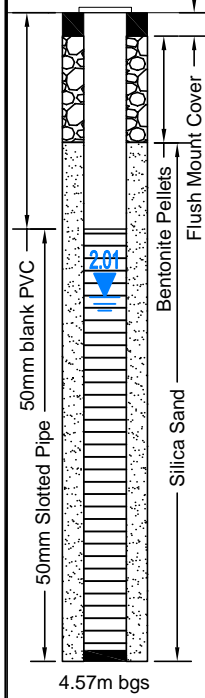
PROJECT NAME: Hydrogeological Investigation

LOCATION: 6333 Hurontario Street, Mississauga, ON

DRILLING METHOD: D-50, Solid Stem

DRILLING DATE: September 8, 2020

DEPTH (feet) DEPTH (metres)	SOIL PROFILE		SAMPLES			PENETRATION TESTING (SPT) ▲				VAPOUR READING (ppm) □				PIEZOMETER OR WELL CONSTRUCTION		
	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	LAB ID:	TYPE NUMBER	P.I.D. Reading	"N" VALUE	20 40 60 80				20 40 60 80				
								SHEAR STRENGTH (Kpa) +				MOISTURE CONTENT (%) ●				
								40	80	120	160	10	20	30	40	
0	GROUND SURFACE (m asl)		198.32													
0	80mm ASPHALT															
2	FILL: granular material mixed with silt and gravel, pieces of asphalt, brown with black seams, moist, loose.				SS-1											
4			1.52/196.80		SS-2	7										
6	BROWN SANDY SILT TILL: trace of gravel, occasional silty sand seams, moist, loose to dense.				SS-3	8										
8					SS-4	11										
10					SS-5	35										
16	GREY SANDY SILT TILL: trace of gravel, very moist to wet, very dense.		4.57/193.75		SS-6	100+										
16			5.03/193.29													
18	End of Borehole															
Groundwater Depth on completion: 4.12m; on September 18, 2020: 2.01m																
DRAWN: BL										LOGGED: RR				CHECKED: CW		



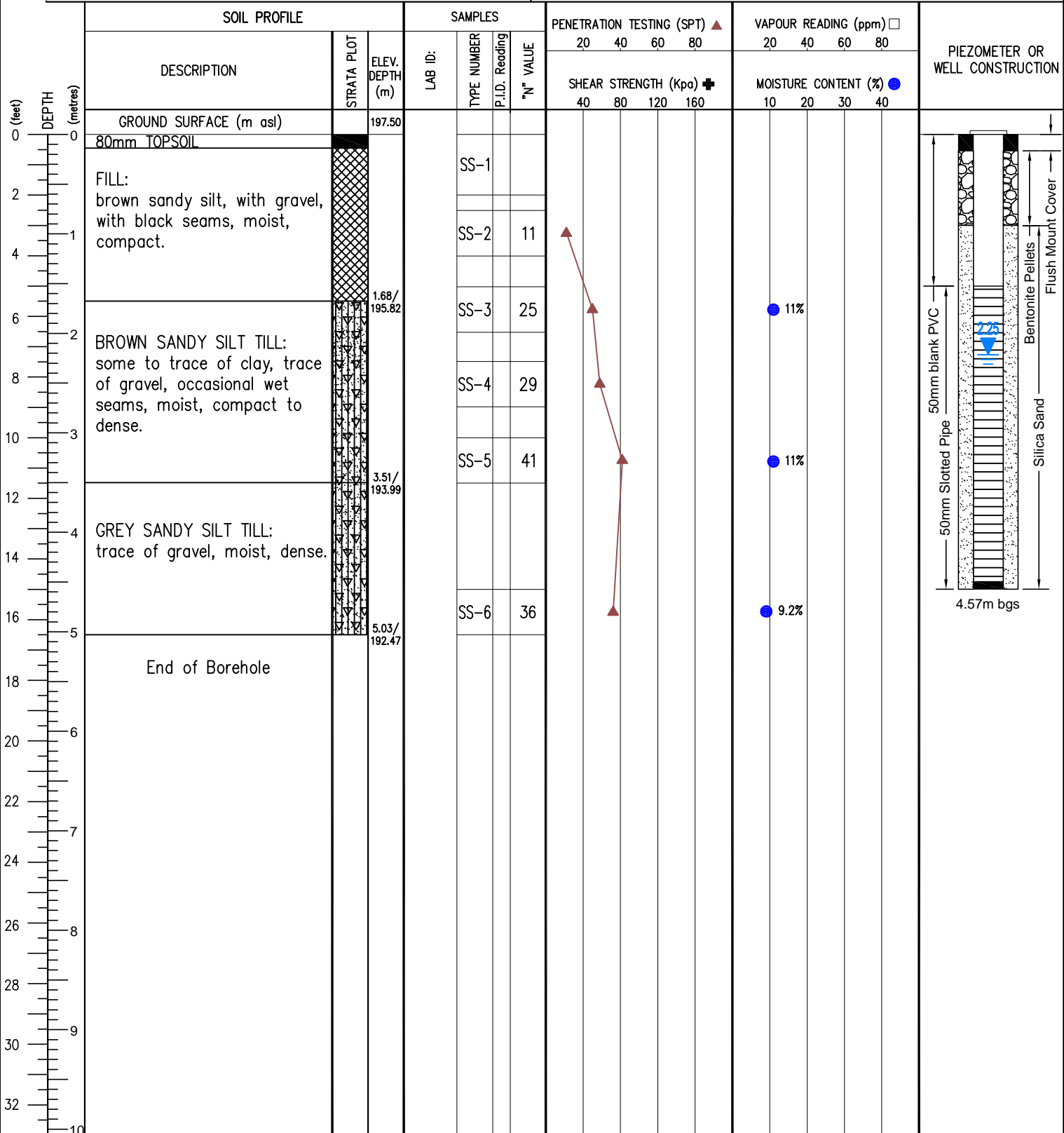


PROJECT NAME: Hydrogeological Investigation

LOCATION: 6333 Hurontario Street, Mississauga, ON

DRILLING METHOD: D-50, Solid Stem

DRILLING DATE: September 8, 2020

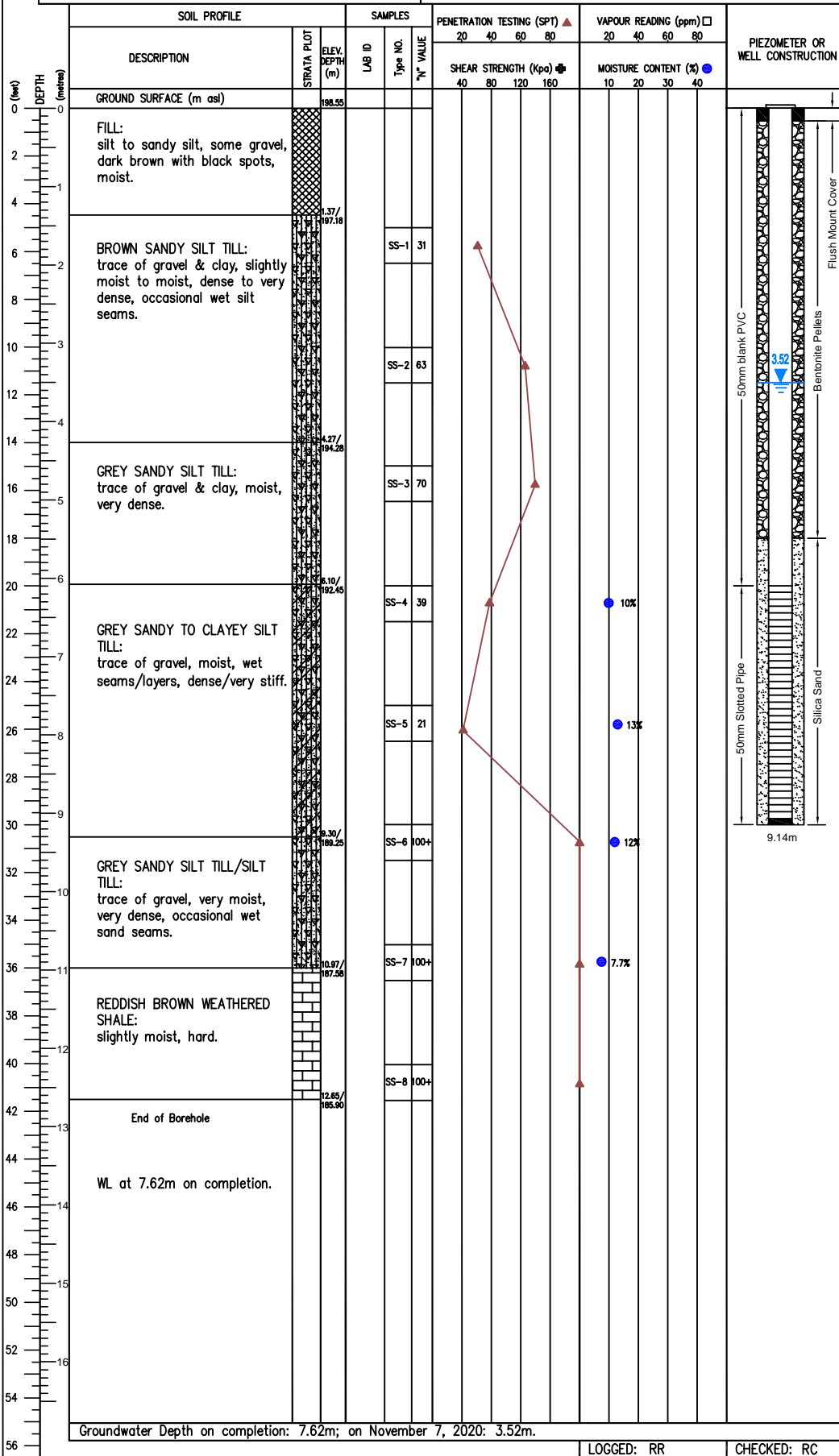


Groundwater Depth on completion: dry, on September 18, 2020: 2.25m

DRAWN: BL

LOGGED: RR

CHECKED: CW





PROJECT NO.: FE-P 20-10654/55

PROJECT NAME: Geotechnical & Hydrogeological Investigations

LOCATION: 6333 Hurontario St., Mississauga, ON.

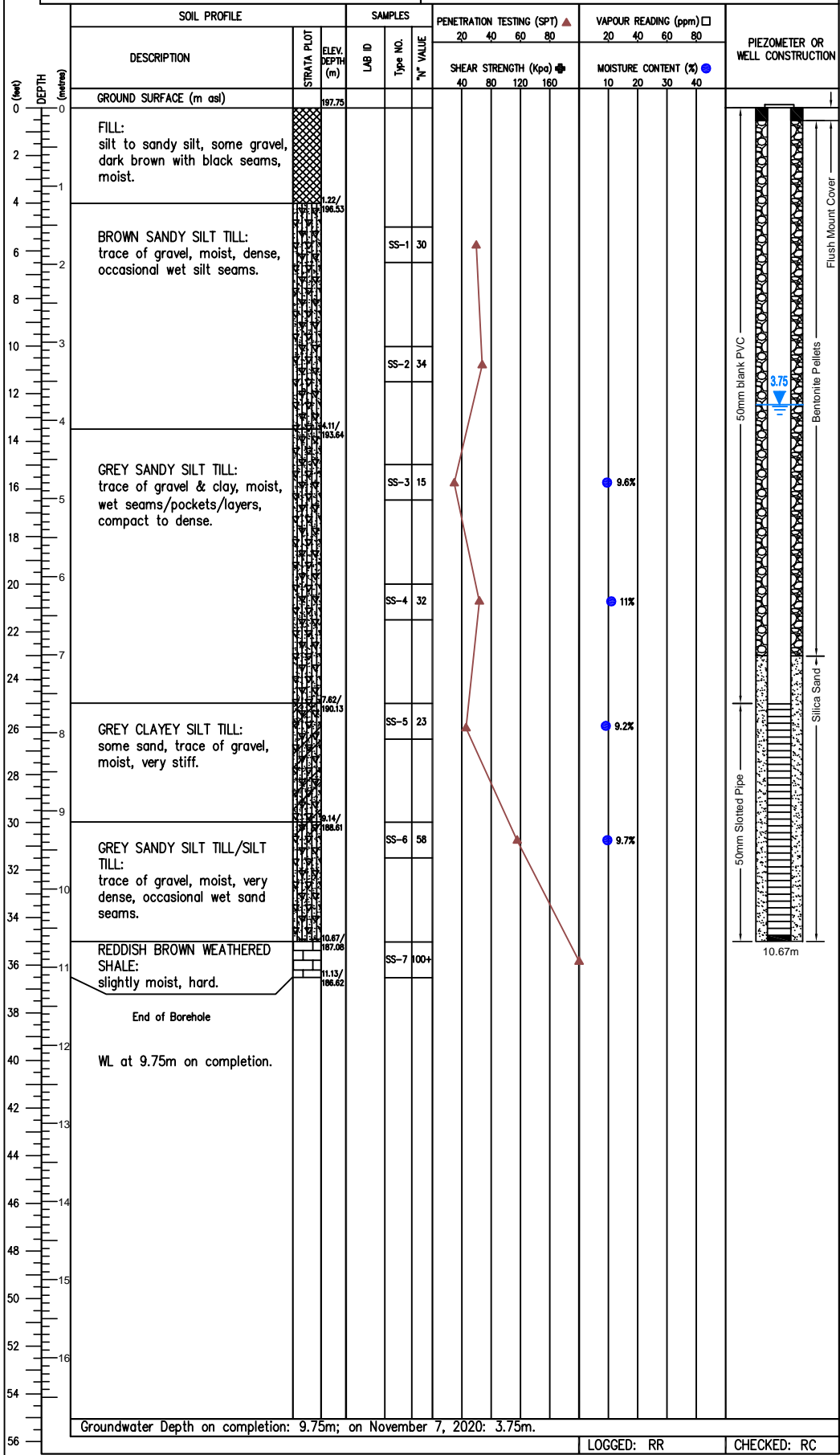
DRILLING METHOD: CME 75 - Solid Stem

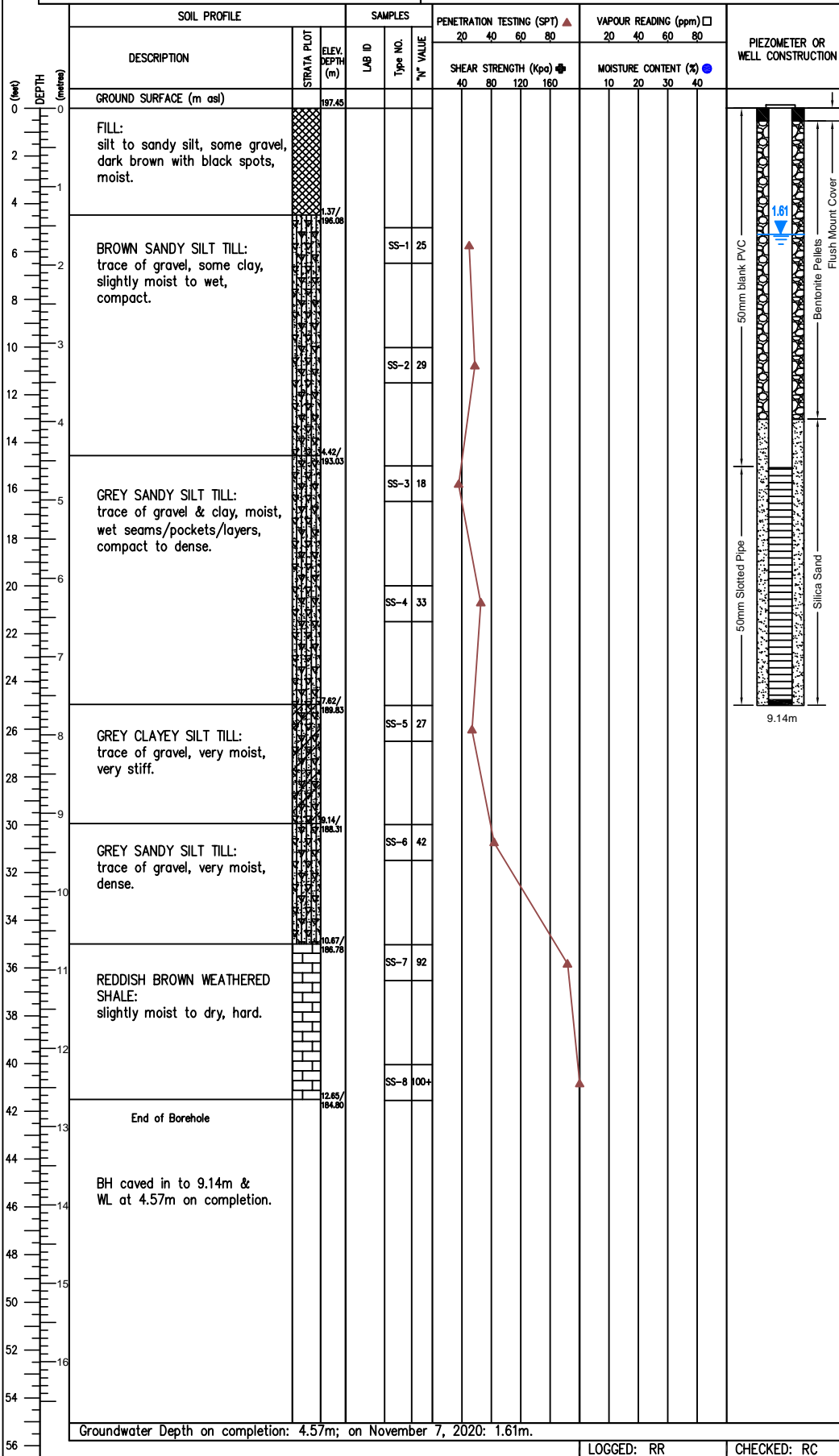
DRILLING DATE: November 2, 2020

DEPTH (metres)	SOIL PROFILE		SAMPLES			PENETRATION TESTING (SPT) ▲				VAPOUR READING (ppm) □				PIEZOMETER OR WELL CONSTRUCTION
	DESCRIPTION	STRATA PLOT ELEV. DEPTH (m)	LAB ID	Type NO.	"N" VALUE	SHEAR STRENGTH (Kpa) ⊕				MOISTURE CONTENT (%) ●				
						20	40	60	80	20	40	60	80	
0	GROUND SURFACE (m asi)	198.45												
0.1	Asphalt													
0.2	Granular Material													
0.5	FILL: sandy silt, occasional pieces of concrete, brown with black seams, slightly moist.	197.06												
2.5	BROWN SANDY SILT TILL: some clay, trace of gravel, moist, compact to very dense, occasional sand seams.	195.37	SS-1	27		80	100	120	140					
6.5		193.86	SS-2	63		100	120	140	160					
16.5	GREY SANDY SILT TILL: trace of gravel, trace of clay, moist to wet, very dense.	193.86	SS-3	62		100	120	140	160					
22.5		191.33	SS-4	50		100	120	140	160					
26.5	GREY SANDY TO CLAYEY SILT TILL: trace of gravel, very moist, compact/stiff, wet seams.	191.33	SS-5	14		100	120	140	160					
30.5		189.25	SS-6	77		100	120	140	160					
34.5	GREY SANDY SILT TILL/SILT TILL: trace of gravel, very moist, very dense, red at bottom of spoon with pieces of shale.	189.25	SS-7	98		100	120	140	160					
37.5	End of Borehole	187.32												
40.5	WL at 10.67m on completion.													
56	Groundwater Depth on completion: 10.67m.													

LOGGED: RR

CHECKED: RC





## APPENDIX C – GRAIN SIZE DISTRIBUTION ANALYSES





# FISHER ENVIRONMENTAL LABORATORIES

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FAX: 905 475-7718  
www.fisherenvironmental.com


**Client:** Dymon Group  
**Address:**  
  
**Tel.:**  
**Email:**  
**Attn.:**


**F.E. Job #:** 20-5201  
**Project Name:** Geo/Hydro Investigations  
**Project ID:** FE-P 20-10463  
**Date Sampled:** 10-Sep-2020  
**Date Received:** 11-Sep-2020  
**Date Reported:** 18-Sep-2020  
**Location:** 6333 Hurontario Street  
Mississauga, ON

## Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
Moisture Content	Soil	3	N/A	14-Sep-20	Support Procedures F-99	Carter (1993)
Grain Size	Soil	3	N/A	15-Sep-20	Grain Size F-28	ASTM D6913-04

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

**Authorized by:**   
 Roger Lin, Ph. D., C. Chem.  
 Laboratory Manager





## Certificate of Analysis

<b>Analysis Requested:</b>	Moisture Content, Grain Size
<b>Sample Description:</b>	3 Soil Sample(s)

Parameter	20-5201-1 BH4 1.50-1.95m	20-5201-2 BH4 3.00-3.45m	20-5201-3 BH4 4.55-5.00m			
<b>Moisture Content (%)</b>	11	11	9.2			

## QA/QC Report

Parameter	Blank	RL	LCS	AR	Duplicate	AR
	Recovery (%)			RPD (%)		
<b>Moisture Content (%)</b>	<0.1	0.1	100	70-130	3.1	0-20

**LEGEND:**

- RL - Reporting Limit
- LCS - Laboratory Control Sample
- AR - Acceptable Range
- RPD - Relative Percent Difference

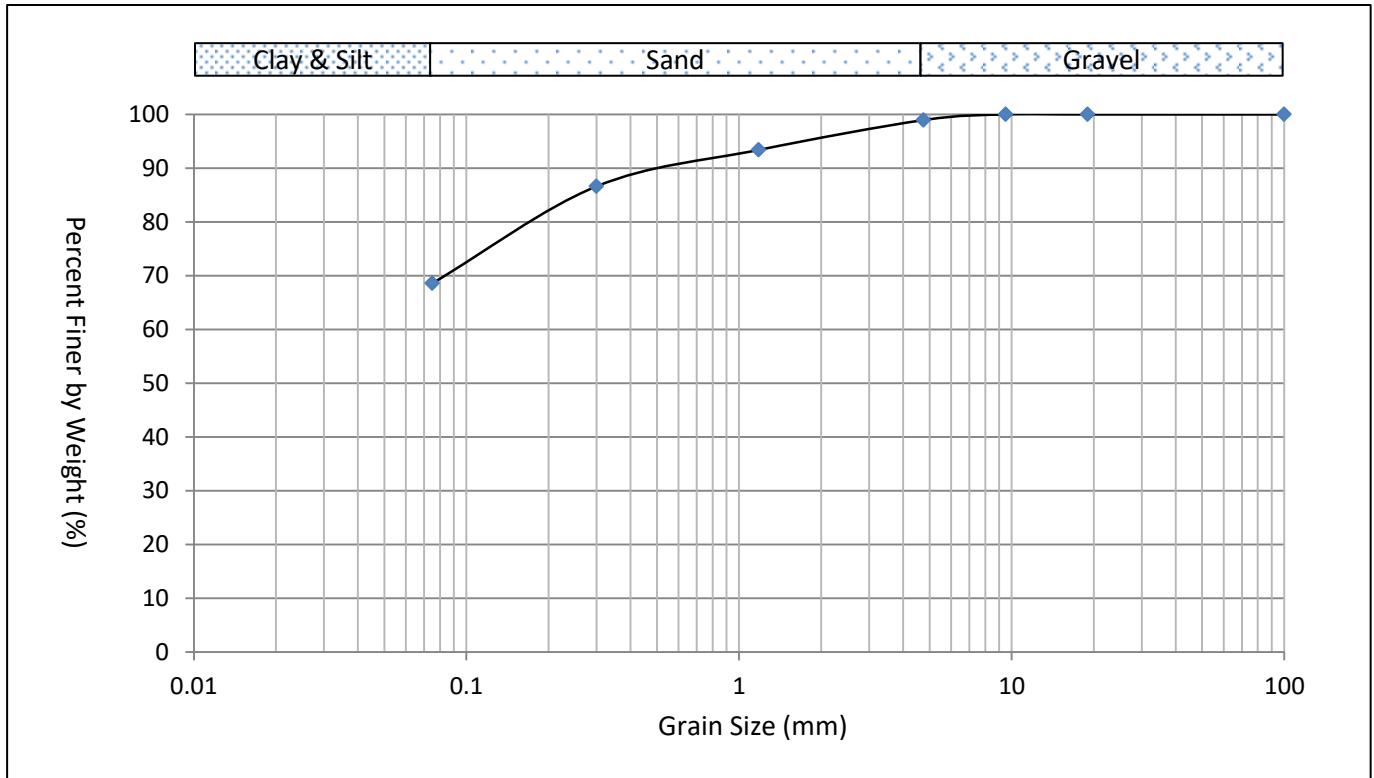
## Certificate of Analysis

<b>Analysis Requested:</b>	Moisture Content, Grain Size					
<b>Sample Description:</b>	3 Soil Sample(s)					
<b>Parameter</b>	<b>20-5201-1</b> BH4 1.50-1.95m	<b>20-5201-2</b> BH4 3.00-3.45m	<b>20-5201-3</b> BH4 4.55-5.00m			
<b>Grain Size (%)</b>						
>19mm	0.0	0.0	0.0			
9.5mm-19mm	0.0	0.0	0.0			
4.75mm-9.5mm	1.1	2.0	1.2			
1.18m-4.75mmm	5.6	7.2	5.0			
300um-1.18mm	6.8	10.2	6.7			
75um-300um	18.0	16.0	22.0			
<75um	68.6	64.6	65.1			
<b>Clay &amp; Silt</b>	<b>69</b>	<b>65</b>	<b>65</b>			
<b>Sand</b>	<b>30</b>	<b>33</b>	<b>34</b>			
<b>Gravel</b>	<b>1</b>	<b>2</b>	<b>1</b>			

# Grain Size Distribution

Sample ID: 20-5201-1      BH4      1.50-1.95m

Clay & Silt: 69%      Sand: 30%      Gravel: 1%



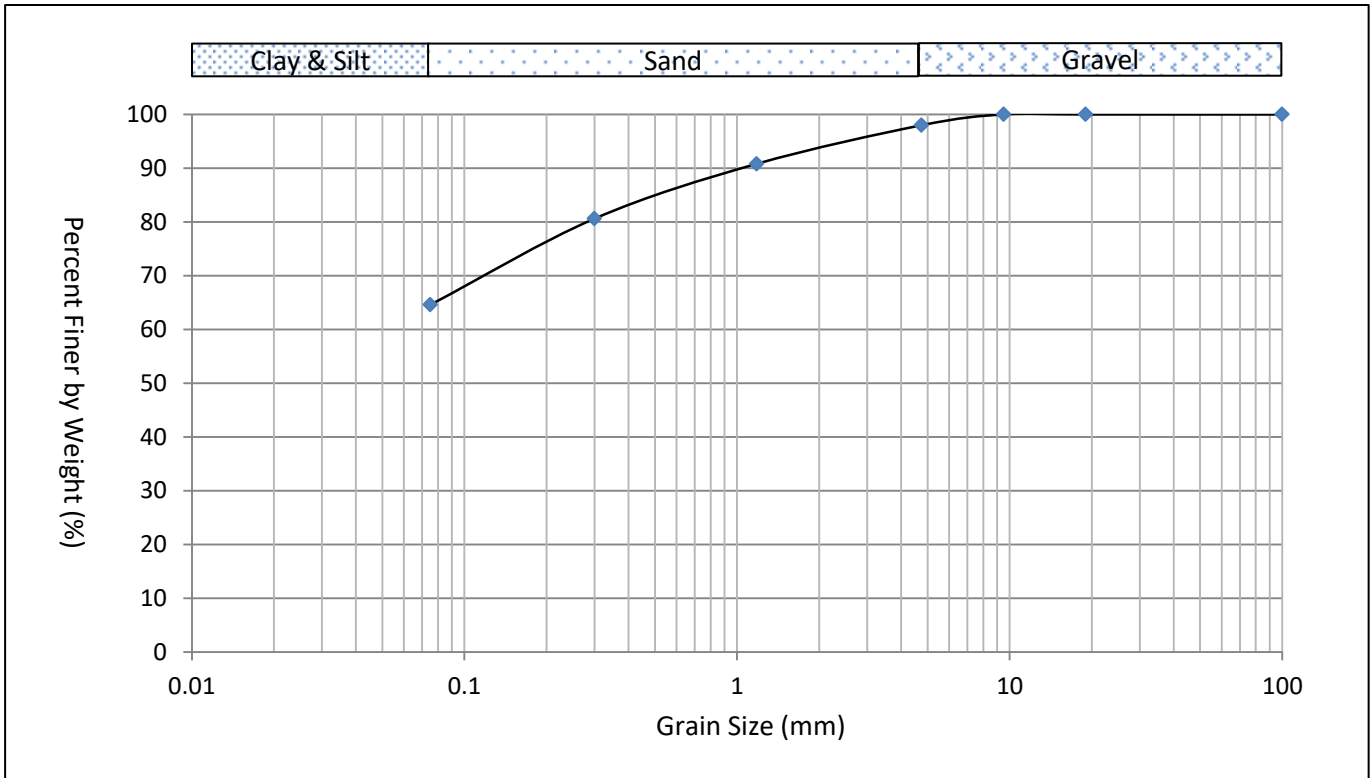
# Grain Size Distribution

Sample ID: 20-5201-2      BH4      3.00-3.45m

Clay & Silt: 65%

Sand: 33%

Gravel: 2%



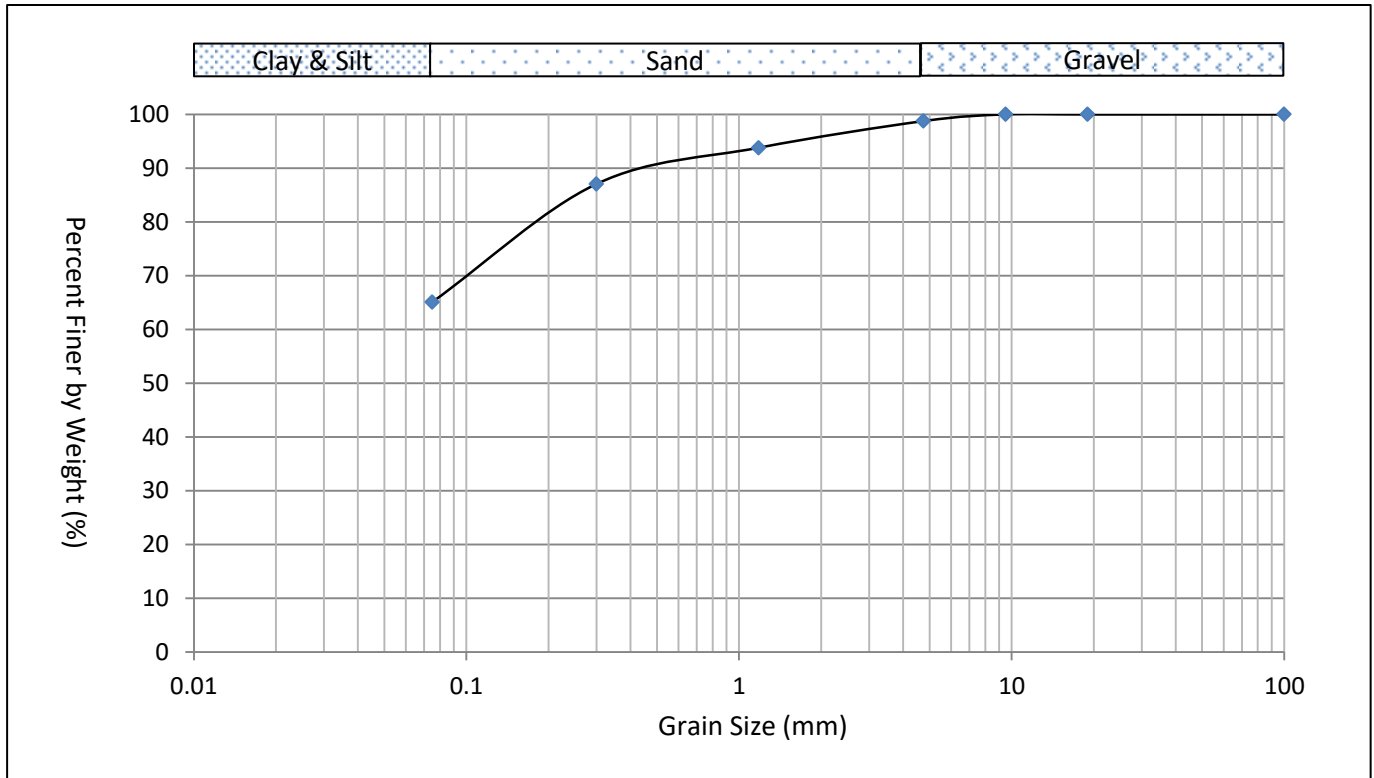
# Grain Size Distribution

Sample ID: 20-5201-3      BH4      4.55-5.00m

Clay & Silt: 65%

Sand: 34%

Gravel: 1%







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MARKHAM, ONT. L3R 3K2  
TEL: 905 475-7755  
FAX: 905 475-7718  
www.fisherenvironmental.com


**Client:** Dymon Group  
**Address:**  
  
**Tel.:**  
**Email:**  
**Attn.:**

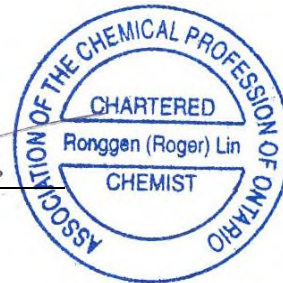
**F.E. Job #:** 20-5476  
**Project Name:** Geo & Hydro Investigation  
**Project ID:** FE-P 20-10654/20-10655  
**Date Sampled:** 3,4-Nov-2020  
**Date Received:** 5-Nov-2020  
**Date Reported:** 16-Nov-2020  
**Location:** 6333 Hurontario Street  
Mississauga, ON

## Certificate of Analysis

Analyses	Matrix	Quantity	Date Extracted	Date Analyzed	Lab SOP	Method Reference
pH	Soil	3	9-Nov-20	9-Nov-20	pH-EC-SAR F-16	SW-846, 9045D
Chloride	Soil	3	12-Nov-20	12-Nov-20	Chloride F-20	SM 4500-Cl-E
Sulphate	Soil	3	12-Nov-20	12-Nov-20	Sulphate F-21	SM 4500-SO <sub>4</sub>
Moisture Content	Soil	8	N/A	6-Nov-20	Support Procedures F-99	Carter (1993)
Grain Size	Soil	8	N/A	10-Nov-20	Grain Size F-28	ASTM D6913-04

Fisher Environmental Laboratories is accredited by CALA (the Canadian Association for Laboratory Accreditation Inc.) for specific parameters as required by Ontario Regulation 153/04. All analytical testing has been performed in accordance with ISO 17025 and the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act published by Ontario Ministry of the Environment.

**Authorized by:**   
Roger Lin, Ph. D., C. Chem.  
Laboratory Manager



## Certificate of Analysis

<b>Analysis Requested:</b>	pH, Sulphate, Chloride, Moisture Content, Grain Size
<b>Sample Description:</b>	8 Soil Sample(s)

Parameter	20-5476-1 BH201 6.05-6.50m	20-5476-5 BH203 4.55-5.00m	20-5476-6 BH203 6.05-6.50m			Soil Standards *
<b>pH (pH unit)</b>	8.64	8.59	8.63			(5-11) 5-9

\* Surface soil pH value from 5 - 9, Sub-surface soil pH value from 5-11.

## QA/QC Report

Parameter	LCS	AR	Duplicate	AR		
	<b>Absolute Difference (pH Unit)</b>					
<b>pH (pH unit)</b>	7.05	6.90-7.20	0.00	<0.3		

**LEGEND:**

LCS - Laboratory Control Sample

AR - Acceptable Range

## Certificate of Analysis

<b>Analysis Requested:</b>	pH, Sulphate, Chloride, Moisture Content, Grain Size					
<b>Sample Description:</b>	8 Soil Sample(s)					
<b>Parameter</b>	20-5476-1 BH201 6.05-6.50m	20-5476-5 BH203 4.55-5.00m	20-5476-6 BH203 6.05-6.50m			
	<i>Concentration (µg/g)</i>					
<b>Chloride in Soil</b>	33.7	<10	<10			

< result obtained was below RL (Reporting Limit).

## QA/QC Report

Parameter	Blank	RL	LCS	AR	MS	AR
	(µg/g)		Recovery (%)		Recovery (%)	
<b>Chloride in Soil</b>	<10	10	94	70-130	110	70-130

Parameter	Duplicate	AR				
	RPD (%)					
<b>Chloride in Soil</b>	3.6	0-20				

**LEGEND:**

- RL - Reporting Limit
- LCS - Laboratory Control Sample
- MS - Matrix Spike
- AR - Acceptable Range
- RPD - Relative Percent Difference

## Certificate of Analysis

<b>Analysis Requested:</b>	pH, Sulphate, Chloride, Moisture Content, Grain Size
<b>Sample Description:</b>	8 Soil Sample(s)

Parameter	20-5476-1 BH201 6.05-6.50m	20-5476-5 BH203 4.55-5.00m	20-5476-6 BH203 6.05-6.50m			
<b>Sulphate (mg/kg)</b>	32.1	24.7	39.5			

## QA/QC Report

Parameter	Blank	RL	LCS/Spike	AR	Duplicate	AR
	(mg/kg)		Recovery (%)		RPD (%)	
<b>Sulphate</b>	<1	1	95	70-130	15	0-30

**LEGEND:**

- RL - Reporting Limit
- LCS - Laboratory Control Sample
- AR - Acceptable Range
- RPD - Relative Percent Difference

## Certificate of Analysis

<b>Analysis Requested:</b>	pH, Sulphate, Chloride, Moisture Content, Grain Size
<b>Sample Description:</b>	8 Soil Sample(s)

Parameter	20-5476-1	20-5476-2	20-5476-3	20-5476-4	20-5476-5	20-5476-6
	BH201 6.05-6.50m	BH201 7.55-8.05m	BH201 9.15-9.55m	BH201 10.60-11.05m	BH203 4.55-5.00m	BH203 6.05-6.50m
<b>Moisture Content (%)</b>	10	13	12	7.7	9.6	11

Parameter	20-5476-7	20-5476-8				
	BH203 7.55-8.05m	BH203 9.15-9.55m				
<b>Moisture Content (%)</b>	9.2	9.7				

## QA/QC Report

Parameter	Blank	RL	LCS	AR	Duplicate	AR
			<b>Recovery (%)</b>		<b>RPD (%)</b>	
<b>Moisture Content (%)</b>	<0.1	0.1	100	70-130	11	0-20

**LEGEND:**

- RL - Reporting Limit
- LCS - Laboratory Control Sample
- AR - Acceptable Range
- RPD - Relative Percent Difference

## Certificate of Analysis

<b>Analysis Requested:</b>	pH, Sulphate, Chloride, Moisture Content, Grain Size
<b>Sample Description:</b>	8 Soil Sample(s)

Parameter	20-5476-1 BH201 6.05-6.50m	20-5476-2 BH201 7.55-8.05m	20-5476-3 BH201 9.15-9.55m	20-5476-4 BH201 10.60-11.05m	20-5476-5 BH203 4.55-5.00m	20-5476-6 BH203 6.05-6.50m
<b>Grain Size (%)</b>						
>19mm	0.0	0.0	0.0	0.0	0.0	0.0
9.5mm-19mm	3.0	4.2	1.7	3.5	0.0	0.0
4.75mm-9.5mm	2.6	3.4	5.3	7.1	2.6	3.7
1.18m-4.75mmm	6.4	9.6	8.4	14.1	7.3	9.9
300um-1.18mm	7.4	10.1	7.6	5.3	9.7	10.8
75um-300um	18.1	9.9	13.6	8.1	22.9	17.1
<75um	62.4	62.8	63.5	62.0	57.5	58.4
<b>Clay &amp; Silt</b>	<b>62</b>	<b>63</b>	<b>63</b>	<b>62</b>	<b>58</b>	<b>58</b>
<b>Sand</b>	<b>32</b>	<b>30</b>	<b>30</b>	<b>27</b>	<b>40</b>	<b>38</b>
<b>Gravel</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>11</b>	<b>3</b>	<b>4</b>

Parameter	20-5476-7 BH203 7.55-8.05m	20-5476-8 BH203 9.15-9.55m				
<b>Grain Size (%)</b>						
>19mm	0.0	0.0				
9.5mm-19mm	2.0	1.2				
4.75mm-9.5mm	3.8	3.6				
1.18m-4.75mmm	7.3	6.5				
300um-1.18mm	8.2	5.6				
75um-300um	16.5	13.4				
<75um	62.2	69.7				
<b>Clay &amp; Silt</b>	<b>62</b>	<b>70</b>				
<b>Sand</b>	<b>32</b>	<b>26</b>				
<b>Gravel</b>	<b>6</b>	<b>5</b>				



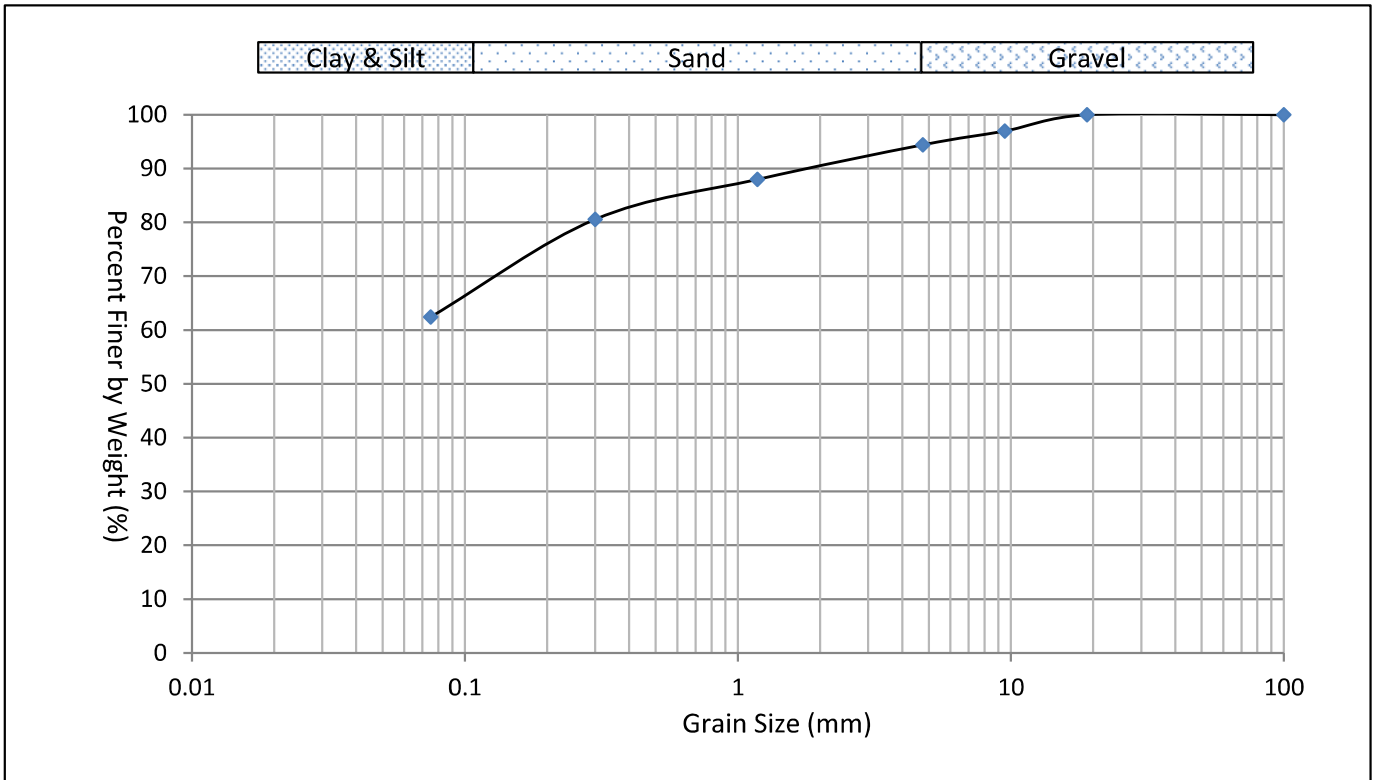
# Grain Size Distribution

Sample ID: 20-5476-1      BH201      6.05-6.50m

Clay & Silt: 62%

Sand: 32%

Gravel: 6%



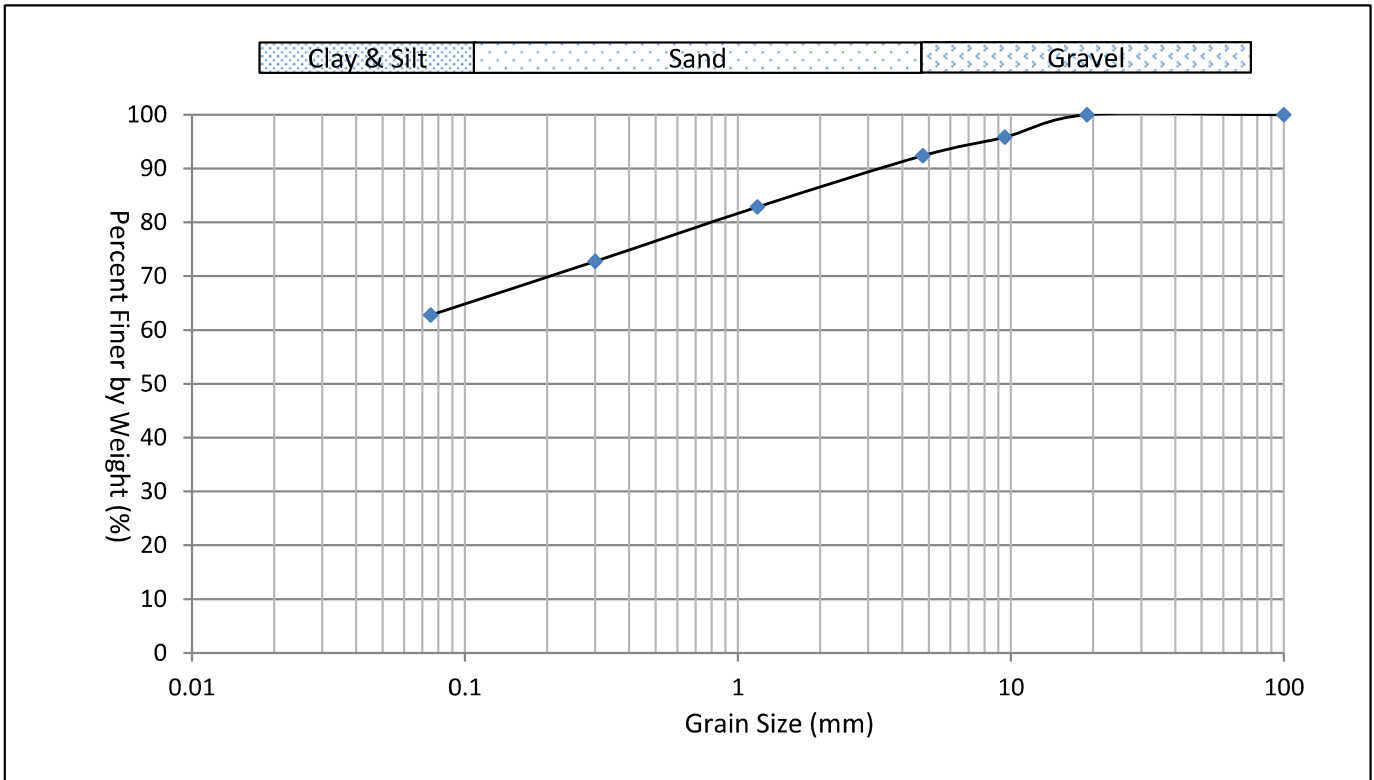
# Grain Size Distribution

Sample ID: 20-5476-2      BH201      7.55-8.05m

Clay & Silt: 63%

Sand: 30%

Gravel: 8%



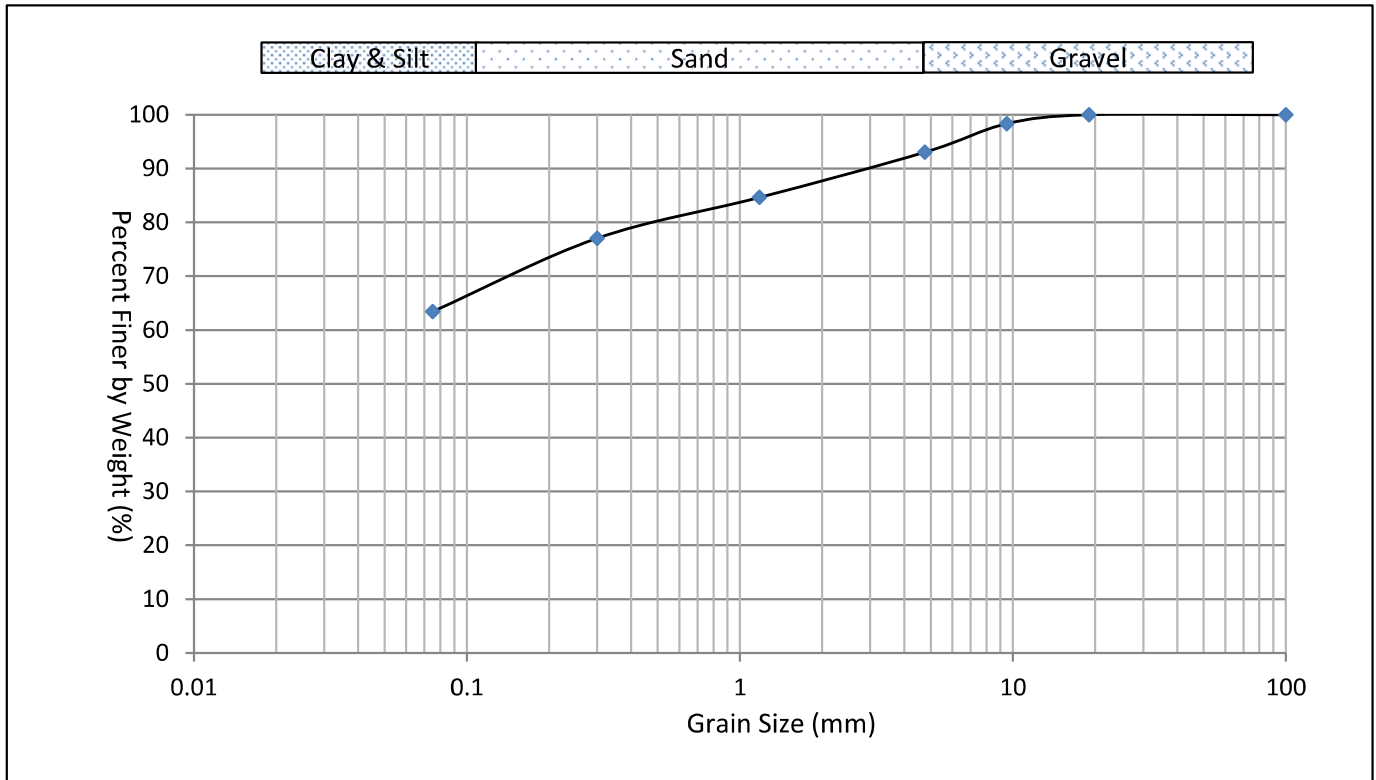
# Grain Size Distribution

Sample ID: 20-5476-3      BH201      9.15-9.55m

Clay & Silt: 63%

Sand: 30%

Gravel: 7%



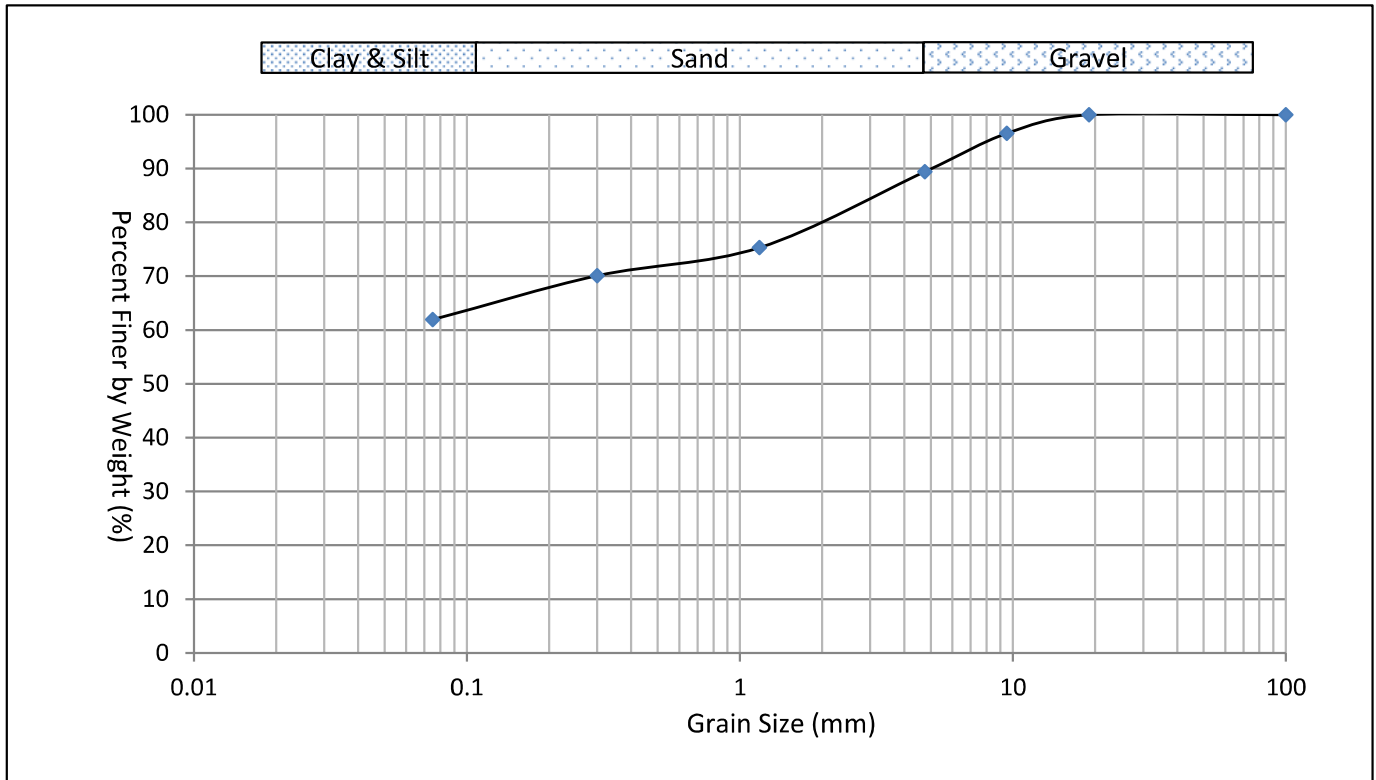
# Grain Size Distribution

Sample ID: 20-5476-4      BH201      10.60-11.05m

Clay & Silt: 62%

Sand: 27%

Gravel: 11%



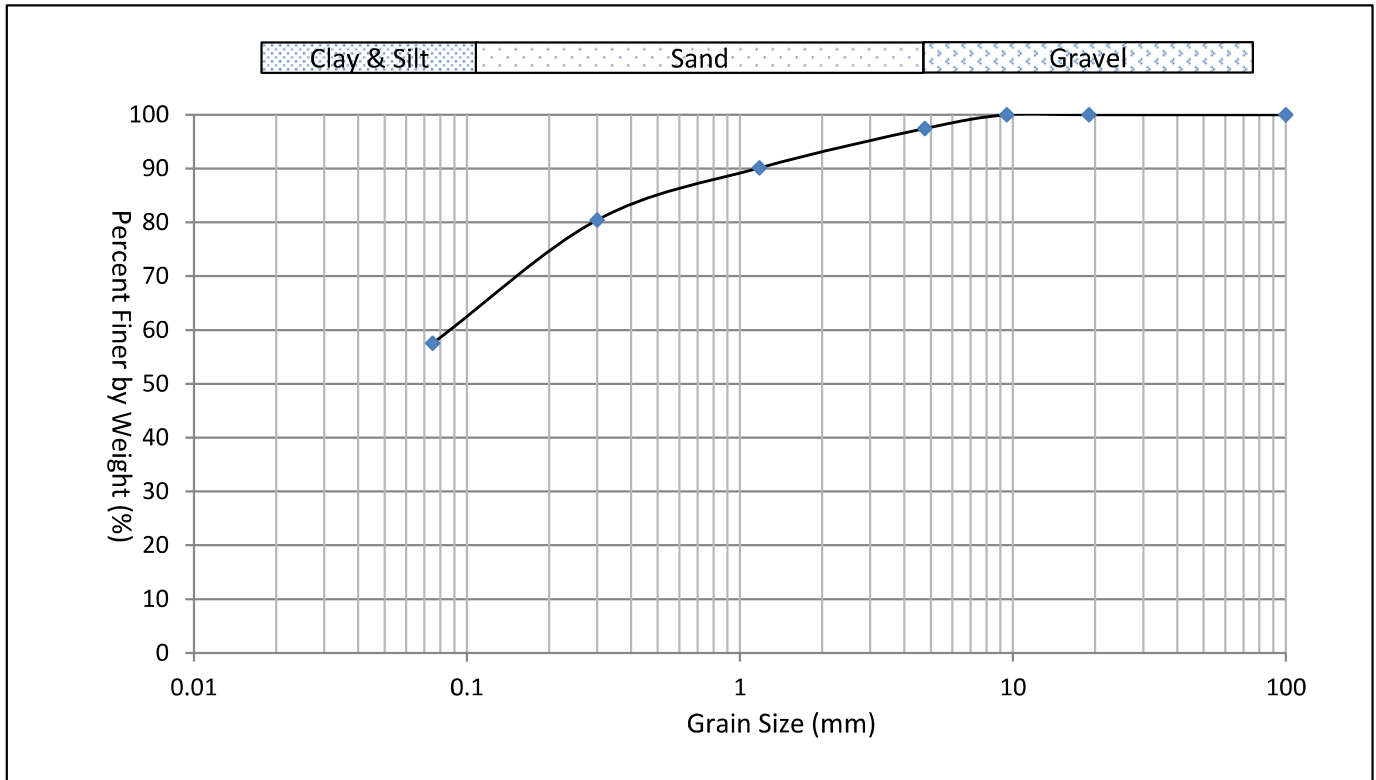
# Grain Size Distribution

Sample ID: 20-5476-5      BH203      4.55-5.00m

Clay & Silt: 58%

Sand: 40%

Gravel: 3%



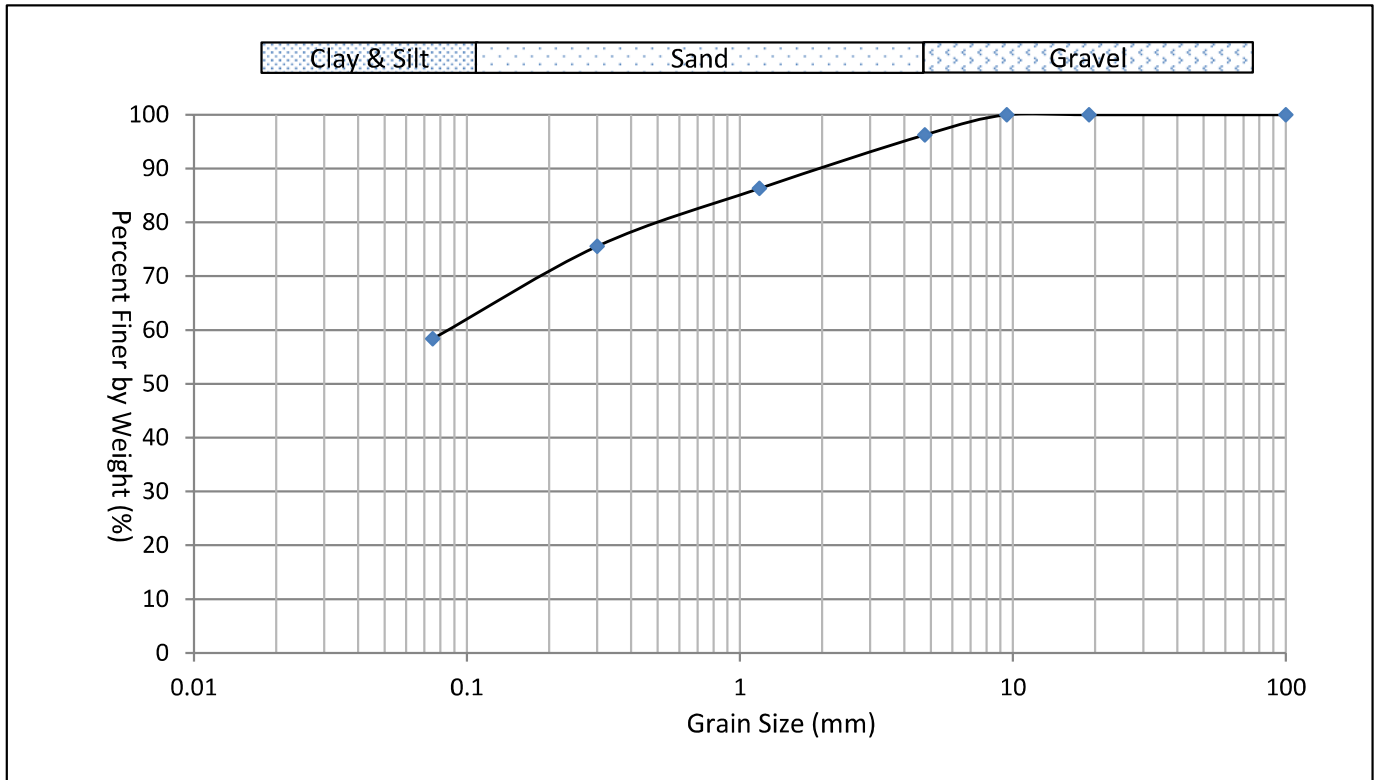
# Grain Size Distribution

Sample ID: 20-5476-6      BH203      6.05-6.50m

Clay & Silt: 58%

Sand: 38%

Gravel: 4%





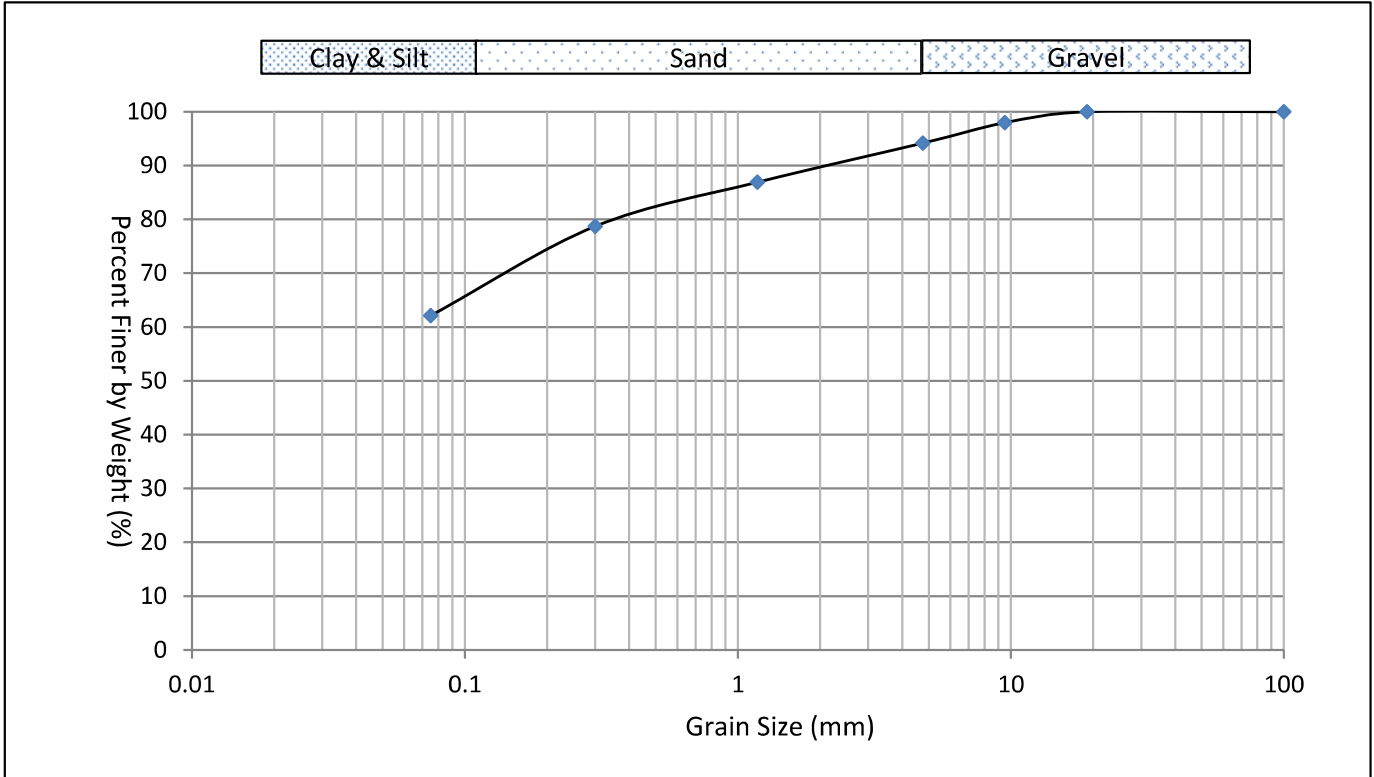
# Grain Size Distribution

Sample ID: 20-5476-7      BH203      7.55-8.05m

Clay & Silt: 62%

Sand: 32%

Gravel: 6%



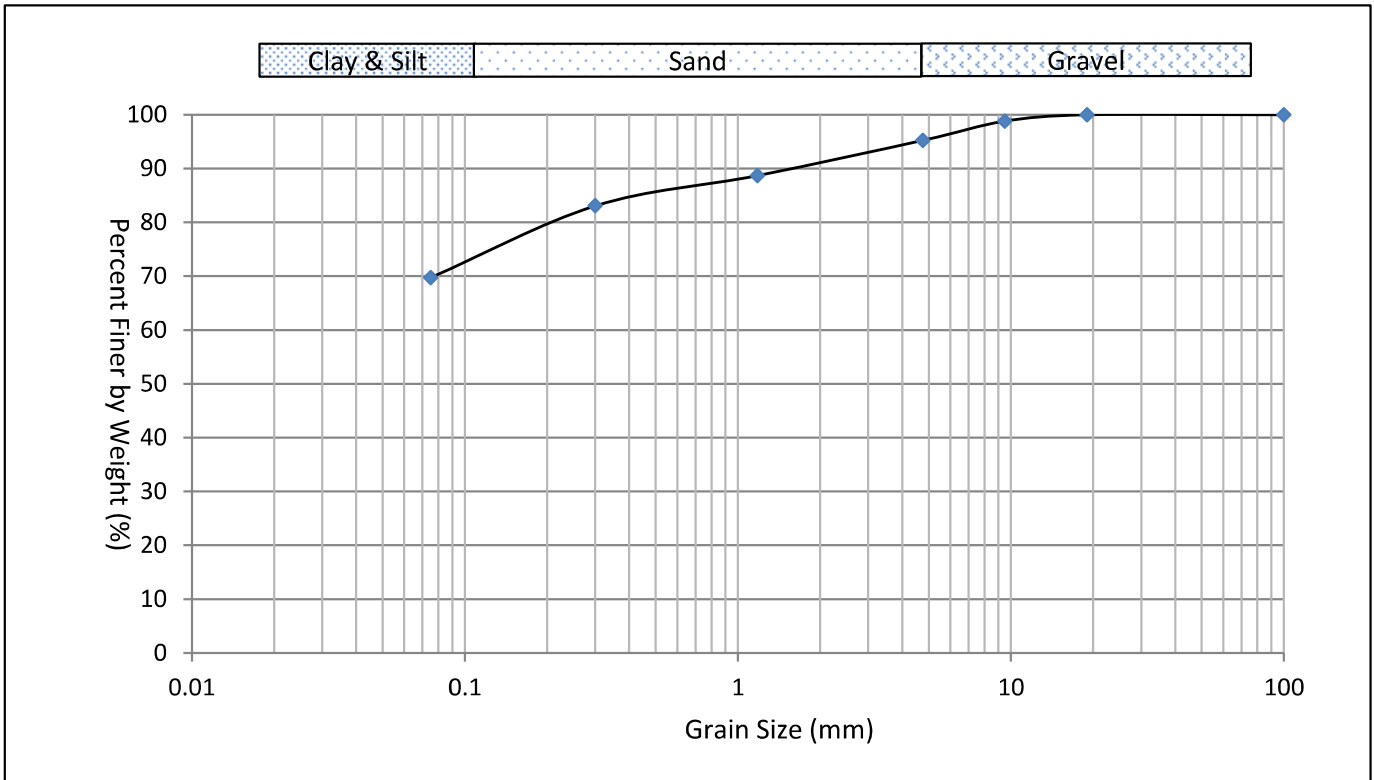
# Grain Size Distribution

Sample ID: 20-5476-8      BH203      9.15-9.55m

Clay & Silt: 70%

Sand: 26%

Gravel: 5%



## **APPENDIX D – SEWER BYLAWS RESULTS**






FISHER ENVIRONMENTAL  
ATTN: CLIVE WIGGAN  
15-400 ESNA PARK DRIVE  
MARKHAM ON -

Date Received: 18-SEP-20  
Report Date: 24-SEP-20 14:58 (MT)  
Version: FINAL

Client Phone: 905-475-7755

## Certificate of Analysis

Lab Work Order #: L2505230  
Project P.O. #: NOT SUBMITTED  
Job Reference: 20-10463  
C of C Numbers: 17-797641  
Legal Site Desc:

  
\_\_\_\_\_  
Emily Hansen  
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 95 West Beaver Creek Road, Unit 1, Richmond Hill, ON L4B 1H2 Canada | Phone: +1 905 881 9887 | Fax: +1 905 881 8062  
ALS CANADA LTD Part of the ALS Group An ALS Limited Company

## Summary of Guideline Exceedances

Guideline		Grouping	Analyte	Result	Guideline Limit	Unit
ALS ID	Client ID					
<b>Ontario Reg. Mun. of Peel Sanitary Bylaw #53-2010 (APR. 2011) - Reg. Mun. of Peel Sanitary by-law #53-2010</b>						
(No parameter exceedances)						
<b>Ontario Reg. Mun. of Peel Sanitary Bylaw #53-2010 (APR. 2011) - Peel Storm Sewer By-Law #53-201- (APR. 2011)</b>						
L2505230-1	MW3	Physical Tests	Total Suspended Solids	167	15	mg/L
		Total Metals	Manganese (Mn)-Total	0.511	0.05	mg/L

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Physical Tests - WATER

**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
pH	pH units	5.5-10	6-9	7.34
Total Suspended Solids	mg/L	350	15	167

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.




## Anions and Nutrients - WATER


**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
Fluoride (F)	mg/L	10	-	0.12 <sup>DLDS</sup>
Total Kjeldahl Nitrogen	mg/L	100	1	0.47
Phosphorus, Total	mg/L	10	0.4	0.154
Sulfate (SO4)	mg/L	1500	-	53.3 <sup>DLDS</sup>

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

 Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

 Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.


## Cyanides - WATER


**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
Cyanide, Total	mg/L	2	0.02	<0.0020

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

 Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

 Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Bacteriological Tests - WATER

**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	0
E. Coli	CFU/100m L	-	200	0
Fecal Coliforms	CFU/100m L	-	0	0

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Total Metals - WATER

		Lab ID	L2505230-1	
		Sample Date	17-SEP-20	
		Sample ID	MW3	
Analyte	Unit	Guide Limits		
		#1	#2	
Aluminum (Al)-Total	mg/L	50	-	1.56 <sup>DLHC</sup>
Antimony (Sb)-Total	mg/L	5	-	<0.0010 <sup>DLHC</sup>
Arsenic (As)-Total	mg/L	1	0.02	0.0029 <sup>DLHC</sup>
Cadmium (Cd)-Total	mg/L	0.7	0.008	0.000054 <sup>DLHC</sup>
Chromium (Cr)-Total	mg/L	5	0.08	<0.0050 <sup>DLHC</sup>
Cobalt (Co)-Total	mg/L	5	-	0.0032 <sup>DLHC</sup>
Copper (Cu)-Total	mg/L	3	0.05	0.0161 <sup>DLHC</sup>
Lead (Pb)-Total	mg/L	3	0.120	0.0036 <sup>DLHC</sup>
Manganese (Mn)-Total	mg/L	5	0.05	0.511 <sup>DLHC</sup>
Mercury (Hg)-Total	mg/L	0.01	0.0004	0.0000151
Molybdenum (Mo)-Total	mg/L	5	-	0.00189 <sup>DLHC</sup>
Nickel (Ni)-Total	mg/L	3	0.08	0.0113 <sup>DLHC</sup>
Selenium (Se)-Total	mg/L	1	0.02	<0.00050 <sup>DLHC</sup>
Silver (Ag)-Total	mg/L	5	0.12	<0.00050 <sup>DLHC</sup>
Tin (Sn)-Total	mg/L	5	-	0.0052 <sup>DLHC</sup>
Titanium (Ti)-Total	mg/L	5	-	<0.030 <sup>DLUI</sup>
Zinc (Zn)-Total	mg/L	3	0.04	<0.030 <sup>DLHC</sup>

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Aggregate Organics - WATER

**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
BOD Carbonaceous	mg/L	300	15	<3.0 <sup>BODL</sup>
Oil and Grease, Total	mg/L	-	-	<5.0
Animal/Veg Oil & Grease	mg/L	150	-	<5.0
Mineral Oil and Grease	mg/L	15	-	<2.5
Phenols (4AAP)	mg/L	1	0.008	0.0017

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Volatile Organic Compounds - WATER

		Lab ID	L2505230-1		
		Sample Date	17-SEP-20		
		Sample ID	MW3		
Analyte	Unit	Guide Limits			
		#1	#2		
Acetone	ug/L	-	-	<20	
Benzene	ug/L	10	2	<0.50	
Bromodichloromethane	ug/L	-	-	<1.0	
Bromoform	ug/L	-	-	<1.0	
Bromomethane	ug/L	-	-	<0.50	
Carbon Disulfide	ug/L	-	-	<1.0	
Carbon tetrachloride	ug/L	-	-	<0.20	
Chlorobenzene	ug/L	-	-	<0.50	
Dibromochloromethane	ug/L	-	-	<1.0	
Chloroethane	ug/L	-	-	<1.0	
Chloroform	ug/L	40	2	<1.0	
Chloromethane	ug/L	-	-	<1.0	
1,2-Dibromoethane	ug/L	-	-	<0.20	
1,2-Dichlorobenzene	ug/L	50	5.6	<0.50	
1,3-Dichlorobenzene	ug/L	-	-	<0.50	
1,4-Dichlorobenzene	ug/L	80	6.8	<0.50	
Dichlorodifluoromethane	ug/L	-	-	<1.0	
1,1-Dichloroethane	ug/L	-	-	<0.50	
1,2-Dichloroethane	ug/L	-	-	<0.50	
1,1-Dichloroethylene	ug/L	-	-	<0.50	
cis-1,2-Dichloroethylene	ug/L	4000	5.6	<0.50	
trans-1,2-Dichloroethylene	ug/L	-	-	<0.50	
Dichloromethane	ug/L	2000	5.2	<2.0	
1,2-Dichloropropane	ug/L	-	-	<0.50	
cis-1,3-Dichloropropene	ug/L	-	-	<0.30	
trans-1,3-Dichloropropene	ug/L	140	5.6	<0.30	
Ethylbenzene	ug/L	160	2	<0.50	
n-Hexane	ug/L	-	-	<0.50	
2-Hexanone	ug/L	-	-	<20	
Methyl Ethyl Ketone	ug/L	8000	-	<20	

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**  
**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.



## Volatile Organic Compounds - WATER

		Lab ID	L2505230-1		
		Sample Date	17-SEP-20		
		Sample ID	MW3		
Analyte	Unit	Guide Limits			
		#1	#2		
Methyl Isobutyl Ketone	ug/L	-	-	<20	
MTBE	ug/L	-	-	<0.50	
Styrene	ug/L	200	-	<0.50	
1,1,1,2-Tetrachloroethane	ug/L	-	-	<0.50	
1,1,2,2-Tetrachloroethane	ug/L	1400	17	<0.50	
Tetrachloroethylene	ug/L	1000	4.4	<0.50	
Toluene	ug/L	270	2	<0.40	
1,1,1-Trichloroethane	ug/L	-	-	<0.50	
1,1,2-Trichloroethane	ug/L	-	-	<0.50	
Trichloroethylene	ug/L	400	8	<0.50	
Trichlorofluoromethane	ug/L	-	-	<1.0	
Vinyl chloride	ug/L	-	-	<0.50	
o-Xylene	ug/L	-	-	<0.30	
m+p-Xylenes	ug/L	-	-	<0.40	
Xylenes (Total)	ug/L	1400	4.4	<0.50	
Surrogate: 4-Bromofluorobenzene	%	-	-	84.3	
Surrogate: 1,4-Difluorobenzene	%	-	-	97.0	

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Phthalate Esters - WATER

**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
Bis(2-ethylhexyl)phthalate	ug/L	12	8.8	<2.0
Surrogate: 2-fluorobiphenyl	%	-	-	89.0
Surrogate: p-Terphenyl d14	%	-	-	110.2

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Semi-Volatile Organics - WATER

**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
Di-n-butylphthalate	ug/L	80	15	<1.0
Surrogate: 2-Fluorobiphenyl	%	-	-	89.0
Surrogate: p-Terphenyl d14	%	-	-	110.2

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Polychlorinated Biphenyls - WATER

**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	125.9
Total PCBs	ug/L	1	0.4	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	105.3

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

## Organic Parameters - WATER

**Lab ID** L2505230-1  
**Sample Date** 17-SEP-20  
**Sample ID** MW3

Analyte	Unit	Guide Limits		
		#1	#2	
Nonylphenol	ug/L	20	-	4.6
Nonylphenol Diethoxylates	ug/L	-	-	<0.10
Total Nonylphenol Ethoxylates	ug/L	200	-	<2.0
Nonylphenol Monoethoxylates	ug/L	-	-	<2.0

**Guide Limit #1: Reg. Mun. of Peel Sanitary by-law #53-2010**

**Guide Limit #2: Peel Storm Sewer By-Law #53-201- (APR. 2011)**

- Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.
- Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

\* Please refer to the Reference Information section for an explanation of any qualifiers noted.

# Reference Information

**Qualifiers for Individual Parameters Listed:**

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLUI	Detection Limit Raised: Unknown Interference generated an apparent false positive test result.
BODL	Limit of Reporting for BOD was increased to account for the largest volume of sample tested.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

**Methods Listed (if applicable):**

ALS Test Code	Matrix	Test Description	Method Reference**
<b>625-BIS-2-PHTH-WT</b>	Water	Bis(2-ethylhexyl)phthalate	SW846 8270
Aqueous samples are extracted and extracts are analyzed on GC/MSD.			
<b>625-DNB-PHTH-WT</b>	Water	Di-n-Butyl Phthalate	SW846 8270
Aqueous samples are extracted and extracts are analyzed on GC/MSD.			
<b>BOD-C-WT</b>	Water	BOD Carbonaceous	APHA 5210 B (CBOD)
This analysis is carried out using procedures adapted from APHA Method 5210B - "Biochemical Oxygen Demand (BOD)". All forms of biochemical oxygen demand (BOD) are determined by diluting and incubating a sample for a specified time period, and measuring the oxygen depletion using a dissolved oxygen meter. Dissolved BOD (SOLUBLE) is determined by filtering the sample through a glass fibre filter prior to dilution. Carbonaceous BOD (CBOD) is determined by adding a nitrification inhibitor to the diluted sample prior to incubation.			
<b>CN-TOT-WT</b>	Water	Cyanide, Total	ISO 14403-2
Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.			
When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference			
<b>EC-SCREEN-WT</b>	Water	Conductivity Screen (Internal Use Only)	APHA 2510
Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.			
<b>EC-WW-MF-WT</b>	Water	E. Coli	SM 9222D
A 100 mL volume of sample is filtered through a membrane, the membrane is placed on mFC-BCIG agar and incubated at 44.5 – 0.2 °C for 24 – 2 h. Method ID: WT-TM-1200			
<b>F-IC-N-WT</b>	Water	Fluoride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
<b>FC-WW-MF-WT</b>	Water	Fecal Coliforms	APHA 9223B
<b>FC-WW-MF-WT</b>	Water	Fecal Coliforms	SM 9222D
<b>HG-T-CVAA-WT</b>	Water	Total Mercury in Water by CVAAS	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.			
<b>MET-T-CCMS-WT</b>	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)

# Reference Information

**Methods Listed (if applicable):**

ALS Test Code	Matrix	Test Description	Method Reference**
		Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.	
		Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.	
		Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).	
<b>NP,NPE-LCMS-WT</b>	Water	Nonylphenols and Ethoxylates by LC/MS-MS	J. Chrom A849 (1999) p.467-482
		Water samples are filtered and analyzed on LCMS/MS by direct injection.	
<b>OGG-SPEC-CALC-WT</b>	Water	Speciated Oil and Grease A/V Calc	CALCULATION
		Sample is extracted with hexane, sample speciation into mineral and animal/vegetable fractions is achieved via silica gel separation and is then determined gravimetrically.	
<b>OGG-SPEC-WT</b>	Water	Speciated Oil and Grease-Gravimetric	APHA 5520 B
		The procedure involves an extraction of the entire water sample with hexane. Sample speciation into mineral and animal/vegetable fractions is achieved via silica gel separation and is then determined gravimetrically.	
<b>P-T-COL-WT</b>	Water	Total P in Water by Colour	APHA 4500-P PHOSPHORUS
		This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.	
<b>PCB-WT</b>	Water	Polychlorinated Biphenyls	EPA 8082
		PCBs are extracted from an aqueous sample at neutral pH with aliquots of dichloromethane using a modified separatory funnel technique. The extracts are analyzed by GC/MSD.	
<b>PH-WT</b>	Water	pH	APHA 4500 H-Electrode
		Water samples are analyzed directly by a calibrated pH meter.	
		Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011). Holdtime for samples under this regulation is 28 days	
<b>PHENOLS-4AAP-WT</b>	Water	Phenol (4AAP)	EPA 9066
		An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a red complex which is measured colorimetrically.	
<b>SO4-IC-N-WT</b>	Water	Sulfate in Water by IC	EPA 300.1 (mod)
		Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.	
<b>SOLIDS-TSS-WT</b>	Water	Suspended solids	APHA 2540 D-Gravimetric
		A well-mixed sample is filtered through a weighed standard glass fibre filter and the residue retained is dried in an oven at 104–1°C for a minimum of four hours or until a constant weight is achieved.	
<b>TKN-WT</b>	Water	Total Kjeldahl Nitrogen	APHA 4500-Norg D
		This analysis is carried out using procedures adapted from APHA Method 4500-Norg "Nitrogen (Organic)". Total Kjeldahl Nitrogen is determined by sample digestion at 380 Celsius with analysis using an automated colorimetric method.	
<b>VOC-ROU-HS-WT</b>	Water	Volatile Organic Compounds	SW846 8260

# Reference Information

## Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
		Aqueous samples are analyzed by headspace-GC/MS.	
<b>XYLENES-SUM-CALC-WT</b>	Water	Sum of Xylene Isomer Concentrations	CALCULATION
		Total xylenes represents the sum of o-xylene and m&p-xylene.	

\*\*ALS test methods may incorporate modifications from specified reference methods to improve performance.

## Chain of Custody Numbers:

17-797641

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

## GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.





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Client: FISHER ENVIRONMENTAL  
15-400 ESNA PARK DRIVE  
MARKHAM ON -

Contact: CLIVE WIGGAN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>625-BIS-2-PHTH-WT</b> <b>Water</b>								
<b>Batch</b>	<b>R5232134</b>							
<b>WG3408970-2</b>	<b>LCS</b>							
Bis(2-ethylhexyl)phthalate			106.9		%		50-140	22-SEP-20
<b>WG3408970-1</b>	<b>MB</b>							
Bis(2-ethylhexyl)phthalate			<2.0		ug/L		2	22-SEP-20
Surrogate: 2-fluorobiphenyl			85.2		%		40-130	22-SEP-20
Surrogate: p-Terphenyl d14			127.8		%		40-130	22-SEP-20
<b>625-DNB-PHTH-WT</b> <b>Water</b>								
<b>Batch</b>	<b>R5232134</b>							
<b>WG3408970-2</b>	<b>LCS</b>							
Di-n-butylphthalate			105.3		%		50-150	22-SEP-20
<b>WG3408970-1</b>	<b>MB</b>							
Di-n-butylphthalate			<1.0		ug/L		1	22-SEP-20
Surrogate: 2-Fluorobiphenyl			85.2		%		40-130	22-SEP-20
Surrogate: p-Terphenyl d14			127.8		%		40-130	22-SEP-20
<b>BOD-C-WT</b> <b>Water</b>								
<b>Batch</b>	<b>R5235060</b>							
<b>WG3408114-10</b>	<b>DUP</b>	<b>L2505230-1</b>						
BOD Carbonaceous		<3.0	<3.0	RPD-NA	mg/L	N/A	30	19-SEP-20
<b>WG3408114-11</b>	<b>LCS</b>							
BOD Carbonaceous			92.4		%		85-115	19-SEP-20
<b>WG3408114-9</b>	<b>MB</b>							
BOD Carbonaceous			<2.0		mg/L		2	19-SEP-20
<b>CN-TOT-WT</b> <b>Water</b>								
<b>Batch</b>	<b>R5232790</b>							
<b>WG3409956-8</b>	<b>DUP</b>	<b>WG3409956-10</b>						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	22-SEP-20
<b>WG3409956-7</b>	<b>LCS</b>							
Cyanide, Total			99.0		%		80-120	22-SEP-20
<b>WG3409956-6</b>	<b>MB</b>							
Cyanide, Total			<0.0020		mg/L		0.002	22-SEP-20
<b>WG3409956-9</b>	<b>MS</b>	<b>WG3409956-10</b>						
Cyanide, Total			98.0		%		70-130	22-SEP-20
<b>EC-WW-MF-WT</b> <b>Water</b>								
<b>Batch</b>	<b>R5231096</b>							
<b>WG3408059-1</b>	<b>MB</b>							
E. Coli			0		CFU/100mL		1	19-SEP-20



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Client: FISHER ENVIRONMENTAL  
15-400 ESNA PARK DRIVE  
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Contact: CLIVE WIGGAN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>F-IC-N-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5232117</b>							
<b>WG3408850-4</b>	<b>DUP</b>	<b>WG3408850-3</b>						
Fluoride (F)		0.085	0.085		mg/L	0.9	20	21-SEP-20
<b>WG3408850-2</b>	<b>LCS</b>							
Fluoride (F)			103.8		%		90-110	21-SEP-20
<b>WG3408850-1</b>	<b>MB</b>							
Fluoride (F)			<0.020		mg/L		0.02	21-SEP-20
<b>WG3408850-5</b>	<b>MS</b>	<b>WG3408850-3</b>						
Fluoride (F)			100.9		%		75-125	21-SEP-20
<b>FC-WW-MF-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5231098</b>							
<b>WG3408074-1</b>	<b>MB</b>							
Fecal Coliforms			0		CFU/100mL		1	19-SEP-20
<b>HG-T-CVAA-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5232105</b>							
<b>WG3408764-3</b>	<b>DUP</b>	<b>L2504415-1</b>						
Mercury (Hg)-Total		<0.0000050	<0.0000050	RPD-NA	mg/L	N/A	20	22-SEP-20
<b>WG3408764-2</b>	<b>LCS</b>							
Mercury (Hg)-Total			93.3		%		80-120	22-SEP-20
<b>WG3408764-1</b>	<b>MB</b>							
Mercury (Hg)-Total			<0.0000050		mg/L		0.000005	22-SEP-20
<b>WG3408764-4</b>	<b>MS</b>	<b>L2504415-2</b>						
Mercury (Hg)-Total			91.3		%		70-130	22-SEP-20
<b>MET-T-CCMS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5231238</b>							
<b>WG3407830-4</b>	<b>DUP</b>	<b>WG3407830-3</b>						
Aluminum (Al)-Total		0.0208	0.0211		mg/L	1.6	20	18-SEP-20
Antimony (Sb)-Total		0.00017	0.00017		mg/L	0.5	20	18-SEP-20
Arsenic (As)-Total		0.00030	0.00031		mg/L	5.6	20	18-SEP-20
Cadmium (Cd)-Total		0.0000131	0.0000099	J	mg/L	0.0000032	0.00001	18-SEP-20
Chromium (Cr)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	18-SEP-20
Cobalt (Co)-Total		0.00143	0.00143		mg/L	0.3	20	18-SEP-20
Copper (Cu)-Total		0.343	0.342		mg/L	0.3	20	18-SEP-20
Lead (Pb)-Total		0.00104	0.00105		mg/L	1.2	20	18-SEP-20
Manganese (Mn)-Total		0.00568	0.00552		mg/L	3.0	20	18-SEP-20
Molybdenum (Mo)-Total		0.000944	0.000980		mg/L	3.8	20	18-SEP-20



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Client: FISHER ENVIRONMENTAL  
15-400 ESNA PARK DRIVE  
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Contact: CLIVE WIGGAN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WT</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R5231238</b>							
<b>WG3407830-4</b>	<b>DUP</b>	<b>WG3407830-3</b>						
Nickel (Ni)-Total		0.00519	0.00516		mg/L	0.6	20	18-SEP-20
Selenium (Se)-Total		0.000128	0.000119		mg/L	7.3	20	18-SEP-20
Silver (Ag)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	18-SEP-20
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	18-SEP-20
Titanium (Ti)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	18-SEP-20
Zinc (Zn)-Total		0.0764	0.0750		mg/L	1.9	20	18-SEP-20
<b>WG3407830-2</b>	<b>LCS</b>							
Aluminum (Al)-Total			110.0		%		80-120	18-SEP-20
Antimony (Sb)-Total			101.9		%		80-120	18-SEP-20
Arsenic (As)-Total			100.5		%		80-120	18-SEP-20
Cadmium (Cd)-Total			103.6		%		80-120	18-SEP-20
Chromium (Cr)-Total			102.8		%		80-120	18-SEP-20
Cobalt (Co)-Total			102.1		%		80-120	18-SEP-20
Copper (Cu)-Total			99.8		%		80-120	18-SEP-20
Lead (Pb)-Total			99.3		%		80-120	18-SEP-20
Manganese (Mn)-Total			102.8		%		80-120	18-SEP-20
Molybdenum (Mo)-Total			99.3		%		80-120	18-SEP-20
Nickel (Ni)-Total			101.5		%		80-120	18-SEP-20
Selenium (Se)-Total			99.0		%		80-120	18-SEP-20
Silver (Ag)-Total			96.5		%		80-120	18-SEP-20
Tin (Sn)-Total			99.4		%		80-120	18-SEP-20
Titanium (Ti)-Total			98.7		%		80-120	18-SEP-20
Zinc (Zn)-Total			102.8		%		80-120	18-SEP-20
<b>WG3407830-1</b>	<b>MB</b>							
Aluminum (Al)-Total			<0.0050		mg/L		0.005	18-SEP-20
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Arsenic (As)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Cadmium (Cd)-Total			<0.0000050		mg/L		0.000005	18-SEP-20
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Copper (Cu)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Lead (Pb)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Manganese (Mn)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	18-SEP-20



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15-400 ESNA PARK DRIVE  
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Contact: CLIVE WIGGAN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>MET-T-CCMS-WT</b>								
	Water							
<b>Batch</b>	<b>R5231238</b>							
<b>WG3407830-1</b>	<b>MB</b>							
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	18-SEP-20
Selenium (Se)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Silver (Ag)-Total			<0.000050		mg/L		0.00005	18-SEP-20
Tin (Sn)-Total			<0.00010		mg/L		0.0001	18-SEP-20
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	18-SEP-20
Zinc (Zn)-Total			<0.0030		mg/L		0.003	18-SEP-20
<b>WG3407830-5</b>	<b>MS</b>	<b>WG3407830-3</b>						
Aluminum (Al)-Total			95.3		%		70-130	18-SEP-20
Antimony (Sb)-Total			96.4		%		70-130	18-SEP-20
Arsenic (As)-Total			98.1		%		70-130	18-SEP-20
Cadmium (Cd)-Total			98.9		%		70-130	18-SEP-20
Chromium (Cr)-Total			97.3		%		70-130	18-SEP-20
Cobalt (Co)-Total			95.6		%		70-130	18-SEP-20
Copper (Cu)-Total			N/A	MS-B	%		-	18-SEP-20
Lead (Pb)-Total			93.2		%		70-130	18-SEP-20
Manganese (Mn)-Total			93.9		%		70-130	18-SEP-20
Molybdenum (Mo)-Total			95.0		%		70-130	18-SEP-20
Nickel (Ni)-Total			93.5		%		70-130	18-SEP-20
Selenium (Se)-Total			98.3		%		70-130	18-SEP-20
Silver (Ag)-Total			88.4		%		70-130	18-SEP-20
Tin (Sn)-Total			94.0		%		70-130	18-SEP-20
Titanium (Ti)-Total			95.0		%		70-130	18-SEP-20
Zinc (Zn)-Total			N/A	MS-B	%		-	18-SEP-20
<b>NP,NPE-LCMS-WT</b>								
	Water							
<b>Batch</b>	<b>R5233235</b>							
<b>WG3408569-3</b>	<b>DUP</b>	<b>L2505230-1</b>						
Nonylphenol		4.6	3.3	J	ug/L	1.3	2	21-SEP-20
Nonylphenol Monoethoxylates		<2.0	<2.0	RPD-NA	ug/L	N/A	30	21-SEP-20
Nonylphenol Diethoxylates		<0.10	<0.10	RPD-NA	ug/L	N/A	30	21-SEP-20
<b>WG3408569-2</b>	<b>LCS</b>							
Nonylphenol			82.1		%		75-125	21-SEP-20
Nonylphenol Monoethoxylates			109.0		%		75-125	21-SEP-20
Nonylphenol Diethoxylates			92.8		%		75-125	21-SEP-20
<b>WG3408569-1</b>	<b>MB</b>							



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Contact: CLIVE WIGGAN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>NP,NPE-LCMS-WT</b>								
	Water							
<b>Batch</b>	<b>R5233235</b>							
<b>WG3408569-1</b>	<b>MB</b>							
Nonylphenol			<1.0		ug/L		1	21-SEP-20
Nonylphenol Monoethoxylates			<2.0		ug/L		2	21-SEP-20
Nonylphenol Diethoxylates			<0.10		ug/L		0.1	21-SEP-20
<b>WG3408569-4</b>	<b>MS</b>	<b>L2505230-1</b>						
Nonylphenol			116.1		%		50-150	21-SEP-20
Nonylphenol Monoethoxylates			119.2		%		50-150	21-SEP-20
Nonylphenol Diethoxylates			98.5		%		50-150	21-SEP-20
<b>OGG-SPEC-WT</b>								
	Water							
<b>Batch</b>	<b>R5231535</b>							
<b>WG3408467-2</b>	<b>LCS</b>							
Oil and Grease, Total			97.4		%		70-130	21-SEP-20
Mineral Oil and Grease			90.7		%		70-130	21-SEP-20
<b>WG3408467-1</b>	<b>MB</b>							
Oil and Grease, Total			<5.0		mg/L		5	21-SEP-20
Mineral Oil and Grease			<2.5		mg/L		2.5	21-SEP-20
<b>P-T-COL-WT</b>								
	Water							
<b>Batch</b>	<b>R5232169</b>							
<b>WG3407969-3</b>	<b>DUP</b>	<b>L2505394-1</b>						
Phosphorus, Total		0.0238	0.0228		mg/L	4.6	20	22-SEP-20
<b>WG3407969-2</b>	<b>LCS</b>							
Phosphorus, Total			98.4		%		80-120	22-SEP-20
<b>WG3407969-1</b>	<b>MB</b>							
Phosphorus, Total			<0.0030		mg/L		0.003	22-SEP-20
<b>WG3407969-4</b>	<b>MS</b>	<b>L2505394-1</b>						
Phosphorus, Total			86.6		%		70-130	22-SEP-20
<b>PCB-WT</b>								
	Water							
<b>Batch</b>	<b>R5232508</b>							
<b>WG3409114-2</b>	<b>LCS</b>							
Aroclor 1242			113.7		%		65-130	22-SEP-20
Aroclor 1248			94.9		%		65-130	22-SEP-20
Aroclor 1254			113.9		%		65-130	22-SEP-20
Aroclor 1260			116.6		%		65-130	22-SEP-20
<b>WG3409114-1</b>	<b>MB</b>							
Aroclor 1242			<0.020		ug/L		0.02	22-SEP-20
Aroclor 1248			<0.020		ug/L		0.02	22-SEP-20



**Environmental**

## Quality Control Report

Workorder: L2505230

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Client: FISHER ENVIRONMENTAL  
 15-400 ESNA PARK DRIVE  
 MARKHAM ON -

Contact: CLIVE WIGGAN

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>PCB-WT</b>		<b>Water</b>						
<b>Batch R5232508</b>								
<b>WG3409114-1 MB</b>								
Aroclor 1254			<0.020		ug/L		0.02	22-SEP-20
Aroclor 1260			<0.020		ug/L		0.02	22-SEP-20
Surrogate: Decachlorobiphenyl			145.2		%		50-150	22-SEP-20
Surrogate: Tetrachloro-m-xylene			111.0		%		50-150	22-SEP-20
<b>PH-WT</b>		<b>Water</b>						
<b>Batch R5231819</b>								
<b>WG3409260-3 DUP</b>		<b>WG3409260-2</b>						
pH		6.88	6.90	J	pH units	0.02	0.2	21-SEP-20
<b>WG3409260-1 LCS</b>								
pH			6.96		pH units		6.9-7.1	21-SEP-20
<b>PHENOLS-4AAP-WT</b>		<b>Water</b>						
<b>Batch R5231444</b>								
<b>WG3407866-3 DUP</b>		<b>L2503752-2</b>						
Phenols (4AAP)		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	18-SEP-20
<b>WG3407866-2 LCS</b>								
Phenols (4AAP)			101.1		%		85-115	18-SEP-20
<b>WG3407866-1 MB</b>								
Phenols (4AAP)			<0.0010		mg/L		0.001	18-SEP-20
<b>WG3407866-4 MS</b>		<b>L2503752-2</b>						
Phenols (4AAP)			100.8		%		75-125	18-SEP-20
<b>SO4-IC-N-WT</b>		<b>Water</b>						
<b>Batch R5232117</b>								
<b>WG3408850-4 DUP</b>		<b>WG3408850-3</b>						
Sulfate (SO4)		14.3	14.3		mg/L	0.0	20	21-SEP-20
<b>WG3408850-2 LCS</b>								
Sulfate (SO4)			104.4		%		90-110	21-SEP-20
<b>WG3408850-1 MB</b>								
Sulfate (SO4)			<0.30		mg/L		0.3	21-SEP-20
<b>WG3408850-5 MS</b>		<b>WG3408850-3</b>						
Sulfate (SO4)			103.6		%		75-125	21-SEP-20
<b>SOLIDS-TSS-WT</b>		<b>Water</b>						
<b>Batch R5233062</b>								
<b>WG3409861-3 DUP</b>		<b>L2505046-1</b>						
Total Suspended Solids		1010	1020		mg/L	0.9	20	23-SEP-20
<b>WG3409861-2 LCS</b>								
Total Suspended Solids			104.7		%		85-115	23-SEP-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>SOLIDS-TSS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5233062</b>							
<b>WG3409861-1 MB</b>								
Total Suspended Solids			<3.0		mg/L		3	23-SEP-20
<b>TKN-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5231795</b>							
<b>WG3407968-3 DUP</b>		<b>WG3407968-5</b>						
Total Kjeldahl Nitrogen		1.31	1.28		mg/L	2.3	20	21-SEP-20
<b>WG3407968-2 LCS</b>								
Total Kjeldahl Nitrogen			107.5		%		75-125	21-SEP-20
<b>WG3407968-1 MB</b>								
Total Kjeldahl Nitrogen			<0.15		mg/L		0.15	21-SEP-20
<b>WG3407968-4 MS</b>		<b>WG3407968-5</b>						
Total Kjeldahl Nitrogen			117.8		%		70-130	21-SEP-20
<b>VOC-ROU-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5232750</b>							
<b>WG3409754-4 DUP</b>		<b>WG3409754-3</b>						
1,1,1,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,1,2,2-Tetrachloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	23-SEP-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
2-Hexanone		<20	<20	RPD-NA	ug/L	N/A	30	23-SEP-20
Acetone		<20	<20	RPD-NA	ug/L	N/A	30	23-SEP-20
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
Bromodichloromethane		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Bromoform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
Carbon Disulfide		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-ROU-HS-WT</b>								
	Water							
<b>Batch</b>	<b>R5232750</b>							
<b>WG3409754-4</b>	<b>DUP</b>	<b>WG3409754-3</b>						
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	23-SEP-20
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
Chloroethane		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Chloromethane		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	23-SEP-20
Dibromochloromethane		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Dichlorodifluoromethane		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Dichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	23-SEP-20
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	23-SEP-20
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	23-SEP-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
MTBE		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	23-SEP-20
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
Toluene		<0.40	<0.40	RPD-NA	ug/L	N/A	30	23-SEP-20
trans-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
trans-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	23-SEP-20
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
Trichlorofluoromethane		<1.0	<1.0	RPD-NA	ug/L	N/A	30	23-SEP-20
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	23-SEP-20
<b>WG3409754-1</b>	<b>LCS</b>							
1,1,1,2-Tetrachloroethane			107.5		%		70-130	23-SEP-20
1,1,2,2-Tetrachloroethane			101.4		%		70-130	23-SEP-20
1,1,1-Trichloroethane			113.0		%		70-130	23-SEP-20
1,1,2-Trichloroethane			109.5		%		70-130	23-SEP-20
1,2-Dibromoethane			107.9		%		70-130	23-SEP-20
1,1-Dichloroethane			114.3		%		70-130	23-SEP-20
1,1-Dichloroethylene			106.7		%		70-130	23-SEP-20





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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-ROU-HS-WT</b>		<b>Water</b>						
<b>Batch</b>	<b>R5232750</b>							
<b>WG3409754-1</b>	<b>LCS</b>							
1,2-Dichlorobenzene			111.4		%		70-130	23-SEP-20
1,2-Dichloroethane			112.4		%		70-130	23-SEP-20
1,2-Dichloropropane			111.2		%		70-130	23-SEP-20
1,3-Dichlorobenzene			113.9		%		70-130	23-SEP-20
1,4-Dichlorobenzene			110.8		%		70-130	23-SEP-20
2-Hexanone			89.0		%		60-140	23-SEP-20
Acetone			115.9		%		60-140	23-SEP-20
Benzene			114.0		%		70-130	23-SEP-20
Bromodichloromethane			121.9		%		70-130	23-SEP-20
Bromoform			107.6		%		70-130	23-SEP-20
Bromomethane			139.2		%		60-140	23-SEP-20
Carbon Disulfide			113.9		%		70-130	23-SEP-20
Carbon tetrachloride			114.1		%		70-130	23-SEP-20
Chlorobenzene			113.1		%		70-130	23-SEP-20
Chloroethane			114.1		%		70-130	23-SEP-20
Chloroform			117.0		%		70-130	23-SEP-20
Chloromethane			125.1		%		60-140	23-SEP-20
cis-1,2-Dichloroethylene			107.4		%		70-130	23-SEP-20
cis-1,3-Dichloropropene			112.0		%		70-130	23-SEP-20
Dibromochloromethane			106.8		%		70-130	23-SEP-20
Dichlorodifluoromethane			90.7		%		50-140	23-SEP-20
Dichloromethane			116.8		%		70-130	23-SEP-20
Ethylbenzene			104.2		%		70-130	23-SEP-20
m+p-Xylenes			111.9		%		70-130	23-SEP-20
Methyl Ethyl Ketone			103.4		%		60-140	23-SEP-20
Methyl Isobutyl Ketone			90.8		%		50-150	23-SEP-20
n-Hexane			108.7		%		70-130	23-SEP-20
MTBE			112.1		%		70-130	23-SEP-20
o-Xylene			110.9		%		70-130	23-SEP-20
Styrene			101.8		%		70-130	23-SEP-20
Tetrachloroethylene			113.3		%		70-130	23-SEP-20
Toluene			104.7		%		70-130	23-SEP-20
trans-1,2-Dichloroethylene			110.2		%		70-130	23-SEP-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-ROU-HS-WT</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R5232750</b>							
<b>WG3409754-1</b>	<b>LCS</b>							
trans-1,3-Dichloropropene			119.1		%		70-130	23-SEP-20
Trichloroethylene			113.1		%		70-130	23-SEP-20
Trichlorofluoromethane			103.7		%		60-140	23-SEP-20
Vinyl chloride			111.9		%		60-140	23-SEP-20
<b>WG3409754-2</b>	<b>MB</b>							
1,1,1,2-Tetrachloroethane			<0.50		ug/L		0.5	23-SEP-20
1,1,1,2,2-Tetrachloroethane			<0.50		ug/L		0.5	23-SEP-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	23-SEP-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	23-SEP-20
1,2-Dibromoethane			<0.20		ug/L		0.2	23-SEP-20
1,1-Dichloroethane			<0.50		ug/L		0.5	23-SEP-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	23-SEP-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	23-SEP-20
1,2-Dichloroethane			<0.50		ug/L		0.5	23-SEP-20
1,2-Dichloropropane			<0.50		ug/L		0.5	23-SEP-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	23-SEP-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	23-SEP-20
2-Hexanone			<20		ug/L		20	23-SEP-20
Acetone			<20		ug/L		20	23-SEP-20
Benzene			<0.50		ug/L		0.5	23-SEP-20
Bromodichloromethane			<1.0		ug/L		1	23-SEP-20
Bromoform			<1.0		ug/L		1	23-SEP-20
Bromomethane			<0.50		ug/L		0.5	23-SEP-20
Carbon Disulfide			<1.0		ug/L		1	23-SEP-20
Carbon tetrachloride			<0.20		ug/L		0.2	23-SEP-20
Chlorobenzene			<0.50		ug/L		0.5	23-SEP-20
Chloroethane			<1.0		ug/L		1	23-SEP-20
Chloroform			<1.0		ug/L		1	23-SEP-20
Chloromethane			<1.0		ug/L		1	23-SEP-20
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	23-SEP-20
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	23-SEP-20
Dibromochloromethane			<1.0		ug/L		1	23-SEP-20
Dichlorodifluoromethane			<1.0		ug/L		1	23-SEP-20
Dichloromethane			<2.0		ug/L		2	23-SEP-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-ROU-HS-WT</b>								
	<b>Water</b>							
<b>Batch</b>	<b>R5232750</b>							
<b>WG3409754-2</b>	<b>MB</b>							
Ethylbenzene			<0.50		ug/L		0.5	23-SEP-20
m+p-Xylenes			<0.40		ug/L		0.4	23-SEP-20
Methyl Ethyl Ketone			<20		ug/L		20	23-SEP-20
Methyl Isobutyl Ketone			<20		ug/L		20	23-SEP-20
n-Hexane			<0.50		ug/L		0.5	23-SEP-20
MTBE			<0.50		ug/L		0.5	23-SEP-20
o-Xylene			<0.30		ug/L		0.3	23-SEP-20
Styrene			<0.50		ug/L		0.5	23-SEP-20
Tetrachloroethylene			<0.50		ug/L		0.5	23-SEP-20
Toluene			<0.40		ug/L		0.4	23-SEP-20
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	23-SEP-20
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	23-SEP-20
Trichloroethylene			<0.50		ug/L		0.5	23-SEP-20
Trichlorofluoromethane			<1.0		ug/L		1	23-SEP-20
Vinyl chloride			<0.50		ug/L		0.5	23-SEP-20
Surrogate: 1,4-Difluorobenzene			98.5		%		70-130	23-SEP-20
Surrogate: 4-Bromofluorobenzene			82.7		%		70-130	23-SEP-20
<b>WG3409754-5</b>	<b>MS</b>	<b>WG3409754-3</b>						
1,1,1,2-Tetrachloroethane			108.1		%		50-150	23-SEP-20
1,1,2,2-Tetrachloroethane			103.6		%		50-150	23-SEP-20
1,1,1-Trichloroethane			118.2		%		50-150	23-SEP-20
1,1,2-Trichloroethane			109.3		%		50-150	23-SEP-20
1,2-Dibromoethane			106.6		%		50-150	23-SEP-20
1,1-Dichloroethane			120.6		%		50-150	23-SEP-20
1,1-Dichloroethylene			108.6		%		50-150	23-SEP-20
1,2-Dichlorobenzene			112.6		%		50-150	23-SEP-20
1,2-Dichloroethane			119.7		%		50-150	23-SEP-20
1,2-Dichloropropane			114.4		%		50-150	23-SEP-20
1,3-Dichlorobenzene			114.7		%		50-150	23-SEP-20
1,4-Dichlorobenzene			113.7		%		50-150	23-SEP-20
2-Hexanone			85.0		%		50-150	23-SEP-20
Acetone			130.3		%		50-150	23-SEP-20
Benzene			117.5		%		50-150	23-SEP-20
Bromodichloromethane			130.4		%		50-150	23-SEP-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
<b>VOC-ROU-HS-WT</b>								
	Water							
<b>Batch</b>	<b>R5232750</b>							
<b>WG3409754-5 MS</b>		<b>WG3409754-3</b>						
Bromoform			110.5		%		50-150	23-SEP-20
Bromomethane			132.3		%		50-150	23-SEP-20
Carbon Disulfide			115.0		%		50-150	23-SEP-20
Carbon tetrachloride			121.5		%		50-150	23-SEP-20
Chlorobenzene			113.0		%		50-150	23-SEP-20
Chloroethane			113.5		%		50-150	23-SEP-20
Chloroform			124.1		%		50-150	23-SEP-20
Chloromethane			120.0		%		50-150	23-SEP-20
cis-1,2-Dichloroethylene			110.3		%		50-150	23-SEP-20
cis-1,3-Dichloropropene			106.4		%		50-150	23-SEP-20
Dibromochloromethane			108.0		%		50-150	23-SEP-20
Dichlorodifluoromethane			80.9		%		50-150	23-SEP-20
Dichloromethane			124.1		%		50-150	23-SEP-20
Ethylbenzene			98.2		%		50-150	23-SEP-20
m+p-Xylenes			109.4		%		50-150	23-SEP-20
Methyl Ethyl Ketone			110.7		%		50-150	23-SEP-20
Methyl Isobutyl Ketone			90.7		%		50-150	23-SEP-20
n-Hexane			108.3		%		50-150	23-SEP-20
MTBE			112.2		%		50-150	23-SEP-20
o-Xylene			104.3		%		50-150	23-SEP-20
Styrene			95.6		%		50-150	23-SEP-20
Tetrachloroethylene			111.9		%		50-150	23-SEP-20
Toluene			97.7		%		50-150	23-SEP-20
trans-1,2-Dichloroethylene			113.9		%		50-150	23-SEP-20
trans-1,3-Dichloropropene			101.8		%		50-150	23-SEP-20
Trichloroethylene			116.5		%		50-150	23-SEP-20
Trichlorofluoromethane			105.5		%		50-150	23-SEP-20
Vinyl chloride			106.4		%		50-150	23-SEP-20

# Quality Control Report

Workorder: L2505230

Report Date: 24-SEP-20

Client: FISHER ENVIRONMENTAL  
15-400 ESNA PARK DRIVE  
MARKHAM ON -  
Contact: CLIVE WIGGAN

Page 13 of 13

## Legend:

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Limit ALS Control Limit (Data Quality Objectives)  
DUP Duplicate  
RPD Relative Percent Difference  
N/A Not Available  
LCS Laboratory Control Sample  
SRM Standard Reference Material  
MS Matrix Spike  
MSD Matrix Spike Duplicate  
ADE Average Desorption Efficiency  
MB Method Blank  
IRM Internal Reference Material  
CRM Certified Reference Material  
CCV Continuing Calibration Verification  
CVS Calibration Verification Standard  
LCSD Laboratory Control Sample Duplicate

## Sample Parameter Qualifier Definitions:

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Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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## Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2505230-COFC

COC Number: 17 - 797641

Page of

*MM*

www.alsglobal.com

<b>Report To</b> Contact and company name below will appear on the final report		<b>Report Format / Distribution</b>		<b>Select Service Level Below - Contact your AM to confirm all E&amp;P TATs (surcharges may apply)</b>																			
Company: <i>Fisher Environmental Ltd</i>		Select Report Format: <input checked="" type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																			
Contact: <i>Clive Wiggan</i>		Quality Control (QC) Report with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		PRIORITY (Business Days)		EMERGENCY																	
Phone:		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		4 day [P4-20%] <input type="checkbox"/>		1 Business day [E - 100%] <input type="checkbox"/>																	
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		3 day [P3-25%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>																	
Street: <i>6333 Hurontario St</i>		Email 1 or Fax: <i>Clive</i>		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm																			
City/Province: <i>Mississauga</i>		Email 2: <i>allen</i>		For tests that can not be performed according to the service level selected, you will be contacted.																			
Postal Code:		Email 3:		<b>Analysis Request</b>																			
Invoice To: Same as Report To <input type="checkbox"/> YES <input type="checkbox"/> NO		<b>Invoice Distribution</b>		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																			
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																					
Company:		Email 1 or Fax: <i>Olga Clive</i>		<table border="1"> <tr><td colspan="4">NUMBER OF CONTAINERS</td></tr> <tr><td colspan="4"><i>Peel/Region SAN 50m Below</i></td></tr> <tr><td colspan="4">SAMPLES ON HOLD</td></tr> <tr><td colspan="4">SUSPECTED HAZARD (see Special Instructions)</td></tr> </table>				NUMBER OF CONTAINERS				<i>Peel/Region SAN 50m Below</i>				SAMPLES ON HOLD				SUSPECTED HAZARD (see Special Instructions)			
NUMBER OF CONTAINERS																							
<i>Peel/Region SAN 50m Below</i>																							
SAMPLES ON HOLD																							
SUSPECTED HAZARD (see Special Instructions)																							
Contact:		Email 2:																					
<b>Project Information</b>		<b>Oil and Gas Required Fields (client use)</b>																					
ALS Account # / Quote #:		AFE/Cost Center:						PO#:															
Job #: <i>22-10463</i>		Major/Minor Code:						Routing Code:															
PO / AFE:		Requisitioner:						Location:															
LSD:		ALS Contact:		Sampler:																			
ALS Lab Work Order # (lab use only): <i>L2505230</i>																							
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																			
	<i>MW3</i>	<i>17-Sep-20</i>	<i>15:00</i>	<i>Bottle</i>	<i>X</i>																		
<b>Drinking Water (DW) Samples<sup>1</sup> (client use)</b>		<b>Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)</b>		<b>SAMPLE CONDITION AS RECEIVED (lab use only)</b>																			
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																			
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																			
				Cooling Initiated <input checked="" type="checkbox"/>																			
				INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C																	
				<i>83.0</i>		<i>21.2</i>																	
<b>SHIPMENT RELEASE (client use)</b>		<b>INITIAL SHIPMENT RECEPTION (lab use only)</b>		<b>FINAL SHIPMENT RECEPTION (lab use only)</b>																			
Released by: <i>[Signature]</i>	Date: <i>Sep 17, 2020</i>	Time:	Received by: <i>[Signature]</i>	Date: <i>Sep 17 / 20</i>	Time: <i>16:05</i>	Received by: <i>[Signature]</i>	Date: <i>Sep 18 / 20</i>																
							Time: <i>1415</i>																

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

## APPENDIX E – HYDRAULIC CONDUCTIVITY ANALYSES



Location: 6333 Hurontario Street, Mississauga  
 Project: FE-P-20-10463 HydroGeo  
 Test Date: 2020-09-18  
 Well No. MW101

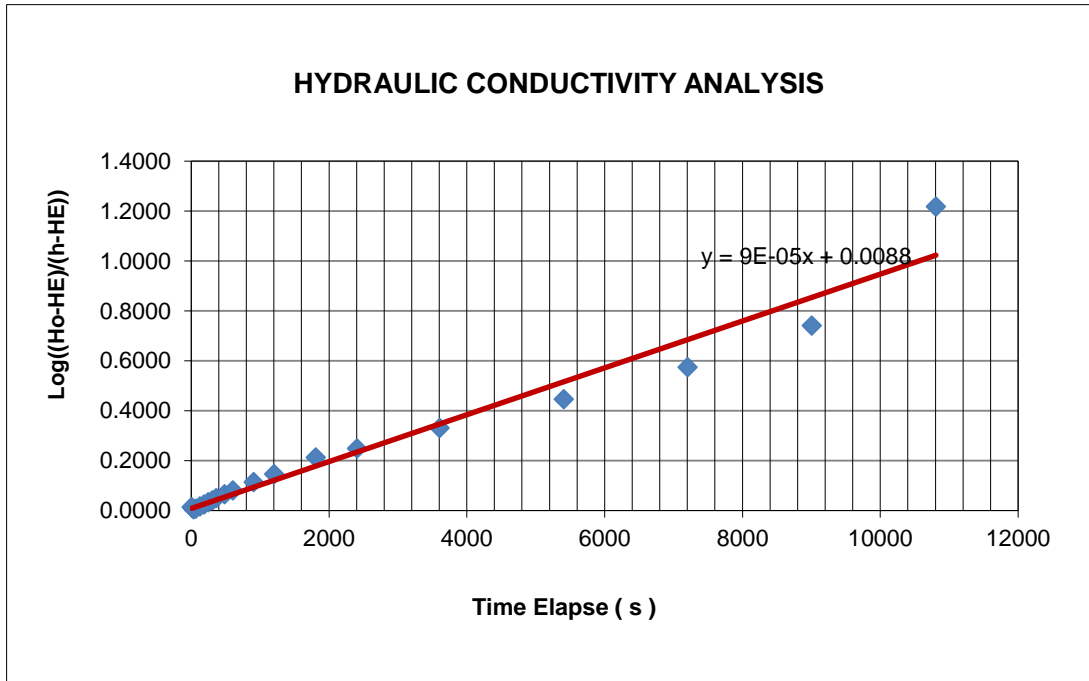
Equilibrium Water level (from top of pipe)  $H_E$  210 cm  
 Initial Water level (from top of pipe)  $H_o$  375 cm  
 Monitoring well inner diameter  $d$  0.05 m  
 Initial Time offset  $T_o$  5 second  
 Reverse of Luthin's reference system  $R_u = H_o - H_E$  165.00 cm  
 Slope of  $\text{Log}((h_o - h_e)/(h_t - h_e)) / T$  9.00E-05  
 $G = R_u / (H_T - H_E)$

Hydraulic conductivity computed  $k =$  0.0001362 cm/s  
 1.36E-06 m/s  
 0.118 m/day

Time		HT (Water Drop)		G	LOG (G)
(Interval s)	(Elapsed s)	( m )	( cm )		
5	5	3.750	375.00	1.0000	0.0147
30	35	3.730	373.00	1.0123	0.0053
30	65	3.720	372.00	1.0185	0.0080
60	125	3.690	369.00	1.0377	0.0161
60	185	3.660	366.00	1.0577	0.0244
60	245	3.630	363.00	1.0784	0.0328
60	305	3.600	360.00	1.1000	0.0414
60	365	3.570	357.00	1.1224	0.0502
120	485	3.520	352.00	1.1620	0.0652
120	605	3.470	347.00	1.2044	0.0808
300	905	3.370	337.00	1.2992	0.1137
300	1205	3.280	328.00	1.3983	0.1456
600	1805	3.110	311.00	1.6337	0.2132
600	2405	3.030	303.00	1.7742	0.2490
1200	3605	2.870	287.00	2.1429	0.3310
1800	5405	2.690	269.00	2.7966	0.4466
1800	7205	2.540	254.00	3.7500	0.5740
1800	9005	2.400	240.00	5.5000	0.7404
1800	10805	2.200	220.00	16.5000	1.2175



Location: 6333 Hurontario Street, Mississauga  
Project: FE-P-20-10463 HydroGeo  
Test Date: 2020-09-18  
Well No. MW101



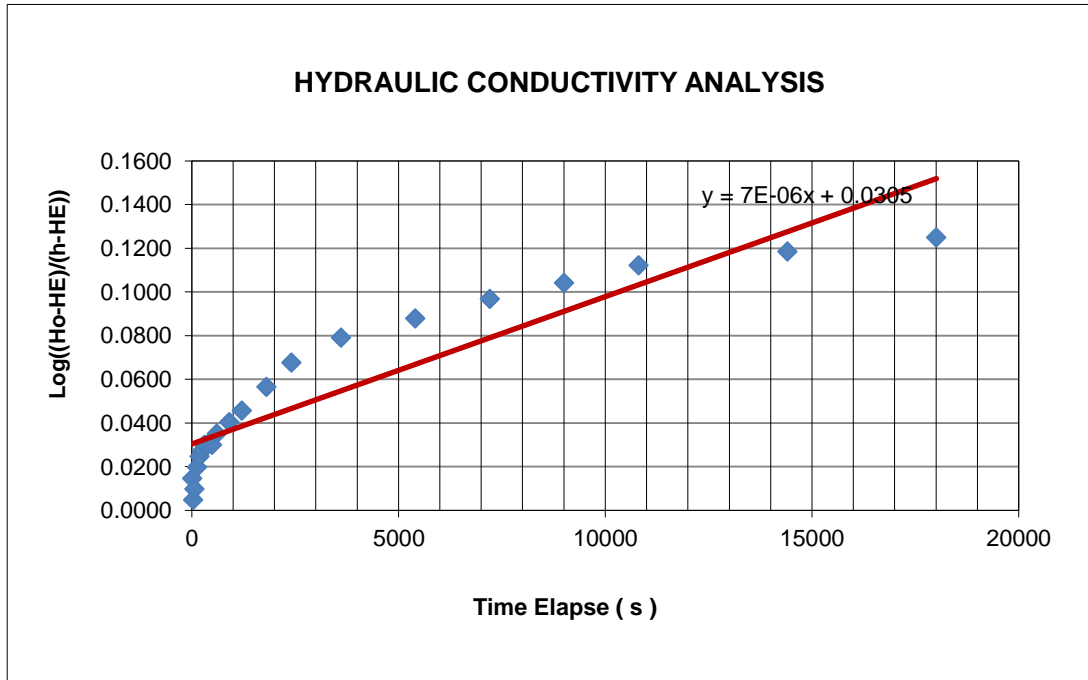
Location: 6333 Hurontario Street, Mississauga  
 Project: FE-P-20-10463 HydroGeo  
 Test Date: 2020-09-18  
 Well No. MW102

Equilibrium Water level (from top of pipe)  $H_E$  286 cm  
 Initial Water level (from top of pipe)  $H_o$  376 cm  
 Monitoring well inner diameter  $d$  0.05 m  
 Initial Time offset  $T_o$  5 second  
 Reverse of Luthin's reference system  $R_u = H_o - H_E$  90.00 cm  
 Slope of  $\text{Log}((h_o - h_e)/(h_t - h_e)) / T$  7.00E-06  
 $G = R_u / (H_T - H_E)$

Hydraulic conductivity computed  $k =$  0.0000106 cm/s  
 1.06E-07 m/s  
 0.009 m/day

Time		HT (Water Drop )		G	LOG (G)
(Interval s)	(Elapsed s)	( m )	( cm )		
5	5	3.760	376.00	1.0000	0.0147
30	35	3.750	375.00	1.0112	0.0049
30	65	3.740	374.00	1.0227	0.0098
60	125	3.720	372.00	1.0465	0.0197
60	185	3.710	371.00	1.0588	0.0248
60	245	3.705	370.50	1.0651	0.0274
60	305	3.700	370.00	1.0714	0.0300
60	365	3.700	370.00	1.0714	0.0300
120	485	3.700	370.00	1.0714	0.0300
120	605	3.690	369.00	1.0843	0.0352
300	905	3.680	368.00	1.0976	0.0404
300	1205	3.670	367.00	1.1111	0.0458
600	1805	3.650	365.00	1.1392	0.0566
600	2405	3.630	363.00	1.1688	0.0678
1200	3605	3.610	361.00	1.2000	0.0792
1800	5405	3.595	359.50	1.2245	0.0880
1800	7205	3.580	358.00	1.2500	0.0969
1800	9005	3.568	356.80	1.2712	0.1042
1800	10805	3.555	355.50	1.2950	0.1123
3600	14405	3.545	354.50	1.3139	0.1186
3600	18005	3.535	353.50	1.3333	0.1249

**Location:** 6333 Hurontario Street, Mississauga  
**Project:** FE-P-20-10463 HydroGeo  
**Test Date:** 2020-09-18  
**Well No.** MW102



**Location:** 6333 Hurontario Street, Mississauga  
**Project:** FE-P-20-10463 HydroGeo  
**Test Date:** 2020-09-18  
**Well No.** MW103

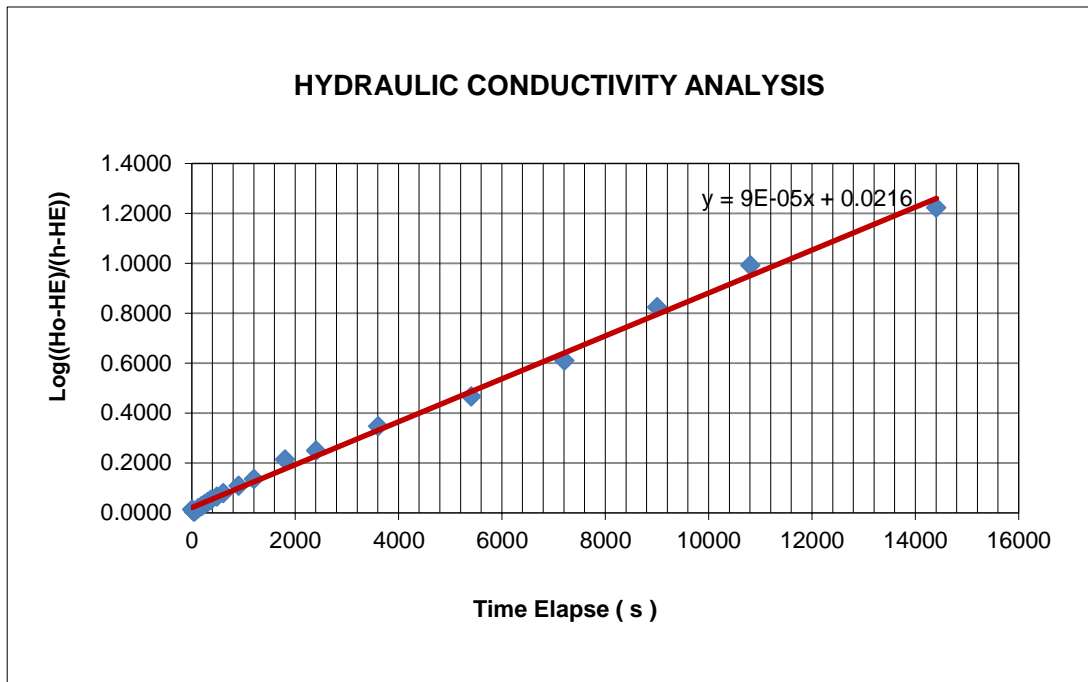
Equilibrium Water level (from top of pipe) $H_E$	201 cm
Initial Water level (from top of pipe) $H_o$	368 cm
Monitoring well inner diameter $d$	0.05 m
Initial Time offset $T_o$	5 second
Reverse of Luthin's reference system $R_u = H_o - H_E$	167.00 cm
Slope of $\text{Log}((h_o - h_e)/(h_t - h_e)) / T$	9.00E-05
$G = R_u / (H_T - H_E)$	

**Hydraulic conductivity computed  $k =$** 

**0.0001362 cm/s**  
**1.36E-06 m/s**  
**0.118 m/day**

Time		HT (Water Drop)		G	LOG (G)
(Interval s)	(Elapsed s)	( m )	( cm )		
5	5	3.680	368.00	1.0000	0.0147
30	35	3.660	366.00	1.0121	0.0052
30	65	3.650	365.00	1.0183	0.0079
60	125	3.610	361.00	1.0438	0.0186
60	185	3.580	358.00	1.0637	0.0268
60	245	3.550	355.00	1.0844	0.0352
60	305	3.520	352.00	1.1060	0.0437
60	365	3.490	349.00	1.1284	0.0525
120	485	3.445	344.50	1.1638	0.0659
120	605	3.400	340.00	1.2014	0.0797
300	905	3.310	331.00	1.2846	0.1088
300	1205	3.230	323.00	1.3689	0.1364
600	1805	3.030	303.00	1.6373	0.2141
600	2405	2.950	295.00	1.7766	0.2496
1200	3605	2.760	276.00	2.2267	0.3477
1800	5405	2.580	258.00	2.9298	0.4668
1800	7205	2.420	242.00	4.0732	0.6099
1800	9005	2.260	226.00	6.6800	0.8248
1800	10805	2.180	218.00	9.8235	0.9923
3600	14405	2.110	211.00	16.7000	1.2227

**Location:** 6333 Hurontario Street, Mississauga  
**Project:** FE-P-20-10463 HydroGeo  
**Test Date:** 2020-09-18  
**Well No.** MW103



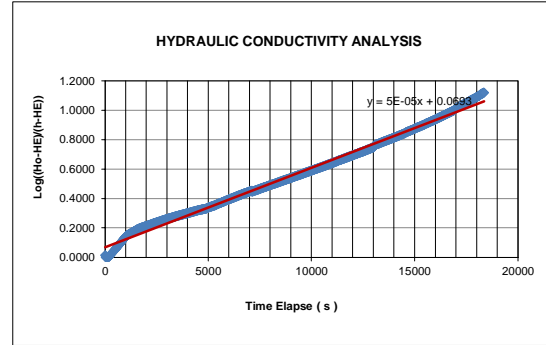
Location: 6333 Hurontario Street, Mississauga  
 Project: FE-P-20-10655 HydroGeo  
 Test Date: 2020-11-07  
 Well No. MW201

Equilibrium Water level (from top of pipe)  $H_E$  352 cm  
 Initial Water level (from top of pipe)  $H_0$  835.9 cm  
 Monitoring well inner diameter  $d$  0.05 m  
 Initial Time offset  $T_0$  5 second  
 Reverse of Luthin's reference system  $R_u = H_0 - H_E$  483.90 cm  
 Slope of  $\text{Log}((h_0 - h_e)/(h_t - h_e)) / T$  5.00E-05  
 $G = R_u / (H_T - H_E)$

Hydraulic conductivity computed  $k =$  0.0000757 cm/s  
 7.57E-07 m/s  
 0.065 m/day

Time (Interval)	Time (Elapsed s)	HT (Water Drop)		G	LOG (G)
		(m)	(cm)		
10	0	8.359	835.88	1.0000	0.0147
10	10	8.164	816.42	1.0419	0.0147
10	20	8.347	834.69	1.0025	0.0011
10	30	8.344	834.43	1.0030	0.0013
10	40	8.345	834.50	1.0029	0.0013
10	50	8.344	834.37	1.0032	0.0014
10	60	8.343	834.33	1.0033	0.0014
10	70	8.345	834.50	1.0029	0.0013
10	80	8.344	834.38	1.0032	0.0014
10	90	8.344	834.43	1.0030	0.0013
10	100	8.345	834.48	1.0029	0.0013
10	110	8.346	834.56	1.0028	0.0012
10	120	8.345	834.54	1.0028	0.0012
10	130	8.345	834.53	1.0028	0.0012
10	140	8.347	834.68	1.0025	0.0011
10	150	8.348	834.82	1.0022	0.0010
10	160	8.347	834.70	1.0025	0.0011
10	170	8.331	833.13	1.0058	0.0025
10	180	8.310	831.00	1.0102	0.0044
10	190	8.291	829.05	1.0144	0.0062
10	200	8.271	827.08	1.0186	0.0080
10	210	8.251	825.09	1.0228	0.0098
10	220	8.233	823.29	1.0268	0.0115
10	230	8.214	821.40	1.0309	0.0132
10	240	8.197	819.70	1.0346	0.0148
10	250	8.181	818.13	1.0381	0.0162
10	260	8.166	816.56	1.0416	0.0177
10	270	8.147	814.66	1.0459	0.0195
10	280	8.131	813.05	1.0496	0.0210
10	290	8.114	811.39	1.0534	0.0226
10	300	8.096	809.61	1.0575	0.0243
10	310	8.079	807.94	1.0613	0.0258
10	320	8.063	806.29	1.0652	0.0274
10	330	8.046	804.63	1.0691	0.0290
10	340	8.0301	803.01	1.0729	0.0306
10	350	8.0148	801.48	1.0766	0.0320
10	360	7.9986	799.86	1.0805	0.0336
10	370	7.9837	798.37	1.0841	0.0351
10	380	7.9672	796.72	1.0881	0.0367
10	390	7.9524	795.24	1.0917	0.0381
10	400	7.9365	793.65	1.0957	0.0397
10	410	7.9201	792.01	1.0997	0.0413
10	420	7.904	790.40	1.1038	0.0429
10	430	7.8869	788.69	1.1081	0.0446
10	440	7.8703	787.03	1.1123	0.0462
10	450	7.8524	785.24	1.1169	0.0480
10	460	7.8371	783.71	1.1209	0.0496
10	470	7.8207	782.07	1.1252	0.0512
10	480	7.8041	780.41	1.1295	0.0529
10	490	7.7884	778.84	1.1337	0.0545
10	500	7.7723	777.23	1.1380	0.0561
10	510	7.7566	775.66	1.1422	0.0577
10	520	7.741	774.10	1.1464	0.0593
10	530	7.7242	772.42	1.1510	0.0611
10	540	7.7085	770.85	1.1553	0.0627
10	550	7.6921	769.21	1.1598	0.0644
10	560	7.6765	767.65	1.1642	0.0660
10	570	7.6607	766.07	1.1686	0.0677
10	580	7.6422	764.22	1.1739	0.0696
10	590	7.6261	762.61	1.1785	0.0713
10	600	7.6082	760.82	1.1837	0.0732
10	610	7.5925	759.25	1.1882	0.0749
10	620	7.5771	757.71	1.1927	0.0765
10	630	7.56	756.00	1.1978	0.0784
10	640	7.5451	754.51	1.2022	0.0800
10	650	7.528	752.80	1.2073	0.0818
10	660	7.5128	751.28	1.2119	0.0835
10	670	7.4963	749.63	1.2170	0.0853
10	680	7.4809	748.09	1.2217	0.0870
10	690	7.4653	746.53	1.2265	0.0887
10	700	7.4502	745.02	1.2312	0.0903
10	710	7.4339	743.39	1.2364	0.0921
10	720	7.4173	741.73	1.2416	0.0940
10	730	7.4028	740.28	1.2463	0.0956
10	740	7.3876	738.76	1.2512	0.0973
10	750	7.3729	737.29	1.2559	0.0990
10	760	7.3583	735.83	1.2607	0.1006
10	770	7.3428	734.28	1.2658	0.1024
10	780	7.3268	732.68	1.2711	0.1042
10	790	7.3123	731.23	1.2760	0.1059
10	800	7.2974	729.74	1.2810	0.1076
10	810	7.282	728.20	1.2863	0.1093
10	820	7.2656	726.56	1.2919	0.1112
10	830	7.2513	725.13	1.2969	0.1129
10	840	7.2352	723.52	1.3025	0.1148
10	850	7.2197	721.97	1.3079	0.1166
10	860	7.2044	720.44	1.3134	0.1184
10	870	7.1899	718.99	1.3186	0.1201
10	880	7.1754	717.54	1.3238	0.1218
10	890	7.1608	716.08	1.3291	0.1236
10	900	7.1452	714.52	1.3348	0.1254
10	910	7.131	713.10	1.3401	0.1271
10	920	7.1158	711.58	1.3457	0.1290
10	930	7.1003	710.03	1.3516	0.1308
10	940	7.0868	708.68	1.3567	0.1325
10	950	7.0721	707.21	1.3623	0.1343
10	960	7.058	705.80	1.3677	0.1360
10	970	7.0426	704.26	1.3737	0.1379
10	980	7.0293	702.93	1.3789	0.1395
10	990	7.0157	701.57	1.3843	0.1412

Location: 6333 Hurontario Street, Mississauga  
 Project: FE-P-20-10655 HydroGeo  
 Test Date: 2020-11-07  
 Well No. MW201



10	1000	7.0021	700.21	1.3897	0.1429
10	1010	6.9885	698.85	1.3951	0.1446
10	1020	6.9756	697.56	1.4003	0.1462
10	1030	6.9649	696.49	1.4047	0.1476
10	1040	6.9565	695.65	1.4081	0.1486
10	1050	6.9491	694.91	1.4112	0.1496
10	1060	6.9412	694.12	1.4144	0.1506
10	1070	6.9341	693.41	1.4174	0.1515
10	1080	6.9273	692.73	1.4202	0.1523
10	1090	6.9196	691.96	1.4234	0.1533
10	1100	6.9138	691.38	1.4258	0.1541
10	1110	6.9075	690.75	1.4285	0.1549
10	1120	6.9008	690.08	1.4313	0.1557
10	1130	6.8949	689.49	1.4338	0.1565
10	1140	6.8895	688.95	1.4361	0.1572
10	1150	6.8835	688.35	1.4387	0.1580
10	1160	6.8772	687.72	1.4414	0.1588
10	1170	6.8715	687.15	1.4438	0.1595
10	1180	6.8661	686.61	1.4462	0.1602
10	1190	6.8606	686.06	1.4485	0.1609
10	1200	6.8541	685.41	1.4514	0.1618
10	1210	6.8476	684.76	1.4542	0.1626
10	1220	6.8424	684.24	1.4565	0.1633
10	1230	6.8359	683.59	1.4593	0.1642
10	1240	6.829	682.90	1.4624	0.1651
10	1250	6.8236	682.36	1.4648	0.1658
10	1260	6.8179	681.79	1.4673	0.1665
10	1270	6.8109	681.09	1.4704	0.1674
10	1280	6.8057	680.57	1.4727	0.1681
10	1290	6.7983	679.83	1.4761	0.1691
10	1300	6.7942	679.42	1.4779	0.1697
10	1310	6.7858	678.58	1.4817	0.1708
10	1320	6.7795	677.95	1.4846	0.1716
10	1330	6.7735	677.35	1.4873	0.1724
10	1340	6.7672	676.72	1.4902	0.1732
10	1350	6.7609	676.09	1.4931	0.1741
10	1360	6.7565	675.65	1.4951	0.1747
10	1370	6.751	675.10	1.4977	0.1754
10	1380	6.7445	674.45	1.5007	0.1763
10	1390	6.7396	673.96	1.5030	0.1770
10	1400	6.7338	673.38	1.5057	0.1777
10	1410	6.7294	672.94	1.5078	0.1783
10	1420	6.7229	672.29	1.5108	0.1792
10	1430	6.7175	671.75	1.5134	0.1799
10	1440	6.7128	671.28	1.5156	0.1806
10	1450	6.7058	670.58	1.5189	0.1815
10	1460	6.6998	669.98	1.5218	0.1824
10	1470	6.6933	669.33	1.5249	0.1832
10	1480	6.6867	668.67	1.5281	0.1841
10	1490	6.6783	667.83	1.5322	0.1853
10	1500	6.6704	667.04	1.5360	0.1864
10	1510	6.6628	666.28	1.5397	0.1874
10	1520	6.6568	665.68	1.5427	0.1883
10	1530	6.6518	665.18	1.5451	0.1890
10	1540	6.6461	664.61	1.5479	0.1898
10	1550	6.6413	664.13	1.5503	0.1904
10	1560	6.6356	663.56	1.5532	0.1912
10	1570	6.6322	663.22	1.5548	0.1917
10	1580	6.6277	662.77	1.5571	0.1923
10	1590	6.623	662.30	1.5595	0.1930
10	1600	6.6204	662.04	1.5608	0.1933
10	1610	6.6154	661.54	1.5633	0.1940
10	1620	6.6113	661.13	1.5654	0.1946
10	1630	6.6071	660.71	1.5675	0.1952
10	1640	6.6027	660.27	1.5697	0.1958
10	1650	6.5994	659.94	1.5714	0.1963
10	1660	6.5948	659.48	1.5738	0.1969
10	1670	6.5908	659.08	1.5758	0.1975
10	1680	6.5891	658.91	1.5767	0.1977
10	1690	6.583	658.30	1.5798	0.1986
10	1700	6.58	658.00	1.5814	0.1990
10	1710	6.5759	657.59	1.5835	0.1996
10	1720	6.5729	657.29	1.5851	0.2000
10	1730	6.5697	656.97	1.5867	0.2005
10	1740	6.5661	656.61	1.5886	0.2010
10	1750	6.5619	656.19	1.5908	0.2016
10	1760	6.5595	655.95	1.5920	0.2020
10	1770	6.5551	655.51	1.5943	0.2026
10	1780	6.5516	655.16	1.5962	0.2031
10	1790	6.5479	654.79	1.5981	0.2036
10	1800	6.5441	654.41	1.6001	0.2042
10	1810	6.5405	654.05	1.6021	0.2047
10	1820	6.5368	653.68	1.6040	0.2052
10	1830	6.5337	653.37	1.6057	0.2057
10	1840	6.5291	652.91	1.6081	0.2063
10	1850	6.5266	652.66	1.6095	0.2067
10	1860	6.5229	652.29	1.6114	0.2072
10	1870	6.5194	651.94	1.6133	0.2077
10	1880	6.5158	651.58	1.6153	0.2082
10	1890	6.5118	651.18	1.6174	0.2088
10	1900	6.5093	650.93	1.6188	0.2092
10	1910	6.5072	650.72	1.6199	0.2095
10	1920	6.5025	650.25	1.6225	0.2102
10	1930	6.499	649.90	1.6244	0.2107
10	1940	6.4956	649.56	1.6262	0.2112
10	1950	6.4916	649.16	1.6284	0.2118
10	1960	6.4873	648.73	1.6308	0.2124
10	1970	6.4842	648.42	1.6325	0.2128
10	1980	6.4803	648.03	1.6346	0.2134
10	1990	6.4768	647.68	1.6366	0.2139
10	2000	6.4727	647.27	1.6388	0.2145
10	2010	6.4704	647.04	1.6401	0.2149
10	2020	6.4674	646.74	1.6418	0.2153
10	2030	6.464	646.40	1.6437	0.2158
10	2040	6.4625	646.25	1.6445	0.2160
10	2050	6.4582	645.82	1.6469	0.2167
10	2060	6.4564	645.64	1.6479	0.2169
10	2070	6.4545	645.45	1.6490	0.2172
10	2080	6.4519	645.19	1.6505	0.2176
10	2090	6.4506	645.06	1.6512	0.2178
10	2100	6.4495	644.95	1.6518	0.2180
10	2110	6.4469	644.69	1.6533	0.2183
10	2120	6.4466	644.66	1.6535	0.2184
10	2130	6.4437	644.37	1.6551	0.2188
10	2140	6.4434	644.34	1.6553	0.2189
10	2150	6.4408	644.08	1.6567	0.2193
10	2160	6.4392	643.92	1.6576	0.2195
10	2170	6.4378	643.78	1.6584	0.2197
10	2180	6.4167	641.67	1.6705	0.2229
10	2190	6.4151	641.51	1.6714	0.2231
10	2200	6.4132	641.32	1.6725	0.2234
10	2210	6.4117	641.17	1.6734	0.2236
10	2220	6.4096	640.96	1.6746	0.2239

10	2230	6.4077	640.77	1.6757	0.2242
10	2240	6.3964	639.64	1.6823	0.2259
10	2250	6.3917	639.17	1.6851	0.2266
10	2260	6.3887	638.87	1.6868	0.2271
10	2270	6.3845	638.45	1.6893	0.2277
10	2280	6.3815	638.15	1.6911	0.2282
10	2290	6.3795	637.95	1.6923	0.2285
10	2300	6.3754	637.54	1.6947	0.2291
10	2310	6.3732	637.32	1.6960	0.2294
10	2320	6.3699	636.99	1.6980	0.2299
10	2330	6.3664	636.64	1.7000	0.2305
10	2340	6.3636	636.36	1.7017	0.2309
10	2350	6.3603	636.03	1.7037	0.2314
10	2360	6.3571	635.71	1.7056	0.2319
10	2370	6.3553	635.53	1.7067	0.2322
10	2380	6.3517	635.17	1.7089	0.2327
10	2390	6.348	634.80	1.7111	0.2333
10	2400	6.3456	634.56	1.7126	0.2336
10	2410	6.3427	634.27	1.7143	0.2341
10	2420	6.3405	634.05	1.7157	0.2344
10	2430	6.3367	633.67	1.7180	0.2350
10	2440	6.3344	633.44	1.7194	0.2354
10	2450	6.33	633.00	1.7221	0.2360
10	2460	6.3273	632.73	1.7237	0.2365
10	2470	6.3238	632.38	1.7259	0.2370
10	2480	6.3212	632.12	1.7275	0.2374
10	2490	6.318	631.80	1.7294	0.2379
10	2500	6.316	631.60	1.7307	0.2382
10	2510	6.3126	631.26	1.7328	0.2387
10	2520	6.3099	630.99	1.7345	0.2392
10	2530	6.3058	630.58	1.7370	0.2398
10	2540	6.3037	630.37	1.7383	0.2401
10	2550	6.3004	630.04	1.7404	0.2406
10	2560	6.298	629.80	1.7419	0.2410
10	2570	6.295	629.50	1.7438	0.2415
10	2580	6.2927	629.27	1.7452	0.2419
10	2590	6.2886	628.86	1.7478	0.2425
10	2600	6.2863	628.63	1.7493	0.2429
10	2610	6.2828	628.28	1.7515	0.2434
10	2620	6.2796	627.96	1.7535	0.2439
10	2630	6.2776	627.76	1.7548	0.2442
10	2640	6.2742	627.42	1.7570	0.2448
10	2650	6.2695	626.95	1.7600	0.2455
10	2660	6.2677	626.77	1.7611	0.2458
10	2670	6.2645	626.45	1.7632	0.2463
10	2680	6.2597	625.97	1.7663	0.2471
10	2690	6.2584	625.84	1.7671	0.2473
10	2700	6.2547	625.47	1.7695	0.2478
10	2710	6.2524	625.24	1.7710	0.2482
10	2720	6.2498	624.98	1.7727	0.2486
10	2730	6.2466	624.66	1.7747	0.2491
10	2740	6.2435	624.35	1.7768	0.2496
10	2750	6.2398	623.98	1.7792	0.2502
10	2760	6.2368	623.68	1.7811	0.2507
10	2770	6.2349	623.49	1.7824	0.2510
10	2780	6.232	623.20	1.7843	0.2515
10	2790	6.2292	622.92	1.7861	0.2519
10	2800	6.2271	622.71	1.7875	0.2523
10	2810	6.2244	622.44	1.7893	0.2527
10	2820	6.2212	622.12	1.7914	0.2532
10	2830	6.2192	621.92	1.7928	0.2535
10	2840	6.217	621.70	1.7942	0.2539
10	2850	6.2134	621.34	1.7966	0.2545
10	2860	6.2099	620.99	1.7990	0.2550
10	2870	6.2078	620.78	1.8004	0.2554
10	2880	6.2049	620.49	1.8023	0.2558
10	2890	6.2019	620.19	1.8043	0.2563
10	2900	6.1996	619.96	1.8059	0.2567
10	2910	6.195	619.50	1.8090	0.2574
10	2920	6.1929	619.29	1.8104	0.2578
10	2930	6.1892	618.92	1.8129	0.2584
10	2940	6.1878	618.78	1.8139	0.2586
10	2950	6.1842	618.42	1.8163	0.2592
10	2960	6.1821	618.21	1.8177	0.2595
10	2970	6.1788	617.88	1.8200	0.2601
10	2980	6.176	617.60	1.8219	0.2605
10	2990	6.1727	617.27	1.8242	0.2611
10	3000	6.1708	617.08	1.8255	0.2614
10	3010	6.1674	616.74	1.8278	0.2619
10	3020	6.1653	616.53	1.8293	0.2623
10	3030	6.162	616.20	1.8316	0.2628
10	3040	6.1596	615.96	1.8332	0.2632
10	3050	6.157	615.70	1.8350	0.2636
10	3060	6.1544	615.44	1.8369	0.2641
10	3070	6.1514	615.14	1.8389	0.2646
10	3080	6.1493	614.93	1.8404	0.2649
10	3090	6.1454	614.54	1.8431	0.2656
10	3100	6.1445	614.45	1.8438	0.2657
10	3110	6.1416	614.16	1.8458	0.2662
10	3120	6.1393	613.93	1.8474	0.2666
10	3130	6.1361	613.61	1.8497	0.2671
10	3140	6.1333	613.33	1.8517	0.2676
10	3150	6.1307	613.07	1.8535	0.2680
10	3160	6.1295	612.95	1.8544	0.2682
10	3170	6.1259	612.59	1.8569	0.2688
10	3180	6.1239	612.39	1.8584	0.2691
10	3190	6.1209	612.09	1.8605	0.2696
10	3200	6.12	612.00	1.8612	0.2698
10	3210	6.1161	611.61	1.8639	0.2704
10	3220	6.1131	611.31	1.8661	0.2709
10	3230	6.1113	611.13	1.8674	0.2712
10	3240	6.108	610.80	1.8698	0.2718
10	3250	6.1049	610.49	1.8720	0.2723
10	3260	6.1027	610.27	1.8736	0.2727
10	3270	6.1	610.00	1.8756	0.2731
10	3280	6.0983	609.83	1.8768	0.2734
10	3290	6.0951	609.51	1.8792	0.2740
10	3300	6.093	609.30	1.8807	0.2743
10	3310	6.0909	609.09	1.8822	0.2747
10	3320	6.0874	608.74	1.8848	0.2753
10	3330	6.0854	608.54	1.8863	0.2756
10	3340	6.0827	608.27	1.8882	0.2761
10	3350	6.0802	608.02	1.8901	0.2765
10	3360	6.0783	607.83	1.8915	0.2768
10	3370	6.076	607.60	1.8932	0.2772
10	3380	6.0741	607.41	1.8946	0.2775
10	3390	6.0722	607.22	1.8960	0.2778
10	3400	6.0686	606.86	1.8987	0.2785
10	3410	6.0668	606.68	1.9000	0.2788
10	3420	6.0643	606.43	1.9019	0.2792
10	3430	6.062	606.20	1.9036	0.2796
10	3440	6.0596	605.96	1.9054	0.2800
10	3450	6.057	605.70	1.9074	0.2804



10	3460	6.0563	605.63	1.9079	0.2806
10	3470	6.0528	605.28	1.9105	0.2812
10	3480	6.0508	605.08	1.9120	0.2815
10	3490	6.05	605.00	1.9126	0.2816
10	3500	6.0467	604.67	1.9151	0.2822
10	3510	6.0436	604.36	1.9175	0.2827
10	3520	6.0418	604.18	1.9189	0.2830
10	3530	6.0398	603.98	1.9204	0.2834
10	3540	6.0367	603.67	1.9228	0.2839
10	3550	6.0339	603.39	1.9249	0.2844
10	3560	6.033	603.30	1.9256	0.2846
10	3570	6.0302	603.02	1.9277	0.2850
10	3580	6.0285	602.85	1.9290	0.2853
10	3590	6.0261	602.61	1.9309	0.2858
10	3600	6.0244	602.44	1.9322	0.2861
10	3610	6.0218	602.18	1.9342	0.2865
10	3620	6.0191	601.91	1.9363	0.2870
10	3630	6.0181	601.81	1.9371	0.2871
10	3640	6.0156	601.56	1.9390	0.2876
10	3650	6.0132	601.32	1.9409	0.2880
10	3660	6.0107	601.07	1.9428	0.2884
10	3670	6.0092	600.92	1.9440	0.2887
10	3680	6.0062	600.62	1.9463	0.2892
10	3690	6.0046	600.46	1.9476	0.2895
10	3700	6.0019	600.19	1.9497	0.2900
10	3710	5.9997	599.97	1.9514	0.2904
10	3720	5.9979	599.79	1.9529	0.2907
10	3730	5.9958	599.58	1.9545	0.2910
10	3740	5.9934	599.34	1.9564	0.2915
10	3750	5.9916	599.16	1.9578	0.2918
10	3760	5.9898	598.98	1.9593	0.2921
10	3770	5.9881	598.81	1.9606	0.2924
10	3780	5.986	598.60	1.9623	0.2928
10	3790	5.9837	598.37	1.9641	0.2932
10	3800	5.9814	598.14	1.9660	0.2936
10	3810	5.9799	597.99	1.9672	0.2938
10	3820	5.9775	597.75	1.9691	0.2943
10	3830	5.9753	597.53	1.9708	0.2947
10	3840	5.9736	597.36	1.9722	0.2950
10	3850	5.9702	597.02	1.9749	0.2956
10	3860	5.9684	596.84	1.9764	0.2959
10	3870	5.9668	596.68	1.9777	0.2962
10	3880	5.9648	596.48	1.9793	0.2965
10	3890	5.9637	596.37	1.9802	0.2967
10	3900	5.9612	596.12	1.9822	0.2972
10	3910	5.9595	595.95	1.9836	0.2975
10	3920	5.9568	595.68	1.9858	0.2979
10	3930	5.9545	595.45	1.9877	0.2983
10	3940	5.9525	595.25	1.9893	0.2987
10	3950	5.9508	595.08	1.9907	0.2990
10	3960	5.9492	594.92	1.9920	0.2993
10	3970	5.947	594.70	1.9938	0.2997
10	3980	5.9449	594.49	1.9955	0.3001
10	3990	5.9423	594.23	1.9977	0.3005
10	4000	5.9401	594.01	1.9995	0.3009
10	4010	5.9382	593.82	2.0011	0.3013
10	4020	5.9359	593.59	2.0030	0.3017
10	4030	5.9346	593.46	2.0041	0.3019
10	4040	5.9316	593.16	2.0066	0.3025
10	4050	5.9298	592.98	2.0081	0.3028
10	4060	5.9281	592.81	2.0095	0.3031
10	4070	5.9261	592.61	2.0111	0.3034
10	4080	5.922	592.20	2.0146	0.3042
10	4090	5.9211	592.11	2.0153	0.3043
10	4100	5.919	591.90	2.0171	0.3047
10	4110	5.9172	591.72	2.0186	0.3051
10	4120	5.9143	591.43	2.0210	0.3056
10	4130	5.9127	591.27	2.0224	0.3059
10	4140	5.909	590.90	2.0255	0.3065
10	4150	5.907	590.70	2.0272	0.3069
10	4160	5.906	590.60	2.0281	0.3071
10	4170	5.9045	590.45	2.0294	0.3074
10	4180	5.9019	590.19	2.0316	0.3078
10	4190	5.899	589.90	2.0340	0.3084
10	4200	5.8977	589.77	2.0352	0.3086
10	4210	5.8965	589.65	2.0362	0.3088
10	4220	5.8928	589.28	2.0394	0.3095
10	4230	5.8911	589.11	2.0408	0.3098
10	4240	5.8896	588.96	2.0421	0.3101
10	4250	5.8868	588.68	2.0445	0.3106
10	4260	5.8859	588.59	2.0453	0.3108
10	4270	5.8833	588.33	2.0476	0.3112
10	4280	5.8813	588.13	2.0493	0.3116
10	4290	5.8789	587.89	2.0514	0.3120
10	4300	5.8771	587.71	2.0529	0.3124
10	4310	5.8745	587.45	2.0552	0.3129
10	4320	5.8725	587.25	2.0570	0.3132
10	4330	5.8711	587.11	2.0582	0.3135
10	4340	5.8682	586.82	2.0607	0.3140
10	4350	5.8667	586.67	2.0620	0.3143
10	4360	5.8646	586.46	2.0639	0.3147
10	4370	5.8622	586.22	2.0660	0.3151
10	4380	5.8603	586.03	2.0677	0.3155
10	4390	5.8578	585.78	2.0699	0.3159
10	4400	5.8557	585.57	2.0718	0.3163
10	4410	5.854	585.40	2.0733	0.3167
10	4420	5.852	585.20	2.0750	0.3170
10	4430	5.8505	585.05	2.0764	0.3173
10	4440	5.8477	584.77	2.0789	0.3178
10	4450	5.8452	584.52	2.0811	0.3183
10	4460	5.8438	584.38	2.0824	0.3186
10	4470	5.8423	584.23	2.0837	0.3188
10	4480	5.8395	583.95	2.0862	0.3194
10	4490	5.8371	583.71	2.0884	0.3198
10	4500	5.8346	583.46	2.0906	0.3203
10	4510	5.832	583.20	2.0930	0.3208
10	4520	5.8307	583.07	2.0942	0.3210
10	4530	5.8286	582.86	2.0961	0.3214
10	4540	5.8257	582.57	2.0987	0.3220
10	4550	5.8237	582.37	2.1005	0.3223
10	4560	5.8217	582.17	2.1024	0.3227
10	4570	5.8202	582.02	2.1037	0.3230
10	4580	5.8179	581.79	2.1058	0.3234
10	4590	5.8169	581.69	2.1068	0.3236
10	4600	5.8151	581.51	2.1084	0.3240
10	4610	5.8144	581.44	2.1090	0.3241
10	4620	5.8129	581.29	2.1104	0.3244
10	4630	5.8114	581.14	2.1118	0.3247
10	4640	5.811	581.10	2.1122	0.3247
10	4650	5.808	580.80	2.1149	0.3253
10	4660	5.8069	580.69	2.1160	0.3255
10	4670	5.8053	580.53	2.1174	0.3258
10	4680	5.8053	580.53	2.1174	0.3258

10	4690	5.8035	580.35	2.1191	0.3262
10	4700	5.803	580.30	2.1196	0.3262
10	4710	5.8024	580.24	2.1201	0.3264
10	4720	5.8009	580.09	2.1215	0.3266
10	4730	5.7994	579.94	2.1229	0.3269
10	4740	5.7975	579.75	2.1247	0.3273
10	4750	5.7963	579.63	2.1258	0.3275
10	4760	5.7964	579.64	2.1257	0.3275
10	4770	5.7951	579.51	2.1269	0.3278
10	4780	5.7938	579.38	2.1282	0.3280
10	4790	5.7929	579.29	2.1290	0.3282
10	4800	5.7928	579.28	2.1291	0.3282
10	4810	5.7904	579.04	2.1313	0.3287
10	4820	5.7902	579.02	2.1315	0.3287
10	4830	5.7895	578.95	2.1322	0.3288
10	4840	5.7883	578.83	2.1333	0.3291
10	4850	5.7862	578.62	2.1353	0.3295
10	4860	5.7845	578.45	2.1369	0.3298
10	4870	5.7841	578.41	2.1373	0.3299
10	4880	5.7818	578.18	2.1394	0.3303
10	4890	5.7803	578.03	2.1409	0.3306
10	4900	5.7586	575.86	2.1616	0.3348
10	4910	5.7565	575.65	2.1636	0.3352
10	4920	5.7552	575.52	2.1649	0.3354
10	4930	5.7549	575.49	2.1652	0.3355
10	4940	5.7531	575.31	2.1669	0.3358
10	4950	5.753	575.30	2.1670	0.3359
10	4960	5.751	575.10	2.1690	0.3363
10	4970	5.75	575.00	2.1700	0.3365
10	4980	5.7495	574.95	2.1704	0.3365
10	4990	5.7476	574.76	2.1723	0.3369
10	5000	5.7325	573.25	2.1871	0.3399
10	5010	5.7303	573.03	2.1893	0.3403
10	5020	5.7274	572.74	2.1922	0.3409
10	5030	5.7258	572.58	2.1938	0.3412
10	5040	5.7236	572.36	2.1960	0.3416
10	5050	5.7221	572.21	2.1974	0.3419
10	5060	5.7197	571.97	2.1998	0.3424
10	5070	5.7171	571.71	2.2024	0.3429
10	5080	5.7143	571.43	2.2053	0.3435
10	5090	5.7126	571.26	2.2070	0.3438
10	5100	5.7094	570.94	2.2102	0.3444
10	5110	5.7071	570.71	2.2125	0.3449
10	5120	5.7048	570.48	2.2148	0.3453
10	5130	5.7028	570.28	2.2169	0.3457
10	5140	5.6998	569.98	2.2199	0.3463
10	5150	5.6981	569.81	2.2217	0.3467
10	5160	5.6953	569.53	2.2245	0.3472
10	5170	5.6925	569.25	2.2274	0.3478
10	5180	5.691	569.10	2.2289	0.3481
10	5190	5.6897	568.97	2.2303	0.3484
10	5200	5.686	568.60	2.2341	0.3491
10	5210	5.6844	568.44	2.2357	0.3494
10	5220	5.6822	568.22	2.2380	0.3499
10	5230	5.68	568.00	2.2403	0.3503
10	5240	5.6778	567.78	2.2426	0.3507
10	5250	5.6748	567.48	2.2457	0.3513
10	5260	5.674	567.40	2.2465	0.3515
10	5270	5.671	567.10	2.2497	0.3521
10	5280	5.669	566.90	2.2517	0.3525
10	5290	5.6673	566.73	2.2535	0.3529
10	5300	5.6645	566.45	2.2565	0.3534
10	5310	5.6618	566.18	2.2593	0.3540
10	5320	5.6568	565.68	2.2646	0.3550
10	5330	5.6549	565.49	2.2666	0.3554
10	5340	5.6512	565.12	2.2706	0.3561
10	5350	5.6483	564.83	2.2736	0.3567
10	5360	5.6454	564.54	2.2767	0.3573
10	5370	5.6425	564.25	2.2799	0.3579
10	5380	5.639	563.90	2.2836	0.3586
10	5390	5.6366	563.66	2.2862	0.3591
10	5400	5.6335	563.35	2.2896	0.3598
10	5410	5.6295	562.95	2.2939	0.3606
10	5420	5.6274	562.74	2.2962	0.3610
10	5430	5.6248	562.48	2.2990	0.3615
10	5440	5.6222	562.22	2.3019	0.3621
10	5450	5.619	561.90	2.3054	0.3627
10	5460	5.6148	561.48	2.3100	0.3636
10	5470	5.6123	561.23	2.3128	0.3641
10	5480	5.6092	560.92	2.3162	0.3648
10	5490	5.6068	560.68	2.3189	0.3653
10	5500	5.6043	560.43	2.3216	0.3658
10	5510	5.6007	560.07	2.3257	0.3665
10	5520	5.5982	559.82	2.3285	0.3671
10	5530	5.5962	559.62	2.3307	0.3675
10	5540	5.5924	559.24	2.3350	0.3683
10	5550	5.5901	559.01	2.3376	0.3688
10	5560	5.5875	558.75	2.3405	0.3693
10	5570	5.5857	558.57	2.3425	0.3697
10	5580	5.5824	558.24	2.3463	0.3704
10	5590	5.5798	557.98	2.3493	0.3709
10	5600	5.5767	557.67	2.3528	0.3716
10	5610	5.574	557.40	2.3559	0.3722
10	5620	5.5718	557.18	2.3584	0.3726
10	5630	5.5681	556.81	2.3627	0.3734
10	5640	5.5661	556.61	2.3650	0.3738
10	5650	5.5638	556.38	2.3676	0.3743
10	5660	5.5602	556.02	2.3718	0.3751
10	5670	5.5584	555.84	2.3739	0.3755
10	5680	5.5546	555.46	2.3784	0.3763
10	5690	5.5528	555.28	2.3805	0.3767
10	5700	5.5502	555.02	2.3835	0.3772
10	5710	5.5486	554.86	2.3854	0.3776
10	5720	5.5435	554.35	2.3914	0.3787
10	5730	5.5418	554.18	2.3934	0.3790
10	5740	5.5388	553.88	2.3970	0.3797
10	5750	5.5362	553.62	2.4001	0.3802
10	5760	5.534	553.40	2.4027	0.3807
10	5770	5.5312	553.12	2.4060	0.3813
10	5780	5.5281	552.81	2.4097	0.3820
10	5790	5.5251	552.51	2.4133	0.3826
10	5800	5.523	552.30	2.4159	0.3831
10	5810	5.5202	552.02	2.4193	0.3837
10	5820	5.517	551.70	2.4231	0.3844
10	5830	5.5155	551.55	2.4250	0.3847
10	5840	5.5126	551.26	2.4285	0.3853
10	5850	5.5087	550.87	2.4332	0.3862
10	5860	5.5066	550.66	2.4358	0.3866
10	5870	5.5031	550.31	2.4401	0.3874
10	5880	5.4999	549.99	2.4441	0.3881
10	5890	5.4985	549.85	2.4458	0.3884
10	5900	5.4965	549.65	2.4483	0.3889
10	5910	5.4937	549.37	2.4517	0.3895

10	5920	5.4904	549.04	2.4558	0.3902
10	5930	5.4887	548.87	2.4580	0.3906
10	5940	5.4852	548.52	2.4623	0.3913
10	5950	5.484	548.40	2.4638	0.3916
10	5960	5.4805	548.05	2.4682	0.3924
10	5970	5.4783	547.83	2.4710	0.3929
10	5980	5.4752	547.52	2.4749	0.3936
10	5990	5.4721	547.21	2.4789	0.3943
10	6000	5.4697	546.97	2.4819	0.3948
10	6010	5.4681	546.81	2.4840	0.3951
10	6020	5.4658	546.58	2.4869	0.3957
10	6030	5.463	546.30	2.4905	0.3963
10	6040	5.4595	545.95	2.4950	0.3971
10	6050	5.4566	545.66	2.4987	0.3977
10	6060	5.4552	545.52	2.5005	0.3980
10	6070	5.4517	545.17	2.5050	0.3988
10	6080	5.4493	544.93	2.5082	0.3994
10	6090	5.4477	544.77	2.5102	0.3997
10	6100	5.446	544.60	2.5125	0.4001
10	6110	5.4429	544.29	2.5165	0.4008
10	6120	5.4398	543.98	2.5206	0.4015
10	6130	5.4383	543.83	2.5225	0.4018
10	6140	5.4348	543.48	2.5272	0.4026
10	6150	5.433	543.30	2.5295	0.4030
10	6160	5.4303	543.03	2.5331	0.4037
10	6170	5.4275	542.75	2.5368	0.4043
10	6180	5.4258	542.58	2.5391	0.4047
10	6190	5.423	542.30	2.5428	0.4053
10	6200	5.4206	542.06	2.5460	0.4059
10	6210	5.4183	541.83	2.5491	0.4064
10	6220	5.416	541.60	2.5522	0.4069
10	6230	5.4137	541.37	2.5553	0.4074
10	6240	5.4107	541.07	2.5594	0.4081
10	6250	5.4096	540.96	2.5609	0.4084
10	6260	5.4067	540.67	2.5648	0.4091
10	6270	5.4037	540.37	2.5689	0.4097
10	6280	5.4011	540.11	2.5724	0.4103
10	6290	5.3996	539.96	2.5745	0.4107
10	6300	5.3966	539.66	2.5786	0.4114
10	6310	5.3935	539.35	2.5829	0.4121
10	6320	5.392	539.20	2.5849	0.4124
10	6330	5.3898	538.98	2.5880	0.4130
10	6340	5.3874	538.74	2.5913	0.4135
10	6350	5.3861	538.61	2.5931	0.4138
10	6360	5.3833	538.33	2.5970	0.4145
10	6370	5.3805	538.05	2.6009	0.4151
10	6380	5.3778	537.78	2.6047	0.4158
10	6390	5.3755	537.55	2.6079	0.4163
10	6400	5.3736	537.36	2.6106	0.4167
10	6410	5.3711	537.11	2.6141	0.4173
10	6420	5.3687	536.87	2.6175	0.4179
10	6430	5.3657	536.57	2.6218	0.4186
10	6440	5.3649	536.49	2.6229	0.4188
10	6450	5.3621	536.21	2.6269	0.4194
10	6460	5.3596	535.96	2.6305	0.4200
10	6470	5.3567	535.67	2.6346	0.4207
10	6480	5.3547	535.47	2.6375	0.4212
10	6490	5.3518	535.18	2.6417	0.4219
10	6500	5.3503	535.03	2.6438	0.4222
10	6510	5.3481	534.81	2.6470	0.4228
10	6520	5.3453	534.53	2.6511	0.4234
10	6530	5.3434	534.34	2.6538	0.4239
10	6540	5.3409	534.09	2.6575	0.4245
10	6550	5.3384	533.84	2.6611	0.4251
10	6560	5.3361	533.61	2.6645	0.4256
10	6570	5.3336	533.36	2.6682	0.4262
10	6580	5.3316	533.16	2.6711	0.4267
10	6590	5.3296	532.96	2.6741	0.4272
10	6600	5.3268	532.68	2.6782	0.4278
10	6610	5.3252	532.52	2.6806	0.4282
10	6620	5.3216	532.16	2.6859	0.4291
10	6630	5.3193	531.93	2.6894	0.4297
10	6640	5.3176	531.76	2.6919	0.4301
10	6650	5.3152	531.52	2.6955	0.4306
10	6660	5.3136	531.36	2.6979	0.4310
10	6670	5.3115	531.15	2.7011	0.4315
10	6680	5.3095	530.95	2.7041	0.4320
10	6690	5.3062	530.62	2.7091	0.4328
10	6700	5.3044	530.44	2.7118	0.4333
10	6710	5.3024	530.24	2.7149	0.4338
10	6720	5.3012	530.12	2.7167	0.4340
10	6730	5.2997	529.97	2.7190	0.4344
10	6740	5.297	529.70	2.7231	0.4351
10	6750	5.2942	529.42	2.7274	0.4358
10	6760	5.2927	529.27	2.7297	0.4361
10	6770	5.2902	529.02	2.7336	0.4367
10	6780	5.2881	528.81	2.7368	0.4372
10	6790	5.2864	528.64	2.7395	0.4377
10	6800	5.2838	528.38	2.7435	0.4383
10	6810	5.2817	528.17	2.7468	0.4388
10	6820	5.2805	528.05	2.7487	0.4391
10	6830	5.278	527.80	2.7526	0.4397
10	6840	5.2762	527.62	2.7554	0.4402
10	6850	5.2724	527.24	2.7614	0.4411
10	6860	5.2705	527.05	2.7644	0.4416
10	6870	5.2696	526.96	2.7658	0.4418
10	6880	5.2672	526.72	2.7696	0.4424
10	6890	5.2656	526.56	2.7721	0.4428
10	6900	5.2625	526.25	2.7770	0.4436
10	6910	5.2606	526.06	2.7801	0.4441
10	6920	5.2592	525.92	2.7823	0.4444
10	6930	5.2569	525.69	2.7860	0.4450
10	6940	5.2546	525.46	2.7897	0.4456
10	6950	5.2519	525.19	2.7940	0.4462
10	6960	5.2505	525.05	2.7963	0.4466
10	6970	5.2488	524.88	2.7991	0.4470
10	6980	5.2473	524.73	2.8015	0.4474
10	6990	5.2445	524.45	2.8060	0.4481
10	7000	5.2431	524.31	2.8083	0.4484
10	7010	5.2395	523.95	2.8142	0.4494
10	7020	5.2382	523.82	2.8163	0.4497
10	7030	5.2359	523.59	2.8201	0.4503
10	7040	5.2355	523.55	2.8208	0.4504
10	7050	5.2336	523.36	2.8239	0.4508
10	7060	5.2297	522.97	2.8303	0.4518
10	7070	5.2281	522.81	2.8330	0.4522
10	7080	5.2262	522.62	2.8361	0.4527
10	7090	5.2246	522.46	2.8388	0.4531
10	7100	5.2214	522.14	2.8441	0.4539
10	7110	5.249	524.90	2.7987	0.4470
10	7120	5.2472	524.72	2.8016	0.4474
10	7130	5.2449	524.49	2.8054	0.4480
10	7140	5.2417	524.17	2.8106	0.4488

10	7150	5.2398	523.98	2.8137	0.4493
10	7160	5.2385	523.85	2.8158	0.4496
10	7170	5.2366	523.66	2.8189	0.4501
10	7180	5.2344	523.44	2.8226	0.4506
10	7190	5.2331	523.31	2.8247	0.4510
10	7200	5.2303	523.03	2.8293	0.4517
10	7210	5.2286	522.86	2.8321	0.4521
10	7220	5.2257	522.57	2.8370	0.4529
10	7230	5.2246	522.46	2.8388	0.4531
10	7240	5.2216	522.16	2.8438	0.4539
10	7250	5.2202	522.02	2.8461	0.4543
10	7260	5.2187	521.87	2.8486	0.4546
10	7270	5.2171	521.71	2.8513	0.4550
10	7280	5.2151	521.51	2.8547	0.4556
10	7290	5.2125	521.25	2.8591	0.4562
10	7300	5.2104	521.04	2.8626	0.4568
10	7310	5.2091	520.91	2.8648	0.4571
10	7320	5.2072	520.72	2.8681	0.4576
10	7330	5.2056	520.56	2.8708	0.4580
10	7340	5.2035	520.35	2.8744	0.4585
10	7350	5.2005	520.05	2.8795	0.4593
10	7360	5.1989	519.89	2.8822	0.4597
10	7370	5.1973	519.73	2.8850	0.4601
10	7380	5.1956	519.56	2.8879	0.4606
10	7390	5.194	519.40	2.8907	0.4610
10	7400	5.1916	519.16	2.8948	0.4616
10	7410	5.1906	519.06	2.8966	0.4619
10	7420	5.188	518.80	2.9011	0.4626
10	7430	5.1862	518.62	2.9042	0.4630
10	7440	5.1846	518.46	2.9070	0.4634
10	7450	5.1825	518.25	2.9107	0.4640
10	7460	5.1793	517.93	2.9163	0.4648
10	7470	5.1787	517.87	2.9173	0.4650
10	7480	5.1764	517.64	2.9214	0.4656
10	7490	5.1748	517.48	2.9242	0.4660
10	7500	5.1726	517.26	2.9281	0.4666
10	7510	5.1704	517.04	2.9320	0.4672
10	7520	5.1691	516.91	2.9343	0.4675
10	7530	5.167	516.70	2.9381	0.4681
10	7540	5.1633	516.33	2.9447	0.4690
10	7550	5.1618	516.18	2.9474	0.4694
10	7560	5.1597	515.97	2.9511	0.4700
10	7570	5.1577	515.77	2.9548	0.4705
10	7580	5.1558	515.58	2.9582	0.4710
10	7590	5.1551	515.51	2.9595	0.4712
10	7600	5.1525	515.25	2.9642	0.4719
10	7610	5.1514	515.14	2.9662	0.4722
10	7620	5.1493	514.93	2.9700	0.4728
10	7630	5.1467	514.67	2.9747	0.4734
10	7640	5.1453	514.53	2.9773	0.4738
10	7650	5.1439	514.39	2.9799	0.4742
10	7660	5.1426	514.26	2.9823	0.4745
10	7670	5.1399	513.99	2.9872	0.4753
10	7680	5.1381	513.81	2.9905	0.4758
10	7690	5.1357	513.57	2.9950	0.4764
10	7700	5.1345	513.45	2.9972	0.4767
10	7710	5.1324	513.24	3.0011	0.4773
10	7720	5.1309	513.09	3.0039	0.4777
10	7730	5.1283	512.83	3.0088	0.4784
10	7740	5.1273	512.73	3.0106	0.4787
10	7750	5.1256	512.56	3.0138	0.4791
10	7760	5.1219	512.19	3.0208	0.4801
10	7770	5.1211	512.11	3.0223	0.4803
10	7780	5.1196	511.96	3.0251	0.4807
10	7790	5.1176	511.76	3.0289	0.4813
10	7800	5.1165	511.65	3.0310	0.4816
10	7810	5.1144	511.44	3.0350	0.4822
10	7820	5.1116	511.16	3.0403	0.4829
10	7830	5.1095	510.95	3.0444	0.4835
10	7840	5.1094	510.94	3.0445	0.4835
10	7850	5.1062	510.62	3.0507	0.4844
10	7860	5.1044	510.44	3.0542	0.4849
10	7870	5.1028	510.28	3.0572	0.4853
10	7880	5.1015	510.15	3.0598	0.4857
10	7890	5.099	509.90	3.0646	0.4864
10	7900	5.0969	509.69	3.0687	0.4870
10	7910	5.0966	509.66	3.0693	0.4870
10	7920	5.0939	509.39	3.0745	0.4878
10	7930	5.0918	509.18	3.0786	0.4884
10	7940	5.0911	509.11	3.0800	0.4886
10	7950	5.0885	508.85	3.0851	0.4893
10	7960	5.0871	508.71	3.0879	0.4897
10	7970	5.0845	508.45	3.0930	0.4904
10	7980	5.0825	508.25	3.0970	0.4909
10	7990	5.0809	508.09	3.1001	0.4914
10	8000	5.0797	507.97	3.1025	0.4917
10	8010	5.0775	507.75	3.1069	0.4923
10	8020	5.076	507.60	3.1099	0.4927
10	8030	5.0744	507.44	3.1131	0.4932
10	8040	5.0729	507.29	3.1161	0.4936
10	8050	5.0717	507.17	3.1185	0.4939
10	8060	5.0689	506.89	3.1242	0.4947
10	8070	5.0667	506.67	3.1286	0.4953
10	8080	5.0663	506.63	3.1294	0.4955
10	8090	5.0642	506.42	3.1337	0.4961
10	8100	5.0621	506.21	3.1379	0.4966
10	8110	5.061	506.10	3.1402	0.4970
10	8120	5.0591	505.91	3.1440	0.4975
10	8130	5.0565	505.65	3.1494	0.4982
10	8140	5.0555	505.55	3.1514	0.4985
10	8150	5.0531	505.31	3.1563	0.4992
10	8160	5.0522	505.22	3.1582	0.4994
10	8170	5.05	505.00	3.1627	0.5001
10	8180	5.0493	504.93	3.1642	0.5003
10	8190	5.0466	504.66	3.1698	0.5010
10	8200	5.0461	504.61	3.1708	0.5012
10	8210	5.0433	504.33	3.1767	0.5020
10	8220	5.042	504.20	3.1794	0.5023
10	8230	5.0411	504.11	3.1813	0.5026
10	8240	5.039	503.90	3.1856	0.5032
10	8250	5.0374	503.74	3.1890	0.5037
10	8260	5.0359	503.59	3.1922	0.5041
10	8270	5.0339	503.39	3.1964	0.5047
10	8280	5.03	503.00	3.2046	0.5058
10	8290	5.0278	502.78	3.2093	0.5064
10	8300	5.0262	502.62	3.2127	0.5069
10	8310	5.0264	502.64	3.2123	0.5068
10	8320	5.0238	502.38	3.2178	0.5076
10	8330	5.0221	502.21	3.2215	0.5081
10	8340	5.0198	501.98	3.2264	0.5087
10	8350	5.0188	501.88	3.2286	0.5090
10	8360	5.0169	501.69	3.2327	0.5096
10	8370	5.016	501.60	3.2346	0.5098

10	8380	5.014	501.40	3.2390	0.5104
10	8390	5.012	501.20	3.2433	0.5110
10	8400	5.0103	501.03	3.2470	0.5115
10	8410	5.0086	500.86	3.2507	0.5120
10	8420	5.0068	500.68	3.2546	0.5125
10	8430	5.0055	500.55	3.2575	0.5129
10	8440	5.0039	500.39	3.2610	0.5134
10	8450	5.0023	500.23	3.2645	0.5138
10	8460	5.0001	500.01	3.2694	0.5145
10	8470	4.9987	499.87	3.2725	0.5149
10	8480	4.9969	499.69	3.2765	0.5154
10	8490	4.9952	499.52	3.2802	0.5159
10	8500	4.9938	499.38	3.2833	0.5163
10	8510	4.9917	499.17	3.2880	0.5169
10	8520	4.991	499.10	3.2896	0.5171
10	8530	4.9896	498.96	3.2927	0.5176
10	8540	4.9874	498.74	3.2977	0.5182
10	8550	4.9852	498.52	3.3026	0.5189
10	8560	4.9835	498.35	3.3065	0.5194
10	8570	4.9823	498.23	3.3092	0.5197
10	8580	4.9807	498.07	3.3128	0.5202
10	8590	4.9787	497.87	3.3173	0.5208
10	8600	4.9771	497.71	3.3210	0.5213
10	8610	4.9765	497.65	3.3223	0.5214
10	8620	4.9745	497.45	3.3269	0.5220
10	8630	4.9722	497.22	3.3322	0.5227
10	8640	4.9703	497.03	3.3366	0.5233
10	8650	4.9686	496.86	3.3405	0.5238
10	8660	4.9672	496.72	3.3437	0.5242
10	8670	4.9658	496.58	3.3469	0.5246
10	8680	4.9637	496.37	3.3518	0.5253
10	8690	4.9623	496.23	3.3551	0.5257
10	8700	4.9612	496.12	3.3576	0.5260
10	8710	4.9591	495.91	3.3625	0.5267
10	8720	4.9581	495.81	3.3649	0.5270
10	8730	4.9563	495.63	3.3691	0.5275
10	8740	4.9548	495.48	3.3726	0.5280
10	8750	4.9525	495.25	3.3780	0.5287
10	8760	4.9513	495.13	3.3808	0.5290
10	8770	4.9502	495.02	3.3834	0.5294
10	8780	4.9478	494.78	3.3891	0.5301
10	8790	4.9468	494.68	3.3915	0.5304
10	8800	4.9445	494.50	3.3958	0.5309
10	8810	4.9437	494.37	3.3989	0.5313
10	8820	4.9415	494.15	3.4042	0.5320
10	8830	4.9407	494.07	3.4061	0.5323
10	8840	4.9381	493.81	3.4123	0.5330
10	8850	4.9378	493.78	3.4130	0.5331
10	8860	4.935	493.50	3.4198	0.5340
10	8870	4.933	493.30	3.4246	0.5346
10	8880	4.9317	493.17	3.4278	0.5350
10	8890	4.9315	493.15	3.4283	0.5351
10	8900	4.9292	492.92	3.4339	0.5358
10	8910	4.9268	492.68	3.4397	0.5365
10	8920	4.9263	492.63	3.4409	0.5367
10	8930	4.9243	492.43	3.4458	0.5373
10	8940	4.9223	492.23	3.4508	0.5379
10	8950	4.9215	492.15	3.4527	0.5382
10	8960	4.9194	491.94	3.4579	0.5388
10	8970	4.9167	491.67	3.4646	0.5397
10	8980	4.9157	491.57	3.4671	0.5400
10	8990	4.9134	491.34	3.4728	0.5407
10	9000	4.9121	491.21	3.4760	0.5411
10	9010	4.9107	491.07	3.4795	0.5415
10	9020	4.9094	490.94	3.4828	0.5419
10	9030	4.9087	490.87	3.4846	0.5421
10	9040	4.906	490.60	3.4913	0.5430
10	9050	4.9051	490.51	3.4936	0.5433
10	9060	4.9038	490.38	3.4969	0.5437
10	9070	4.9026	490.26	3.4999	0.5441
10	9080	4.9012	490.12	3.5035	0.5445
10	9090	4.8982	489.82	3.5111	0.5454
10	9100	4.8971	489.71	3.5139	0.5458
10	9110	4.8957	489.57	3.5175	0.5462
10	9120	4.8944	489.44	3.5208	0.5466
10	9130	4.892	489.20	3.5270	0.5474
10	9140	4.8904	489.04	3.5311	0.5479
10	9150	4.8891	488.91	3.5344	0.5483
10	9160	4.8866	488.66	3.5409	0.5491
10	9170	4.8856	488.56	3.5435	0.5494
10	9180	4.8838	488.38	3.5482	0.5500
10	9190	4.8833	488.33	3.5495	0.5502
10	9200	4.881	488.10	3.5555	0.5509
10	9210	4.8795	487.95	3.5594	0.5514
10	9220	4.8771	487.71	3.5657	0.5521
10	9230	4.8768	487.68	3.5665	0.5522
10	9240	4.8745	487.45	3.5725	0.5530
10	9250	4.8731	487.31	3.5762	0.5534
10	9260	4.8719	487.19	3.5794	0.5538
10	9270	4.8709	487.09	3.5821	0.5541
10	9280	4.8691	486.91	3.5868	0.5547
10	9290	4.8666	486.66	3.5935	0.5555
10	9300	4.8656	486.56	3.5962	0.5558
10	9310	4.8639	486.39	3.6007	0.5564
10	9320	4.8627	486.27	3.6039	0.5568
10	9330	4.8608	486.08	3.6090	0.5574
10	9340	4.8595	485.95	3.6125	0.5578
10	9350	4.8588	485.88	3.6144	0.5580
10	9360	4.856	485.60	3.6220	0.5589
10	9370	4.8548	485.48	3.6253	0.5593
10	9380	4.8535	485.35	3.6288	0.5598
10	9390	4.8522	485.22	3.6323	0.5602
10	9400	4.8502	485.02	3.6378	0.5608
10	9410	4.8489	484.89	3.6414	0.5613
10	9420	4.8473	484.73	3.6457	0.5618
10	9430	4.8455	484.55	3.6507	0.5624
10	9440	4.8443	484.43	3.6540	0.5628
10	9450	4.8423	484.23	3.6595	0.5634
10	9460	4.8404	484.04	3.6648	0.5641
10	9470	4.8407	484.07	3.6640	0.5640
10	9480	4.8377	483.77	3.6723	0.5649
10	9490	4.8368	483.68	3.6748	0.5652
10	9500	4.8349	483.49	3.6801	0.5659
10	9510	4.8335	483.35	3.6841	0.5663
10	9520	4.8321	483.21	3.6880	0.5668
10	9530	4.83	483.00	3.6939	0.5675
10	9540	4.8294	482.94	3.6956	0.5677
10	9550	4.8276	482.76	3.7007	0.5683
10	9560	4.826	482.60	3.7052	0.5688
10	9570	4.8257	482.57	3.7061	0.5689
10	9580	4.8227	482.27	3.7146	0.5699
10	9590	4.82	482.00	3.7223	0.5708
10	9600	4.82	482.00	3.7223	0.5708

10	9610	4.8184	481.84	3.7269	0.5713
10	9620	4.8172	481.72	3.7303	0.5717
10	9630	4.8154	481.54	3.7355	0.5724
10	9640	4.8134	481.34	3.7413	0.5730
10	9650	4.8118	481.18	3.7459	0.5736
10	9660	4.8117	481.17	3.7462	0.5736
10	9670	4.8092	480.92	3.7535	0.5744
10	9680	4.8087	480.87	3.7549	0.5746
10	9690	4.8069	480.69	3.7602	0.5752
10	9700	4.8051	480.51	3.7655	0.5758
10	9710	4.8032	480.32	3.7710	0.5765
10	9720	4.8028	480.28	3.7722	0.5766
10	9730	4.8004	480.04	3.7793	0.5774
10	9740	4.7988	479.88	3.7840	0.5780
10	9750	4.7978	479.78	3.7870	0.5783
10	9760	4.7951	479.51	3.7950	0.5792
10	9770	4.7942	479.42	3.7977	0.5795
10	9780	4.7928	479.28	3.8019	0.5800
10	9790	4.7916	479.16	3.8054	0.5804
10	9800	4.7904	479.04	3.8090	0.5808
10	9810	4.7901	479.01	3.8099	0.5809
10	9820	4.7866	478.66	3.8205	0.5821
10	9830	4.7858	478.58	3.8229	0.5824
10	9840	4.7848	478.48	3.8259	0.5827
10	9850	4.7824	478.24	3.8332	0.5836
10	9860	4.7818	478.18	3.8350	0.5838
10	9870	4.78	478.00	3.8405	0.5844
10	9880	4.7789	477.89	3.8438	0.5848
10	9890	4.7784	477.84	3.8454	0.5849
10	9900	4.7756	477.56	3.8539	0.5859
10	9910	4.7743	477.43	3.8579	0.5864
10	9920	4.7734	477.34	3.8607	0.5867
10	9930	4.7704	477.04	3.8700	0.5877
10	9940	4.7709	477.09	3.8684	0.5875
10	9950	4.768	476.80	3.8774	0.5885
10	9960	4.7671	476.71	3.8802	0.5889
10	9970	4.7656	476.56	3.8849	0.5894
10	9980	4.7643	476.43	3.8889	0.5898
10	9990	4.7624	476.24	3.8949	0.5905
10	10000	4.761	476.10	3.8993	0.5910
10	10010	4.76	476.00	3.9024	0.5913
10	10020	4.7578	475.78	3.9094	0.5921
10	10030	4.7575	475.75	3.9103	0.5922
10	10040	4.757	475.70	3.9119	0.5924
10	10050	4.7544	475.44	3.9201	0.5933
10	10060	4.7531	475.31	3.9243	0.5938
10	10070	4.7509	475.09	3.9313	0.5945
10	10080	4.7504	475.04	3.9329	0.5947
10	10090	4.7479	474.79	3.9409	0.5956
10	10100	4.7467	474.67	3.9447	0.5960
10	10110	4.7452	474.52	3.9496	0.5965
10	10120	4.7445	474.45	3.9518	0.5968
10	10130	4.743	474.30	3.9567	0.5973
10	10140	4.7411	474.11	3.9628	0.5980
10	10150	4.7416	474.16	3.9612	0.5978
10	10160	4.7376	473.76	3.9742	0.5993
10	10170	4.7375	473.75	3.9745	0.5993
10	10180	4.7352	473.52	3.9821	0.6001
10	10190	4.7339	473.39	3.9863	0.6006
10	10200	4.7327	473.27	3.9903	0.6010
10	10210	4.7322	473.22	3.9919	0.6012
10	10220	4.7303	473.03	3.9982	0.6019
10	10230	4.7296	472.96	4.0005	0.6021
10	10240	4.7288	472.88	4.0031	0.6024
10	10250	4.7264	472.64	4.0111	0.6033
10	10260	4.7245	472.45	4.0174	0.6039
10	10270	4.7231	472.31	4.0221	0.6045
10	10280	4.7216	472.16	4.0271	0.6050
10	10290	4.7205	472.05	4.0308	0.6054
10	10300	4.7197	471.97	4.0335	0.6057
10	10310	4.7167	471.67	4.0436	0.6068
10	10320	4.7154	471.54	4.0480	0.6072
10	10330	4.7158	471.58	4.0467	0.6071
10	10340	4.7135	471.35	4.0545	0.6079
10	10350	4.7116	471.16	4.0609	0.6086
10	10360	4.7098	470.98	4.0671	0.6093
10	10370	4.7096	470.96	4.0678	0.6094
10	10380	4.7081	470.81	4.0729	0.6099
10	10390	4.7069	470.69	4.0770	0.6103
10	10400	4.7058	470.58	4.0808	0.6107
10	10410	4.7043	470.43	4.0860	0.6113
10	10420	4.7031	470.31	4.0901	0.6117
10	10430	4.7007	470.07	4.0984	0.6126
10	10440	4.6994	469.94	4.1029	0.6131
10	10450	4.6978	469.78	4.1085	0.6137
10	10460	4.6966	469.66	4.1127	0.6141
10	10470	4.6962	469.62	4.1141	0.6143
10	10480	4.6943	469.43	4.1208	0.6150
10	10490	4.6918	469.18	4.1295	0.6159
10	10500	4.6921	469.21	4.1285	0.6158
10	10510	4.6903	469.03	4.1348	0.6165
10	10520	4.6896	468.96	4.1373	0.6167
10	10530	4.6879	468.79	4.1433	0.6173
10	10540	4.6861	468.61	4.1497	0.6180
10	10550	4.685	468.50	4.1536	0.6184
10	10560	4.6841	468.41	4.1569	0.6188
10	10570	4.6817	468.17	4.1654	0.6197
10	10580	4.6804	468.04	4.1701	0.6201
10	10590	4.6794	467.94	4.1737	0.6205
10	10600	4.6783	467.83	4.1777	0.6209
10	10610	4.6765	467.65	4.1842	0.6216
10	10620	4.6752	467.52	4.1889	0.6221
10	10630	4.6738	467.38	4.1940	0.6226
10	10640	4.6727	467.27	4.1980	0.6230
10	10650	4.6703	467.03	4.2067	0.6239
10	10660	4.6696	466.96	4.2093	0.6242
10	10670	4.6692	466.92	4.2108	0.6244
10	10680	4.6676	466.76	4.2166	0.6250
10	10690	4.6654	466.54	4.2247	0.6258
10	10700	4.6647	466.47	4.2273	0.6261
10	10710	4.6644	466.44	4.2284	0.6262
10	10720	4.6616	466.16	4.2388	0.6272
10	10730	4.6605	466.05	4.2429	0.6277
10	10740	4.6598	465.98	4.2455	0.6279
10	10750	4.6581	465.81	4.2518	0.6286
10	10760	4.6566	465.66	4.2574	0.6291
10	10770	4.6552	465.52	4.2627	0.6297
10	10780	4.6535	465.35	4.2691	0.6303
10	10790	4.6526	465.26	4.2725	0.6307
10	10800	4.6507	465.07	4.2796	0.6314
10	10810	4.649	464.90	4.2861	0.6321
10	10820	4.6484	464.84	4.2884	0.6323
10	10830	4.6465	464.65	4.2956	0.6330

10	10840	4.646	464.60	4.2975	0.6332
10	10850	4.6439	464.39	4.3055	0.6340
10	10860	4.6433	464.33	4.3078	0.6343
10	10870	4.6423	464.23	4.3117	0.6346
10	10880	4.6413	464.13	4.3155	0.6350
10	10890	4.6397	463.97	4.3217	0.6357
10	10900	4.6372	463.72	4.3314	0.6366
10	10910	4.6363	463.63	4.3349	0.6370
10	10920	4.6348	463.48	4.3407	0.6376
10	10930	4.6329	463.29	4.3481	0.6383
10	10940	4.633	463.30	4.3477	0.6383
10	10950	4.6306	463.06	4.3571	0.6392
10	10960	4.6284	462.84	4.3658	0.6401
10	10970	4.6266	462.66	4.3729	0.6408
10	10980	4.627	462.70	4.3713	0.6406
10	10990	4.6253	462.53	4.3780	0.6413
10	11000	4.6231	462.31	4.3867	0.6421
10	11010	4.6226	462.26	4.3887	0.6423
10	11020	4.6208	462.08	4.3959	0.6430
10	11030	4.6199	461.99	4.3955	0.6434
10	11040	4.6195	461.95	4.4011	0.6436
10	11050	4.6179	461.79	4.4075	0.6442
10	11060	4.616	461.60	4.4151	0.6449
10	11070	4.6151	461.51	4.4188	0.6453
10	11080	4.613	461.30	4.4273	0.6461
10	11090	4.6122	461.22	4.4305	0.6465
10	11100	4.6111	461.11	4.4350	0.6469
10	11110	4.6092	460.92	4.4427	0.6476
10	11120	4.6073	460.73	4.4505	0.6484
10	11130	4.6072	460.72	4.4509	0.6484
10	11140	4.6045	460.45	4.4620	0.6495
10	11150	4.6042	460.42	4.4632	0.6496
10	11160	4.6019	460.19	4.4727	0.6506
10	11170	4.6016	460.16	4.4739	0.6507
10	11180	4.5997	459.97	4.4818	0.6515
10	11190	4.5992	459.92	4.4839	0.6517
10	11200	4.5979	459.79	4.4893	0.6522
10	11210	4.5964	459.64	4.4955	0.6528
10	11220	4.5949	459.49	4.5018	0.6534
10	11230	4.5943	459.43	4.5043	0.6536
10	11240	4.5917	459.17	4.5153	0.6547
10	11250	4.5879	458.79	4.5313	0.6562
10	11260	4.587	458.70	4.5351	0.6566
10	11270	4.5869	458.69	4.5356	0.6566
10	11280	4.5851	458.51	4.5432	0.6574
10	11290	4.5834	458.34	4.5505	0.6581
10	11300	4.5816	458.16	4.5582	0.6588
10	11310	4.5807	458.07	4.5621	0.6592
10	11320	4.5806	458.06	4.5625	0.6592
10	11330	4.5784	457.84	4.5720	0.6601
10	11340	4.5778	457.78	4.5746	0.6604
10	11350	4.576	457.60	4.5824	0.6611
10	11360	4.5746	457.46	4.5885	0.6617
10	11370	4.5731	457.31	4.5950	0.6623
10	11380	4.5728	457.28	4.5963	0.6624
10	11390	4.5713	457.13	4.6029	0.6630
10	11400	4.5696	456.96	4.6103	0.6637
10	11410	4.5689	456.89	4.6134	0.6640
10	11420	4.5683	456.83	4.6160	0.6643
10	11430	4.5659	456.59	4.6266	0.6653
10	11440	4.5651	456.51	4.6302	0.6656
10	11450	4.5633	456.33	4.6382	0.6663
10	11460	4.5622	456.22	4.6431	0.6668
10	11470	4.5612	456.12	4.6475	0.6672
10	11480	4.5596	455.96	4.6547	0.6679
10	11490	4.5582	455.82	4.6610	0.6685
10	11500	4.557	455.70	4.6663	0.6690
10	11510	4.5559	455.59	4.6713	0.6694
10	11520	4.5546	455.46	4.6772	0.6700
10	11530	4.5535	455.35	4.6821	0.6704
10	11540	4.5516	455.16	4.6908	0.6712
10	11550	4.5515	455.15	4.6912	0.6713
10	11560	4.5497	454.97	4.6994	0.6720
10	11570	4.5485	454.85	4.7049	0.6726
10	11580	4.5482	454.82	4.7063	0.6727
10	11590	4.5457	454.57	4.7178	0.6737
10	11600	4.5453	454.53	4.7196	0.6739
10	11610	4.5443	454.43	4.7242	0.6743
10	11620	4.5426	454.26	4.7321	0.6750
10	11630	4.5415	454.15	4.7372	0.6755
10	11640	4.5401	454.01	4.7437	0.6761
10	11650	4.5382	453.82	4.7525	0.6769
10	11660	4.5375	453.75	4.7558	0.6772
10	11670	4.5368	453.68	4.7590	0.6775
10	11680	4.5354	453.54	4.7656	0.6781
10	11690	4.5344	453.44	4.7703	0.6785
10	11700	4.5334	453.34	4.7750	0.6790
10	11710	4.5316	453.16	4.7835	0.6797
10	11720	4.5301	453.01	4.7906	0.6804
10	11730	4.5288	452.88	4.7968	0.6810
10	11740	4.5281	452.81	4.8001	0.6813
10	11750	4.5268	452.68	4.8063	0.6818
10	11760	4.5254	452.54	4.8130	0.6824
10	11770	4.5245	452.45	4.8173	0.6828
10	11780	4.5241	452.41	4.8192	0.6830
10	11790	4.5213	452.13	4.8327	0.6842
10	11800	4.5212	452.12	4.8332	0.6842
10	11810	4.52	452.00	4.8390	0.6848
10	11820	4.5194	451.94	4.8419	0.6850
10	11830	4.5175	451.75	4.8511	0.6858
10	11840	4.5156	451.56	4.8604	0.6867
10	11850	4.5144	451.44	4.8663	0.6872
10	11860	4.5129	451.29	4.8736	0.6879
10	11870	4.5127	451.27	4.8746	0.6879
10	11880	4.5111	451.11	4.8825	0.6886
10	11890	4.5102	451.02	4.8869	0.6890
10	11900	4.509	450.90	4.8928	0.6896
10	11910	4.5075	450.75	4.9003	0.6902
10	11920	4.506	450.60	4.9077	0.6909
10	11930	4.5054	450.54	4.9107	0.6911
10	11940	4.5043	450.43	4.9162	0.6916
10	11950	4.5029	450.29	4.9232	0.6922
10	11960	4.5024	450.24	4.9257	0.6925
10	11970	4.5009	450.09	4.9332	0.6931
10	11980	4.4997	449.97	4.9393	0.6937
10	11990	4.4977	449.77	4.9494	0.6946
10	12000	4.4971	449.71	4.9524	0.6948
10	12010	4.4961	449.61	4.9575	0.6953
10	12020	4.495	449.50	4.9631	0.6958
10	12030	4.4937	449.37	4.9697	0.6963
10	12040	4.4922	449.22	4.9774	0.6970
10	12050	4.4907	449.07	4.9851	0.6977
10	12060	4.4895	448.95	4.9912	0.6982

10	12070	4.4889	448.89	4.9943	0.6985
10	12080	4.4877	448.77	5.0005	0.6990
10	12090	4.486	448.60	5.0093	0.6998
10	12100	4.4845	448.45	5.0171	0.7005
10	12110	4.4842	448.42	5.0187	0.7006
10	12120	4.4823	448.23	5.0286	0.7014
10	12130	4.4816	448.16	5.0322	0.7018
10	12140	4.4806	448.06	5.0375	0.7022
10	12150	4.4804	448.04	5.0385	0.7023
10	12160	4.4783	447.83	5.0496	0.7033
10	12170	4.4782	447.82	5.0501	0.7033
10	12180	4.4769	447.69	5.0570	0.7039
10	12190	4.4753	447.53	5.0654	0.7046
10	12200	4.4737	447.37	5.0739	0.7053
10	12210	4.4735	447.35	5.0750	0.7054
10	12220	4.47	447.00	5.0937	0.7070
10	12230	4.4705	447.05	5.0910	0.7068
10	12240	4.4687	446.87	5.1007	0.7076
10	12250	4.4678	446.78	5.1055	0.7080
10	12260	4.4656	446.56	5.1174	0.7090
10	12270	4.4647	446.47	5.1223	0.7095
10	12280	4.4652	446.52	5.1196	0.7092
10	12290	4.4631	446.31	5.1310	0.7102
10	12300	4.462	446.20	5.1369	0.7107
10	12310	4.4609	446.09	5.1429	0.7112
10	12320	4.46	446.00	5.1479	0.7116
10	12330	4.4585	445.85	5.1561	0.7123
10	12340	4.4579	445.79	5.1594	0.7126
10	12350	4.4564	445.64	5.1677	0.7133
10	12360	4.455	445.50	5.1754	0.7139
10	12370	4.4542	445.42	5.1798	0.7143
10	12380	4.4521	445.21	5.1915	0.7153
10	12390	4.4525	445.25	5.1893	0.7151
10	12400	4.4508	445.08	5.1988	0.7159
10	12410	4.4495	444.95	5.2060	0.7165
10	12420	4.4497	444.97	5.2049	0.7164
10	12430	4.4472	444.72	5.2189	0.7176
10	12440	4.4465	444.65	5.2229	0.7179
10	12450	4.4452	444.52	5.2302	0.7185
10	12460	4.4443	444.43	5.2353	0.7189
10	12470	4.4431	444.31	5.2421	0.7195
10	12480	4.4409	444.09	5.2546	0.7205
10	12490	4.44	444.00	5.2598	0.7210
10	12500	4.44	444.00	5.2598	0.7210
10	12510	4.438	443.80	5.2712	0.7219
10	12520	4.4364	443.64	5.2804	0.7227
10	12530	4.4366	443.66	5.2793	0.7226
10	12540	4.4351	443.51	5.2879	0.7233
10	12550	4.4335	443.35	5.2972	0.7240
10	12560	4.4334	443.34	5.2978	0.7241
10	12570	4.4313	443.13	5.3100	0.7251
10	12580	4.4314	443.14	5.3094	0.7250
10	12590	4.4293	442.93	5.3217	0.7260
10	12600	4.4272	442.72	5.3340	0.7271
10	12610	4.4271	442.71	5.3346	0.7271
10	12620	4.426	442.60	5.3411	0.7276
10	12630	4.4255	442.55	5.3440	0.7279
10	12640	4.4248	442.48	5.3481	0.7282
10	12650	4.4219	442.19	5.3653	0.7296
10	12660	4.4215	442.15	5.3677	0.7298
10	12670	4.4196	441.96	5.3791	0.7307
10	12680	4.4188	441.88	5.3838	0.7311
10	12690	4.4167	441.67	5.3965	0.7321
10	12700	4.4159	441.59	5.4013	0.7325
10	12710	4.4155	441.55	5.4037	0.7327
10	12720	4.4144	441.44	5.4103	0.7332
10	12730	4.414	441.40	5.4128	0.7334
10	12740	4.4113	441.13	5.4291	0.7347
10	12750	4.4104	441.04	5.4346	0.7352
10	12760	4.4104	441.04	5.4346	0.7352
10	12770	4.4085	440.85	5.4463	0.7361
10	12780	4.4076	440.76	5.4518	0.7365
10	12790	4.4062	440.62	5.4604	0.7372
10	12800	4.4043	440.43	5.4721	0.7382
10	12810	4.4046	440.46	5.4703	0.7380
10	12820	4.4025	440.25	5.4833	0.7390
10	12830	4.4018	440.18	5.4876	0.7394
10	12840	4.3997	439.97	5.5007	0.7404
10	12850	4.3998	439.98	5.5001	0.7404
10	12860	4.3988	439.88	5.5064	0.7409
10	12870	4.3977	439.77	5.5133	0.7414
10	12880	4.3965	439.65	5.5208	0.7420
10	12890	4.3949	439.49	5.5309	0.7428
10	12900	4.3948	439.48	5.5316	0.7428
10	12910	4.393	439.30	5.5430	0.7437
10	12920	4.3926	439.26	5.5455	0.7439
10	12930	4.3913	439.13	5.5538	0.7446
10	12940	4.3901	439.01	5.5614	0.7452
10	12950	4.3884	438.84	5.5723	0.7460
10	12960	4.3874	438.74	5.5787	0.7465
10	12970	4.3862	438.62	5.5865	0.7471
10	12980	4.3855	438.55	5.5910	0.7475
10	12990	4.3837	438.37	5.6026	0.7484
10	13000	4.383	438.30	5.6072	0.7487
10	13010	4.3757	437.57	5.6550	0.7524
10	13020	4.3722	437.22	5.6782	0.7542
10	13030	4.371	437.10	5.6863	0.7548
10	13040	4.3697	436.97	5.6950	0.7555
10	13050	4.369	436.90	5.6996	0.7558
10	13060	4.3516	435.16	5.8189	0.7648
10	13070	4.3515	435.15	5.8196	0.7649
10	13080	4.3503	435.03	5.8280	0.7655
10	13090	4.3488	434.88	5.8386	0.7663
10	13100	4.3479	434.79	5.8449	0.7668
10	13110	4.3469	434.69	5.8520	0.7673
10	13120	4.3449	434.49	5.8662	0.7684
10	13130	4.3455	434.55	5.8619	0.7680
10	13140	4.3442	434.42	5.8711	0.7687
10	13150	4.3428	434.28	5.8811	0.7695
10	13160	4.3414	434.14	5.8912	0.7702
10	13170	4.3405	434.05	5.8976	0.7707
10	13180	4.3408	434.08	5.8955	0.7705
10	13190	4.3388	433.88	5.9099	0.7716
10	13200	4.3389	433.89	5.9091	0.7715
10	13210	4.3357	433.57	5.9323	0.7732
10	13220	4.3358	433.58	5.9316	0.7732
10	13230	4.3358	433.58	5.9316	0.7732
10	13240	4.3342	433.42	5.9433	0.7740
10	13250	4.3327	433.27	5.9542	0.7748
10	13260	4.3324	433.24	5.9564	0.7750
10	13270	4.3317	433.17	5.9616	0.7754
10	13280	4.3308	433.08	5.9682	0.7758
10	13290	4.3281	432.81	5.9881	0.7773



10	13300	4.328	432.80	5.9889	0.7773
10	13310	4.3269	432.69	5.9970	0.7779
10	13320	4.3265	432.65	6.0000	0.7782
10	13330	4.3259	432.59	6.0045	0.7785
10	13340	4.3246	432.46	6.0142	0.7792
10	13350	4.3235	432.35	6.0224	0.7798
10	13360	4.3225	432.25	6.0299	0.7803
10	13370	4.3214	432.14	6.0382	0.7809
10	13380	4.3204	432.04	6.0457	0.7814
10	13390	4.3185	431.85	6.0601	0.7825
10	13400	4.3184	431.84	6.0609	0.7825
10	13410	4.3174	431.74	6.0685	0.7831
10	13420	4.3166	431.66	6.0746	0.7835
10	13430	4.3141	431.41	6.0937	0.7849
10	13440	4.314	431.40	6.0945	0.7849
10	13450	4.3129	431.29	6.1029	0.7855
10	13460	4.3125	431.25	6.1060	0.7858
10	13470	4.3113	431.13	6.1153	0.7864
10	13480	4.3093	430.93	6.1307	0.7875
10	13490	4.3101	431.01	6.1245	0.7871
10	13500	4.3075	430.75	6.1448	0.7885
10	13510	4.3065	430.65	6.1526	0.7891
10	13520	4.3057	430.57	6.1588	0.7895
10	13530	4.305	430.50	6.1643	0.7899
10	13540	4.3039	430.39	6.1730	0.7905
10	13550	4.3031	430.31	6.1793	0.7909
10	13560	4.3019	430.19	6.1888	0.7916
10	13570	4.3009	430.09	6.1967	0.7922
10	13580	4.2999	429.99	6.2046	0.7927
10	13590	4.3004	430.04	6.2007	0.7924
10	13600	4.2984	429.84	6.2166	0.7936
10	13610	4.2981	429.81	6.2190	0.7937
10	13620	4.2966	429.66	6.2310	0.7946
10	13630	4.2958	429.58	6.2374	0.7950
10	13640	4.2955	429.55	6.2398	0.7952
10	13650	4.294	429.40	6.2519	0.7960
10	13660	4.2931	429.31	6.2592	0.7965
10	13670	4.2915	429.15	6.2722	0.7974
10	13680	4.2904	429.04	6.2812	0.7980
10	13690	4.2899	428.99	6.2852	0.7983
10	13700	4.2888	428.88	6.2942	0.7989
10	13710	4.2879	428.79	6.3016	0.7995
10	13720	4.2861	428.61	6.3164	0.8005
10	13730	4.2852	428.52	6.3238	0.8010
10	13740	4.2853	428.53	6.3230	0.8009
10	13750	4.2845	428.45	6.3296	0.8014
10	13760	4.2838	428.38	6.3354	0.8018
10	13770	4.2819	428.19	6.3512	0.8029
10	13780	4.2815	428.15	6.3546	0.8031
10	13790	4.2801	428.01	6.3663	0.8039
10	13800	4.279	427.90	6.3755	0.8045
10	13810	4.2786	427.86	6.3789	0.8047
10	13820	4.2775	427.75	6.3881	0.8054
10	13830	4.2768	427.68	6.3940	0.8058
10	13840	4.2757	427.57	6.4033	0.8064
10	13850	4.2751	427.51	6.4084	0.8068
10	13860	4.2736	427.36	6.4212	0.8076
10	13870	4.2729	427.29	6.4271	0.8080
10	13880	4.2724	427.24	6.4314	0.8083
10	13890	4.2707	427.07	6.4460	0.8093
10	13900	4.269	426.90	6.4606	0.8103
10	13910	4.2692	426.92	6.4589	0.8102
10	13920	4.269	426.90	6.4606	0.8103
10	13930	4.2667	426.67	6.4805	0.8116
10	13940	4.2654	426.54	6.4918	0.8124
10	13950	4.2649	426.49	6.4962	0.8127
10	13960	4.2634	426.34	6.5093	0.8135
10	13970	4.262	426.20	6.5216	0.8144
10	13980	4.2622	426.22	6.5198	0.8142
10	13990	4.2607	426.07	6.5330	0.8151
10	14000	4.2584	425.84	6.5534	0.8165
10	14010	4.2587	425.87	6.5507	0.8163
10	14020	4.2595	425.95	6.5436	0.8158
10	14030	4.2574	425.74	6.5622	0.8171
10	14040	4.2554	425.54	6.5801	0.8182
10	14050	4.2546	425.46	6.5873	0.8187
10	14060	4.2547	425.47	6.5864	0.8186
10	14070	4.2533	425.33	6.5989	0.8195
10	14080	4.2531	425.31	6.6007	0.8196
10	14090	4.2512	425.12	6.6179	0.8207
10	14100	4.2507	425.07	6.6224	0.8210
10	14110	4.2493	424.93	6.6351	0.8218
10	14120	4.248	424.80	6.6470	0.8226
10	14130	4.2481	424.81	6.6461	0.8226
10	14140	4.247	424.70	6.6561	0.8232
10	14150	4.2456	424.56	6.6690	0.8241
10	14160	4.2453	424.53	6.6717	0.8242
10	14170	4.2441	424.41	6.6828	0.8250
10	14180	4.2431	424.31	6.6920	0.8256
10	14190	4.2421	424.21	6.7013	0.8262
10	14200	4.2417	424.17	6.7050	0.8264
10	14210	4.2398	423.98	6.7227	0.8275
10	14220	4.2395	423.95	6.7255	0.8277
10	14230	4.2378	423.78	6.7414	0.8288
10	14240	4.2378	423.78	6.7414	0.8288
10	14250	4.2369	423.69	6.7499	0.8293
10	14260	4.2359	423.59	6.7593	0.8299
10	14270	4.2357	423.57	6.7612	0.8300
10	14280	4.2341	423.41	6.7764	0.8310
10	14290	4.2334	423.34	6.7830	0.8314
10	14300	4.2313	423.13	6.8030	0.8327
10	14310	4.2311	423.11	6.8050	0.8328
10	14320	4.2305	423.05	6.8107	0.8332
10	14330	4.23	423.00	6.8155	0.8335
10	14340	4.2285	422.85	6.8299	0.8344
10	14350	4.2273	422.73	6.8415	0.8352
10	14360	4.2265	422.65	6.8493	0.8356
10	14370	4.2258	422.58	6.8560	0.8361
10	14380	4.2251	422.51	6.8629	0.8365
10	14390	4.2241	422.41	6.8726	0.8371
10	14400	4.2226	422.26	6.8873	0.8380
10	14410	4.2213	422.13	6.9000	0.8389
10	14420	4.2197	421.97	6.9158	0.8398
10	14430	4.2198	421.98	6.9148	0.8398
10	14440	4.2201	422.01	6.9119	0.8396
10	14450	4.2188	421.88	6.9247	0.8404
10	14460	4.2163	421.63	6.9496	0.8420
10	14470	4.2161	421.61	6.9516	0.8421
10	14480	4.2147	421.47	6.9656	0.8430
10	14490	4.2147	421.47	6.9656	0.8430
10	14500	4.2135	421.35	6.9776	0.8437
10	14510	4.2118	421.18	6.9948	0.8448
10	14520	4.2121	421.21	6.9918	0.8446

10	14530	4.2104	421.04	7.0090	0.8457
10	14540	4.2096	420.96	7.0171	0.8462
10	14550	4.2079	420.79	7.0345	0.8472
10	14560	4.2079	420.79	7.0345	0.8472
10	14570	4.2021	420.21	7.0943	0.8509
10	14580	4.2009	420.09	7.1068	0.8517
10	14590	4.2	420.00	7.1162	0.8522
10	14600	4.1997	419.97	7.1193	0.8524
10	14610	4.1986	419.86	7.1309	0.8531
10	14620	4.1979	419.79	7.1382	0.8536
10	14630	4.1971	419.71	7.1467	0.8541
10	14640	4.1968	419.68	7.1498	0.8543
10	14650	4.1953	419.53	7.1657	0.8553
10	14660	4.1948	419.48	7.1710	0.8556
10	14670	4.1931	419.31	7.1891	0.8567
10	14680	4.1927	419.27	7.1934	0.8569
10	14690	4.1916	419.16	7.2052	0.8576
10	14700	4.1905	419.05	7.2170	0.8584
10	14710	4.1906	419.06	7.2159	0.8583
10	14720	4.1895	418.95	7.2278	0.8590
10	14730	4.1881	418.81	7.2429	0.8599
10	14740	4.1878	418.78	7.2462	0.8601
10	14750	4.1862	418.62	7.2636	0.8612
10	14760	4.1862	418.62	7.2636	0.8612
10	14770	4.1847	418.47	7.2800	0.8621
10	14780	4.1828	418.28	7.3008	0.8634
10	14790	4.1828	418.28	7.3008	0.8634
10	14800	4.1825	418.25	7.3042	0.8636
10	14810	4.1809	418.09	7.3218	0.8646
10	14820	4.1803	418.03	7.3285	0.8650
10	14830	4.1783	417.83	7.3508	0.8663
10	14840	4.1789	417.89	7.3441	0.8659
10	14850	4.1767	417.67	7.3687	0.8674
10	14860	4.1766	417.66	7.3698	0.8675
10	14870	4.1764	417.64	7.3720	0.8676
10	14880	4.1757	417.57	7.3799	0.8681
10	14890	4.1743	417.43	7.3957	0.8690
10	14900	4.1733	417.33	7.4070	0.8696
10	14910	4.1731	417.31	7.4093	0.8698
10	14920	4.172	417.20	7.4218	0.8705
10	14930	4.1699	416.99	7.4458	0.8719
10	14940	4.1691	416.91	7.4549	0.8724
10	14950	4.1687	416.87	7.4595	0.8727
10	14960	4.1681	416.81	7.4664	0.8731
10	14970	4.1666	416.66	7.4838	0.8741
10	14980	4.1664	416.64	7.4861	0.8743
10	14990	4.1654	416.54	7.4977	0.8749
10	15000	4.1642	416.42	7.5116	0.8757
10	15010	4.1632	416.32	7.5233	0.8764
10	15020	4.1619	416.19	7.5386	0.8773
10	15030	4.1609	416.09	7.5503	0.8780
10	15040	4.161	416.10	7.5491	0.8779
10	15050	4.1606	416.06	7.5539	0.8782
10	15060	4.1584	415.84	7.5799	0.8797
10	15070	4.1585	415.85	7.5787	0.8796
10	15080	4.1574	415.74	7.5918	0.8803
10	15090	4.1547	415.47	7.6241	0.8822
10	15100	4.1539	415.39	7.6337	0.8827
10	15110	4.1535	415.35	7.6385	0.8830
10	15120	4.153	415.30	7.6445	0.8834
10	15130	4.1515	415.15	7.6627	0.8844
10	15140	4.151	415.10	7.6688	0.8847
10	15150	4.1493	414.93	7.6895	0.8859
10	15160	4.1501	415.01	7.6797	0.8853
10	15170	4.1482	414.82	7.7030	0.8867
10	15180	4.1478	414.78	7.7079	0.8869
10	15190	4.1467	414.67	7.7214	0.8877
10	15200	4.1463	414.63	7.7263	0.8880
10	15210	4.1459	414.59	7.7313	0.8883
10	15220	4.1441	414.41	7.7536	0.8895
10	15230	4.1441	414.41	7.7536	0.8895
10	15240	4.1431	414.31	7.7660	0.8902
10	15250	4.1403	414.03	7.8011	0.8922
10	15260	4.1412	414.12	7.7898	0.8915
10	15270	4.1393	413.93	7.8137	0.8929
10	15280	4.1398	413.98	7.8074	0.8925
10	15290	4.1383	413.83	7.8263	0.8936
10	15300	4.1379	413.79	7.8314	0.8938
10	15310	4.1367	413.67	7.8466	0.8947
10	15320	4.1356	413.56	7.8606	0.8955
10	15330	4.1344	413.44	7.8760	0.8963
10	15340	4.1341	413.41	7.8798	0.8965
10	15350	4.1333	413.33	7.8901	0.8971
10	15360	4.1321	413.21	7.9056	0.8979
10	15370	4.131	413.10	7.9198	0.8987
10	15380	4.1305	413.05	7.9263	0.8991
10	15390	4.13	413.00	7.9328	0.8994
10	15400	4.1284	412.84	7.9536	0.9006
10	15410	4.1276	412.76	7.9641	0.9011
10	15420	4.1274	412.74	7.9667	0.9013
10	15430	4.1251	412.51	7.9970	0.9029
10	15440	4.1247	412.47	8.0023	0.9032
10	15450	4.1243	412.43	8.0076	0.9035
10	15460	4.1247	412.47	8.0023	0.9032
10	15470	4.1236	412.36	8.0169	0.9040
10	15480	4.1223	412.23	8.0342	0.9049
10	15490	4.1209	412.09	8.0529	0.9060
10	15500	4.1196	411.96	8.0704	0.9069
10	15510	4.1196	411.96	8.0704	0.9069
10	15520	4.1174	411.74	8.1001	0.9085
10	15530	4.1169	411.69	8.1069	0.9089
10	15540	4.1162	411.62	8.1164	0.9094
10	15550	4.1146	411.46	8.1382	0.9105
10	15560	4.1138	411.38	8.1492	0.9111
10	15570	4.1147	411.47	8.1369	0.9105
10	15580	4.1127	411.27	8.1643	0.9119
10	15590	4.1125	411.25	8.1671	0.9121
10	15600	4.1114	411.14	8.1823	0.9129
10	15610	4.1103	411.03	8.1975	0.9137
10	15620	4.1102	411.02	8.1989	0.9138
10	15630	4.1088	410.88	8.2184	0.9148
10	15640	4.1078	410.78	8.2324	0.9155
10	15650	4.1061	410.61	8.2563	0.9168
10	15660	4.1049	410.49	8.2732	0.9177
10	15670	4.1053	410.53	8.2676	0.9174
10	15680	4.1052	410.52	8.2690	0.9175
10	15690	4.1036	410.36	8.2916	0.9186
10	15700	4.1026	410.26	8.3059	0.9194
10	15710	4.1014	410.14	8.3230	0.9203
10	15720	4.1006	410.06	8.3345	0.9209
10	15730	4.0992	409.92	8.3546	0.9219
10	15740	4.098	409.80	8.3720	0.9228
10	15750	4.0977	409.77	8.3763	0.9231

10	15760	4.0967	409.67	8.3908	0.9238
10	15770	4.0965	409.65	8.3938	0.9240
10	15780	4.0958	409.58	8.4040	0.9245
10	15790	4.0948	409.48	8.4186	0.9252
10	15800	4.0942	409.42	8.4274	0.9257
10	15810	4.094	409.40	8.4303	0.9258
10	15820	4.0928	409.28	8.4480	0.9268
10	15830	4.0925	409.25	8.4524	0.9270
10	15840	4.0905	409.05	8.4820	0.9285
10	15850	4.0901	409.01	8.4880	0.9288
10	15860	4.0885	408.85	8.5119	0.9300
10	15870	4.0883	408.83	8.5149	0.9302
10	15880	4.0873	408.73	8.5299	0.9309
10	15890	4.0875	408.75	8.5269	0.9308
10	15900	4.0859	408.59	8.5510	0.9320
10	15910	4.0849	408.49	8.5661	0.9328
10	15920	4.0834	408.34	8.5889	0.9339
10	15930	4.0829	408.29	8.5966	0.9343
10	15940	4.0814	408.14	8.6195	0.9355
10	15950	4.0807	408.07	8.6303	0.9360
10	15960	4.0803	408.03	8.6364	0.9363
10	15970	4.0794	407.94	8.6503	0.9370
10	15980	4.0781	407.81	8.6705	0.9380
10	15990	4.0783	407.83	8.6674	0.9379
10	16000	4.0768	407.68	8.6907	0.9391
10	16010	4.0763	407.63	8.6985	0.9394
10	16020	4.0751	407.51	8.7173	0.9404
10	16030	4.0753	407.53	8.7142	0.9402
10	16040	4.074	407.40	8.7347	0.9412
10	16050	4.0729	407.29	8.7520	0.9421
10	16060	4.0718	407.18	8.7695	0.9430
10	16070	4.0709	407.09	8.7838	0.9437
10	16080	4.0701	407.01	8.7966	0.9443
10	16090	4.0685	406.85	8.8222	0.9456
10	16100	4.0686	406.86	8.8206	0.9455
10	16110	4.0666	406.66	8.8529	0.9471
10	16120	4.0666	406.66	8.8529	0.9471
10	16130	4.0657	406.57	8.8675	0.9478
10	16140	4.0646	406.46	8.8854	0.9487
10	16150	4.064	406.40	8.8952	0.9492
10	16160	4.0635	406.35	8.9034	0.9496
10	16170	4.0635	406.35	8.9034	0.9496
10	16180	4.0619	406.19	8.9297	0.9508
10	16190	4.0595	405.95	8.9694	0.9528
10	16200	4.0604	406.04	8.9545	0.9520
10	16210	4.0597	405.97	8.9661	0.9526
10	16220	4.0588	405.88	8.9811	0.9533
10	16230	4.0577	405.77	8.9994	0.9542
10	16240	4.0569	405.69	9.0129	0.9549
10	16250	4.056	405.60	9.0280	0.9556
10	16260	4.055	405.50	9.0449	0.9564
10	16270	4.0545	405.45	9.0533	0.9568
10	16280	4.053	405.30	9.0788	0.9580
10	16290	4.0529	405.29	9.0805	0.9581
10	16300	4.0516	405.16	9.1027	0.9592
10	16310	4.0509	405.09	9.1147	0.9597
10	16320	4.0493	404.93	9.1423	0.9611
10	16330	4.049	404.90	9.1474	0.9613
10	16340	4.0481	404.81	9.1630	0.9620
10	16350	4.0472	404.72	9.1787	0.9628
10	16360	4.047	404.70	9.1822	0.9629
10	16370	4.0463	404.63	9.1944	0.9635
10	16380	4.0462	404.62	9.1961	0.9636
10	16390	4.0443	404.43	9.2294	0.9652
10	16400	4.0439	404.39	9.2365	0.9655
10	16410	4.0423	404.23	9.2648	0.9668
10	16420	4.042	404.20	9.2701	0.9671
10	16430	4.0416	404.16	9.2772	0.9674
10	16440	4.0398	403.98	9.3093	0.9689
10	16450	4.04	404.00	9.3058	0.9688
10	16460	4.0388	403.88	9.3273	0.9698
10	16470	4.0371	403.71	9.3580	0.9712
10	16480	4.037	403.70	9.3598	0.9713
10	16490	4.0368	403.68	9.3634	0.9714
10	16500	4.0359	403.59	9.3797	0.9722
10	16510	4.0344	403.44	9.4071	0.9735
10	16520	4.0342	403.42	9.4107	0.9736
10	16530	4.034	403.40	9.4144	0.9738
10	16540	4.0332	403.32	9.4291	0.9745
10	16550	4.0317	403.17	9.4567	0.9757
10	16560	4.0301	403.01	9.4864	0.9771
10	16570	4.0291	402.91	9.5050	0.9780
10	16580	4.0292	402.92	9.5031	0.9779
10	16590	4.0282	402.82	9.5218	0.9787
10	16600	4.0271	402.71	9.5425	0.9797
10	16610	4.0264	402.64	9.5557	0.9803
10	16620	4.0259	402.59	9.5651	0.9807
10	16630	4.0251	402.51	9.5803	0.9814
10	16640	4.0233	402.33	9.6145	0.9829
10	16650	4.0219	402.19	9.6414	0.9841
10	16660	4.023	402.30	9.6203	0.9832
10	16670	4.021	402.10	9.6587	0.9849
10	16680	4.0198	401.98	9.6819	0.9860
10	16690	4.02	402.00	9.6780	0.9858
10	16700	4.0193	401.93	9.6916	0.9864
10	16710	4.0183	401.83	9.7110	0.9873
10	16720	4.0169	401.69	9.7384	0.9885
10	16730	4.0162	401.62	9.7521	0.9891
10	16740	4.0156	401.56	9.7639	0.9896
10	16750	4.0153	401.53	9.7698	0.9899
10	16760	4.0144	401.44	9.7876	0.9907
10	16770	4.0138	401.38	9.7995	0.9912
10	16780	4.0129	401.29	9.8174	0.9920
10	16790	4.0123	401.23	9.8294	0.9925
10	16800	4.0108	401.08	9.8594	0.9939
10	16810	4.0109	401.09	9.8574	0.9938
10	16820	4.0105	401.05	9.8654	0.9941
10	16830	4.009	400.90	9.8957	0.9954
10	16840	4.008	400.80	9.9160	0.9963
10	16850	4.0073	400.73	9.9302	0.9970
10	16860	4.0068	400.68	9.9404	0.9974
10	16870	4.0052	400.52	9.9732	0.9988
10	16880	4.0047	400.47	9.9835	0.9993
10	16890	4.0046	400.46	9.9856	0.9994
10	16900	4.003	400.30	10.0186	1.0008
10	16910	4.0013	400.13	10.0540	1.0023
10	16920	4.0014	400.14	10.0519	1.0022
10	16930	3.9999	399.99	10.0834	1.0036
10	16940	3.9994	399.94	10.0939	1.0041
10	16950	3.9958	399.58	10.1702	1.0073
10	16960	3.9901	399.01	10.2936	1.0126
10	16970	3.9889	398.89	10.3199	1.0137
10	16980	3.9883	398.83	10.3331	1.0142

10	16990	3.9878	398.78	10.3442	1.0147
10	17000	3.9873	398.73	10.3552	1.0152
10	17010	3.9864	398.64	10.3752	1.0160
10	17020	3.9856	398.56	10.3930	1.0167
10	17030	3.9845	398.45	10.4177	1.0178
10	17040	3.9834	398.34	10.4424	1.0188
10	17050	3.9836	398.36	10.4379	1.0186
10	17060	3.982	398.20	10.4740	1.0201
10	17070	3.9814	398.14	10.4876	1.0207
10	17080	3.9812	398.12	10.4922	1.0209
10	17090	3.9804	398.04	10.5104	1.0216
10	17100	3.9801	398.01	10.5173	1.0219
10	17110	3.9794	397.94	10.5333	1.0226
10	17120	3.9782	397.82	10.5609	1.0237
10	17130	3.9776	397.76	10.5747	1.0243
10	17140	3.9764	397.64	10.6025	1.0254
10	17150	3.9752	397.52	10.6305	1.0266
10	17160	3.9749	397.49	10.6375	1.0268
10	17170	3.9744	397.44	10.6492	1.0273
10	17180	3.9731	397.31	10.6798	1.0286
10	17190	3.9735	397.35	10.6703	1.0282
10	17200	3.9721	397.21	10.7034	1.0295
10	17210	3.9715	397.15	10.7176	1.0301
10	17220	3.9708	397.08	10.7343	1.0308
10	17230	3.9694	396.94	10.7677	1.0321
10	17240	3.9687	396.87	10.7845	1.0328
10	17250	3.969	396.90	10.7773	1.0325
10	17260	3.9674	396.74	10.8158	1.0341
10	17270	3.9662	396.62	10.8449	1.0352
10	17280	3.9657	396.57	10.8571	1.0357
10	17290	3.9659	396.59	10.8522	1.0355
10	17300	3.9642	396.42	10.8937	1.0372
10	17310	3.9638	396.38	10.9036	1.0376
10	17320	3.9623	396.23	10.9405	1.0390
10	17330	3.9619	396.19	10.9504	1.0394
10	17340	3.9611	396.11	10.9703	1.0402
10	17350	3.9606	396.06	10.9828	1.0407
10	17360	3.96	396.00	10.9977	1.0413
10	17370	3.9608	396.08	10.9778	1.0405
10	17380	3.9584	395.84	11.0379	1.0429
10	17390	3.9572	395.72	11.0682	1.0441
10	17400	3.9571	395.71	11.0707	1.0442
10	17410	3.957	395.70	11.0732	1.0443
10	17420	3.9555	395.55	11.1114	1.0458
10	17430	3.9548	395.48	11.1293	1.0465
10	17440	3.9545	395.45	11.1369	1.0468
10	17450	3.953	395.30	11.1755	1.0483
10	17460	3.9524	395.24	11.1910	1.0489
10	17470	3.9518	395.18	11.2066	1.0495
10	17480	3.9515	395.15	11.2144	1.0498
10	17490	3.9496	394.96	11.2640	1.0517
10	17500	3.9497	394.97	11.2613	1.0516
10	17510	3.9484	394.84	11.2955	1.0529
10	17520	3.9482	394.82	11.3008	1.0531
10	17530	3.9478	394.78	11.3114	1.0535
10	17540	3.9461	394.61	11.3565	1.0552
10	17550	3.9449	394.49	11.3886	1.0565
10	17560	3.9453	394.53	11.3779	1.0561
10	17570	3.9442	394.42	11.4074	1.0572
10	17580	3.9437	394.37	11.4208	1.0577
10	17590	3.9422	394.22	11.4614	1.0592
10	17600	3.9413	394.13	11.4859	1.0602
10	17610	3.9413	394.13	11.4859	1.0602
10	17620	3.9407	394.07	11.5023	1.0608
10	17630	3.9399	393.99	11.5242	1.0616
10	17640	3.939	393.90	11.5489	1.0625
10	17650	3.9389	393.89	11.5517	1.0626
10	17660	3.9373	393.73	11.5960	1.0643
10	17670	3.9365	393.65	11.6182	1.0651
10	17680	3.936	393.60	11.6322	1.0657
10	17690	3.9345	393.45	11.6743	1.0672
10	17700	3.9344	393.44	11.6771	1.0673
10	17710	3.9335	393.35	11.7025	1.0683
10	17720	3.933	393.30	11.7167	1.0688
10	17730	3.9331	393.31	11.7139	1.0687
10	17740	3.9314	393.14	11.7623	1.0705
10	17750	3.9303	393.03	11.7938	1.0717
10	17760	3.929	392.90	11.8313	1.0730
10	17770	3.929	392.90	11.8313	1.0730
10	17780	3.9285	392.85	11.8458	1.0736
10	17790	3.9282	392.82	11.8545	1.0739
10	17800	3.9268	392.68	11.8953	1.0754
10	17810	3.9253	392.53	11.9393	1.0770
10	17820	3.925	392.50	11.9481	1.0773
10	17830	3.925	392.50	11.9481	1.0773
10	17840	3.925	392.50	11.9481	1.0773
10	17850	3.9239	392.39	11.9807	1.0785
10	17860	3.9226	392.26	12.0194	1.0799
10	17870	3.9223	392.23	12.0283	1.0802
10	17880	3.9214	392.14	12.0553	1.0812
10	17890	3.9209	392.09	12.0703	1.0817
10	17900	3.9197	391.97	12.1066	1.0830
10	17910	3.9188	391.88	12.1339	1.0840
10	17920	3.9183	391.83	12.1491	1.0845
10	17930	3.9179	391.79	12.1613	1.0850
10	17940	3.9173	391.73	12.1797	1.0856
10	17950	3.9162	391.62	12.2135	1.0868
10	17960	3.9148	391.48	12.2568	1.0884
10	17970	3.9148	391.48	12.2568	1.0884
10	17980	3.9142	391.42	12.2755	1.0890
10	17990	3.9138	391.38	12.2880	1.0895
10	18000	3.9127	391.27	12.3224	1.0907
10	18010	3.9135	391.35	12.2973	1.0898
10	18020	3.9113	391.13	12.3665	1.0922
10	18030	3.9103	391.03	12.3982	1.0934
10	18040	3.9096	390.96	12.4204	1.0941
10	18050	3.9093	390.93	12.4300	1.0945
10	18060	3.9084	390.84	12.4588	1.0955
10	18070	3.9072	390.72	12.4974	1.0968
10	18080	3.9073	390.73	12.4942	1.0967
10	18090	3.9062	390.62	12.5298	1.0979
10	18100	3.9051	390.51	12.5656	1.0992
10	18110	3.9047	390.47	12.5786	1.0996
10	18120	3.9044	390.44	12.5884	1.1000
10	18130	3.9046	390.46	12.5819	1.0997
10	18140	3.9014	390.14	12.6875	1.1034
10	18150	3.9	390.00	12.7342	1.1050
10	18160	3.8988	389.88	12.7746	1.1063
10	18170	3.8981	389.81	12.7982	1.1071
10	18180	3.8985	389.85	12.7847	1.1067
10	18190	3.8975	389.75	12.8185	1.1078
10	18200	3.8968	389.68	12.8424	1.1086
10	18210	3.8955	389.55	12.8868	1.1101

10	18220	3.8948	389.48	12.9109	1.1110
10	18230	3.8939	389.39	12.9420	1.1120
10	18240	3.8928	389.28	12.9802	1.1133
10	18250	3.892	389.20	13.0081	1.1142
10	18260	3.8925	389.25	12.9906	1.1136
10	18270	3.8914	389.14	13.0291	1.1149
10	18280	3.8917	389.17	13.0186	1.1146
10	18290	3.8907	389.07	13.0537	1.1157
10	18300	3.8897	388.97	13.0890	1.1169
10	18310	3.8889	388.89	13.1174	1.1178
10	18320	3.8876	388.76	13.1638	1.1194
10	18330	3.8876	388.76	13.1638	1.1194
10	18340	3.8862	388.62	13.2141	1.1210
10	18350	3.8862	388.62	13.2141	1.1210

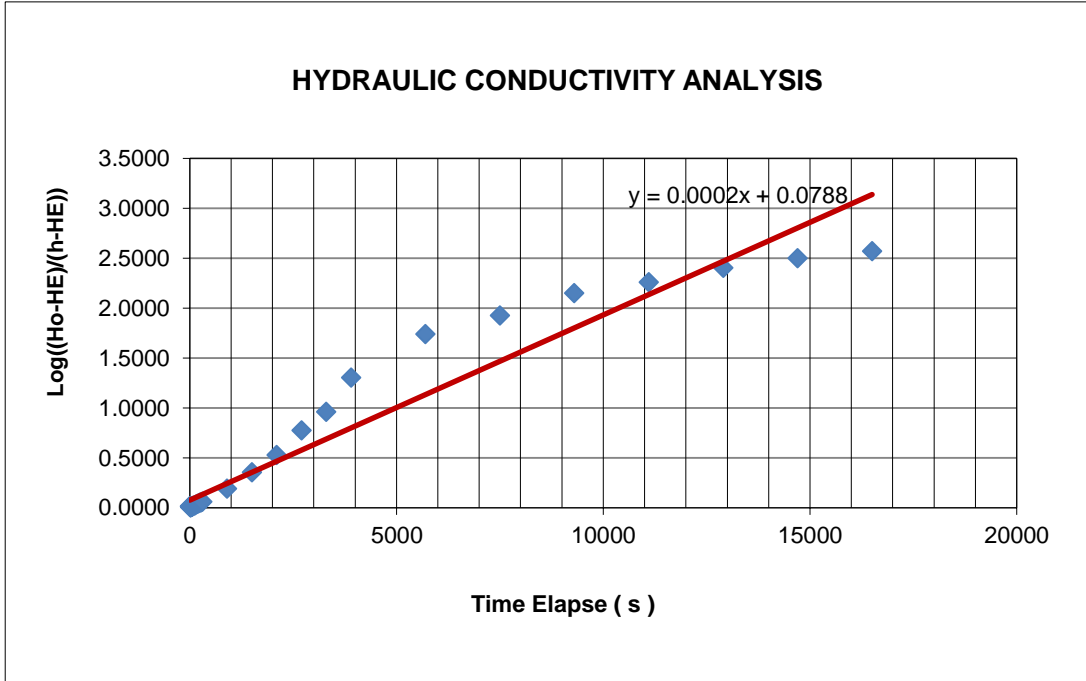
**Location:** 6333 Hurontario Street, Mississauga  
**Project:** FE-P-20-10655 HydroGeo  
**Test Date:** 2020-11-07  
**Well No.** MW204

**Equilibrium Water level (from top of pipe)  $H_E$**  160.5 cm  
**Initial Water level (from top of pipe)  $H_o$**  795 cm  
**Monitoring well inner diameter  $d$**  0.05 m  
**Initial Time offset  $T_o$**  5 second  
**Reverse of Luthin's reference system  $R_u = H_o - H_E$**  634.50 cm  
**Slope of  $\text{Log}((h_o-h_e)/(h_t-h_e)) / T$**  2.00E-04  
 **$G = R_u / (HT - H_E)$**

**Hydraulic conductivity computed  $k =$**  0.0003027 cm/s  
 3.03E-06 m/s  
 0.261 m/day

Time		HT (Water Drop)		G	LOG (G)
(Interval s)	(Elapsed s)	( m )	( cm )		
	0	7.950	795.00	1.0000	0.0147
5	5	7.900	790.00	1.0079	0.0147
5	10	7.880	788.00	1.0112	0.0048
5	15	7.870	787.00	1.0128	0.0055
5	20	7.860	786.00	1.0144	0.0062
5	25	7.840	784.00	1.0176	0.0076
5	30	7.830	783.00	1.0193	0.0083
5	35	7.820	782.00	1.0209	0.0090
5	40	7.800	780.00	1.0242	0.0104
5	45	7.790	779.00	1.0259	0.0111
5	50	7.780	778.00	1.0275	0.0118
5	55	7.770	777.00	1.0292	0.0125
5	60	7.750	775.00	1.0325	0.0139
30	90	7.650	765.00	1.0496	0.0210
30	120	7.610	761.00	1.0566	0.0239
30	150	7.510	751.00	1.0745	0.0312
30	180	7.420	742.00	1.0911	0.0379
30	210	7.330	733.00	1.1083	0.0447
30	240	7.260	726.00	1.1220	0.0500
30	270	7.190	719.00	1.1361	0.0554
30	300	7.120	712.00	1.1505	0.0609
600	900	5.680	568.00	1.5571	0.1923
600	1500	4.400	440.00	2.2701	0.3560
600	2100	3.480	348.00	3.3840	0.5294
600	2700	2.670	267.00	5.9577	0.7751
600	3300	2.300	230.00	9.1295	0.9604
600	3900	1.920	192.00	20.1429	1.3041
1800	5700	1.720	172.00	55.1739	1.7417
1800	7500	1.680	168.00	84.6000	1.9274
1800	9300	1.650	165.00	141.0000	2.1492
1800	11100	1.640	164.00	181.2857	2.2584
1800	12900	1.630	163.00	253.8000	2.4045
1800	14700	1.625	162.50	317.2500	2.5014
1800	16500	1.622	162.20	373.2353	2.5720

**Location:** 6333 Hurontario Street, Mississauga  
**Project:** FE-P-20-10655 HydroGeo  
**Test Date:** 2020-11-07  
**Well No.** MW204



## **APPENDIX F –DEWATERING RATES AND RADIUS OF INFLUENCE**





Location: 6333 Hurontario Street, Mississauga  
 Project: FE-P-20-10655 HydroGeo  
 Date: 11/4/2022

*Dupuit Forcheimer for Radial Flow to a Closely Welled System or Excavation*

Construction Units	Finished P2 Floor elevation (m asl)	Average Ground Surface Elev. (m asl)	Lowest Footing Elevation (m asl)	Required Dewatering Elevation (m asl)	Static water level		Well base elevation (m)	H (m)	h <sub>w</sub> (m)	H-h <sub>w</sub> (m)	R <sub>0</sub> (m)		r <sub>w</sub>	ab (m <sup>2</sup> )	K (m/s)	H <sup>2</sup> -h <sub>w</sub> <sup>2</sup>	lnR <sub>0</sub>	lnr <sub>w</sub>	Q <sub>c</sub> (m <sup>3</sup> /s)	Q <sub>c</sub> (m <sup>3</sup> /day)
					BGS (m)	Elevation (m asl)					Model	Adjusted								
Building with Two Underground Levels	192.449	198.00	189.00	188.00	1.89	196.11	187.70	8.41	0.3	8.11	18.65	56.79	38.14	4570	1.32E-06	70.64	4.04	3.64	7.37E-04	63.69

**Dupuit Forcheimer Equation**

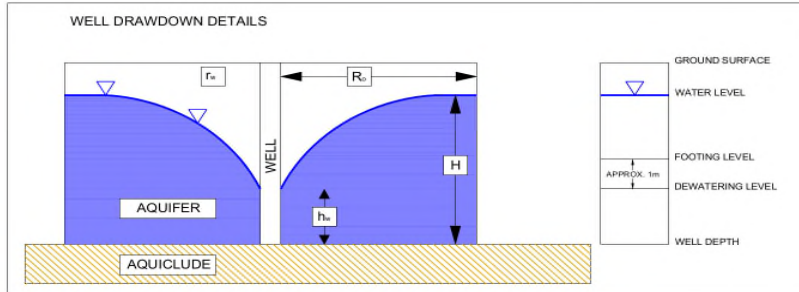
$$Q = \frac{\pi K (H^2 - h_w^2)}{\ln R_0 - \ln r_w}$$

**Equivalent radius of well, r<sub>w</sub>**

$$r_w = \sqrt{\frac{ab}{\pi}}$$

**Radius of influence in m, calculated from Sichardt's equation**

$$R_0 = 2000(H - h_w)\sqrt{k}$$



Where:

- r<sub>w</sub> = equivalent radius of the well in m,
- H = hydraulic head of the original water table (total saturated aquifer thickness) in m,
- h<sub>w</sub> = hydraulic head at maximum dewatering (proposed drawdown) in m,
- R<sub>0</sub> = radius of influence in m, calculated from Sichardt's equation, and
- K = hydraulic conductivity, in m/s
- a = length of excavation area in m
- b = width of excavation area in m

Location: 6333 Hurontario Street, Mississauga  
 Project: FE-P-20-10655 HydroGeo  
 Date: 11/4/2022

Dupuit Forcheimer for Radial Flow to a Closely Welled System or Excavation

Construction Units	Finished Floor elevation (m asl)	Average Ground Surface Elev. (m asl)	Lowest Footing Elevation (m asl)	Required Dewatering Elevation (m asl)	Static water level		Well base elevation (m)	H (m)	h <sub>w</sub> (m)	H-h <sub>w</sub> (m)	R <sub>0</sub> (m)		r <sub>w</sub>	ab (m <sup>2</sup> )	K (m/s)	H <sup>2</sup> -h <sub>w</sub> <sup>2</sup>	lnR <sub>0</sub>	lnr <sub>w</sub>	Q <sub>v</sub> (m <sup>3</sup> /s)	Q <sub>v</sub> (m <sup>3</sup> /day)
					BGS (m)	Elevation (m asl)					Model	Adjusted								
Building with Two Underground Levels	192.45	198.00	189.00	192.25	1.32	196.68	192.05	4.63	0.2	4.43	10.19	48.33	38.14	4570	1.32E-06	21.41	3.88	3.64	3.76E-04	32.45

Dupuit Forcheimer Equation

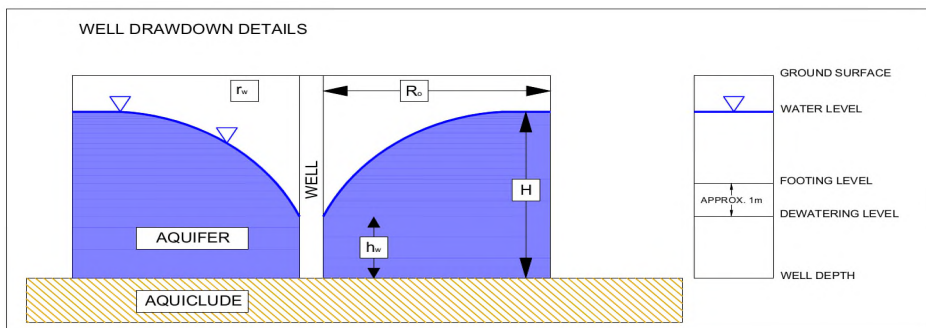
$$Q = \frac{\pi K(H^2 - h_w^2)}{\ln R_0 - \ln r_w}$$

Equivalent radius of well, r<sub>w</sub>

$$r_w = \sqrt{\frac{ab}{\pi}}$$

Radius of influence in m, calculated from Sichardt's equation

$$R_0 = 2000(H - h_w)\sqrt{k}$$

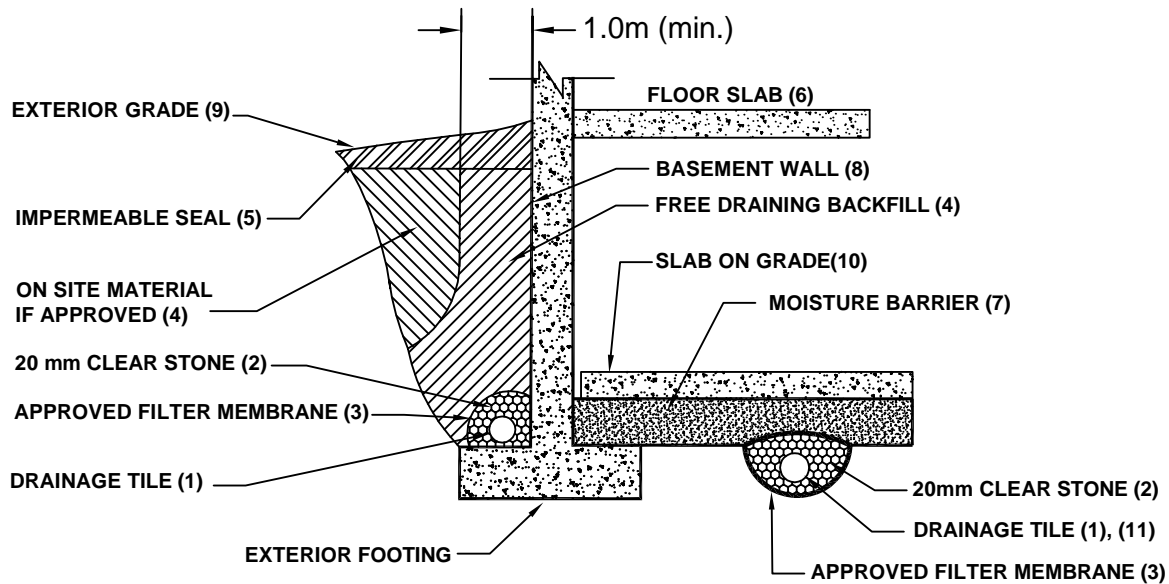


Where:

- r<sub>w</sub> = equivalent radius of the well in m,
- H = hydraulic head of the original water table (total saturated aquifer thickness) in m,
- h<sub>w</sub> = hydraulic head at maximum dewatering (proposed drawdown) in m,
- R<sub>0</sub> = radius of influence in m, calculated from Sichardt's equation, and
- K = hydraulic conductivity, in m/s
- a = length of excavation area in m
- b = width of excavation area in m

## **APPENDIX G –DRAINAGE AND BACKFILL**

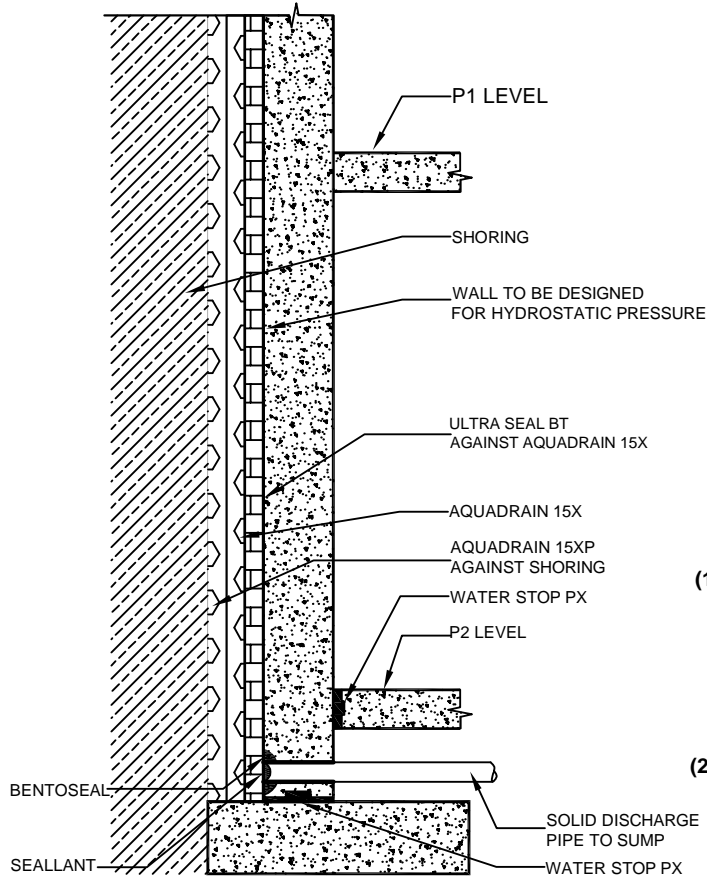




**NOTES:**

- (1) DRAINAGE TILE TO CONSIST OF 100mm (4") DIAMETER WEEPING TILE OR EQUIVALENT PERFORATED PIPE LEADING TO A POSITIVE SUMP OR OUTLET.
- (2) 20mm (3/4") CLEAR STONE - 150mm (6") TOP AND SIDE OF DRAIN. IF DRAIN IS NOT ON FOOTING, PLACE 100mm (4") OF STONE BELOW DRAIN.
- (3) WRAP THE CLEAR STONE WITH AN APPROVED FILTER MEMBRANE (TERRAFIX 279R OR EQUIVALENT).
- (4) FREE DRAINING BACKFILL - OPSS GRANULAR B OR EQUIVALENT COMPACTED TO THE SPECIFIED DENSITY. DO NOT USE HEAVY COMPACTION EQUIPMENT WITHIN 1.8m (6') OF WALL.
- (5) IMPERMEABLE BACKFILL SEAL - COMPACTED CLAY, CLAYEY SILT OR EQUIVALENT. IF ORIGINAL SOIL IS FREE-DRAINING, SEAL MAY BE OMITTED. MAXIMUM THICKNESS OF SEAL TO BE 0.5m.
- (6) DO NOT BACKFILL UNTIL WALL IS SUPPORTED BY BASEMENT AND FLOOR SLABS OR ADEQUATE BRACING.
- (7) MOISTURE BARRIER TO BE AT LEAST 200mm (8") OF COMPACTED CLEAR 20mm (3/4") STONE OR EQUIVALENT FREE DRAINING MATERIAL. A VAPOUR BARRIER MAY BE REQUIRED FOR SPECIALTY FLOORS.
- (8) BASEMENT WALL TO BE DAMP PROOFED.
- (9) EXTERIOR GRADE TO SLOPE AWAY FROM BUILDING.
- (10) SLAB ON GRADE SHOULD NOT BE STRUCTURALLY CONNECTED TO THE WALL OR FOOTING
- (11) UNDERFLOOR DRAIN INVERT TO BE AT LEAST 300mm (12") BELOW UNDERSIDE OF FLOOR SLAB. DRAINAGE TILE PLACED IN PARALLEL ROWS 6 TO 8m (20-25') CENTERS ONE WAY. PLACE DRAIN ON 100mm (4") CLEAR STONE WITH 150mm (6") OF CLEAR STONE ON TOP AND SIDES. ENCLOSE STONE WITH FILTER FABRIC AS NOTED IN (3)
- (12) THE ENTIRE SUBGRADE TO BE SEALED WITH APPROVED FILER FABRIC (TERRAFIX 270R OR EQUIVALENT) IF NON-COHESIVE(SANDY) SOILS BELOW GROUND WATER TABLE ENCOUNTERED.
- (13) DO NOT CONNECT THE UNDERFLOOR DRAINS TO PERIMETER DRAINS.
- (14) REVIEW THE GEOTECHNICAL REPORT FOR SPECIFIC DETAILS.

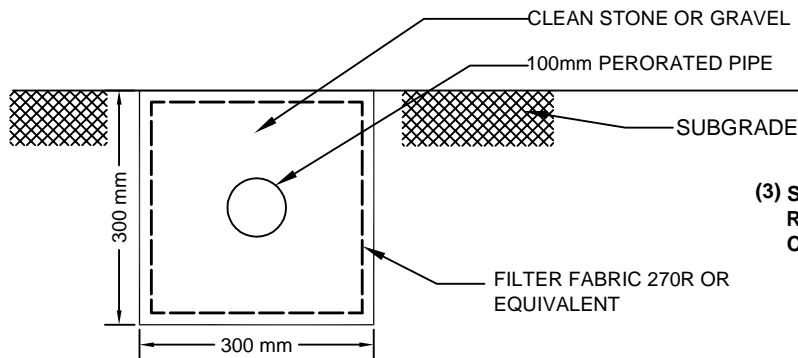
**DRAINAGE AND BACKFILL RECOMMENDATIONS**  
 BASEMENT WITH UNDERFLOOR DRAINAGE  
 (NOT TO SCALE)



**NOTES:**

- (1) ALL PERMANENT DRAINAGE PIPES MUST HAVE GEOTEXTILE FILTER SLEEVE TO PREVENT LONG TERM SILTING. TO FURTHER MINIMIZE SILTATION OF THE DRAINAGE SYSTEM, ALL DRAINAGE PIPE CONNECTION MUST BE SOLID PVC ELBOWS AND Ts. NO "BUTT" END CONNECTIONS SHOULD BE PERMITTED.
- (2) PERIMETER COLLECTION PIPE TO BE SOLID PIPE,

**SUGGESTED EXTERIOR DRAINAGE AGAINST SHORING  
(NOT TO SCALE)**



- (3) SUBGRADE DRAIN TO BE PLACED IN PARALLEL ROWS 6-8 m (20'-25'), FROM CENTERLINE TO CENTERLINE.

**DETAIL OF SUBGRADE DRAIN  
(NOT TO SCALE)**