PATERSON GROUP

Groundwater Impact Assessment

Proposed Residential Development

5971, 5993, 6115 6141 & 6151 Flewellyn Road, 6070 Fernbank Road & 1170 & 1820 Shea Road
Ottawa, Ontario

Prepared for Caivan (Stittsville) Inc.

Report PH5222-REP.01

April 24, 2026

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1.0 Introduction

Paterson Group (Paterson) was commissioned by Caivan (Stittsville) Inc. to complete a Groundwater Impact Assessment (GIA) for the proposed residential development, to be located at 5971, 5993, 6115, 6141 and 6159 Flewellyn Road, 6070 Fernbank Road, and 1770 and 1820 Shea Road, in the City of Ottawa, Ontario as shown on the Drawings in Appendix 1.

The following report has been prepared specifically and solely for the aforementioned project described herein. It contains a hydrogeological review and assessments pertaining to the proposed development as it is understood by Paterson at the time of writing this report.

1.1 Proposed Development

It is our understanding that the proposed development will consist of townhomes and detached homes, with associated driveways, local roadways and landscaped areas. The development is further expected to have condo blocks, parklands, stormwater management ponds and is expected to be municipally serviced.

2.0 Background Information

Field programs were carried out between November 2020 and February 2026 by Paterson at the subject site. During that time, a total of 50 boreholes, one (1) hand auger hole and 18 test pits were advanced to a maximum depth of 10.2 m below ground surface (bgs). The test hole locations were distributed in a manner to provide general coverage of the subject site taking into consideration site features.

Reference should be made to the Soil Profile and Test Data sheets included in Appendix 2 for the details of the soil profiles encountered at each test hole location. The locations of the test holes are presented on Paterson Drawing PG5570-1 - Test Hole Location Plan included in Appendix 2.

The hydrogeological information described in this report is based on the information included in the approved Hydrogeological Existing Conditions Study for this site.

3.0 Site Conditions

The subject site is a mix of agricultural land and forested areas with a hydro corridor and a Stormwater Management Pond (SWMP) for the adjacent residential development to the north transecting the eastern portion of the subject site. The hydro corridor transects the subject site in a northerly orientation from Flewellyn Road to the northern corner of the subject site. The eastern portion of the study area consists of a cleared area that has been converted into agricultural land. The subject site is bordered to the northwest by municipally serviced residential developments. An existing, privately serviced residential development with country estate lots is located to the west of the subject site. Shea Road is located to the east of the subject site while Flewellyn Road is located to the south. Residential properties that border both Flewellyn Road and Shea Road are anticipated to be privately serviced in the area surrounding the subject site.

The subject site generally slopes from east to west with a topographical relief of approximately 109 to 102 m. Greater slopes are observed in the western portion of the subject site.

3.1 Geology

Generally, the subsurface profile encountered at the test hole locations consisted of topsoil underlain by silty sand to a sandy silt deposit followed by glacial till. Clay was observed interbedded with the sandy silt layer on the eastern portion of the subject site. Bedrock was encountered between 0.8 and 6.0 m bgs across the subject site and was characterized as excellent quality dolostone interbedded with limestone. Specific details of the soil profile at each test hole location within the subject site are presented on the Soil Profile and Test Data sheets included in Appendix 2.

According to surficial mapping prepared by the Ontario Geological Survey (OGS, MRD128-Revised) the subject site is in an area where the surficial geology is recorded to consist primarily of glaciomarine deposits with fine grained material to the east and coarse-grained material to the west. To the north, a small portion of the subject site consists of glacial till. The surficial mapping is presented on Paterson Drawing PH4625-1 - Surficial Geology Plan included in Appendix 1.

Silty Sand to Sandy Silt

At select test hole locations, a very loose to dense brown silty sand to sandy silt was encountered below the topsoil, extending to a maximum depth of 4.7 m bgs.

The silty sand to sandy silt had varying amounts of gravel and clay.

Glacial Till

A very loose to very dense brown to grey glacial till deposit was the last stratigraphic unit encountered before bedrock. The glacial till deposit consisted of a silty sand matrix with varying amounts of gravel, cobbles, boulders. The glacial till deposit was observed to extend to a maximum depth of 6.1 m bgs.

Bedrock

Based on coring results completed by Paterson, dolostone bedrock interbedded with limestone was encountered between 0.8 and 6.0 m bgs and was cored to maximum depth of 10.2 m bgs. The recovery values were between 95 and 100%, while RQD values varied between 57 and 100%. Based on these results, the quality of the bedrock generally ranges from fair to excellent.

Based on the available geological mapping provided by the Ontario Geological survey (OGS, MRD 219), the subject site is located in an area where the bedrock consists of limestone, dolostone, shale and sandstone of the Gull River Formation (Middle Ordovician) with an overburden drift thickness of 0 to 10 m. The bedrock geology is presented on drawing PH4625-3 - Bedrock Geology Plan included in Appendix 1.

Karst Features

The term ‘karst’ refers to a geologic formation characterized by the dissolution of carbonate bedrock, such as limestone. Based on a review of Ontario Geological Survey available mapping, a small area within the western portion of the subject site is inferred to contain karst, while the remainder of the site falls within an area that can potentially contain karst. It should be noted that no evidence of karstification was observed at the time of the field investigations completed at the subject site. Site specific testing provides better resolution than high level mapping as well as our experience at other sites in the area, it is our opinion that the subject site does not contain karst.

3.2 Hydrogeology

Existing Aquifer Systems

Aquifer systems are defined as a geological media, either overburden soils or fractured bedrock, which permit the movement of groundwater under hydraulic gradients. Although groundwater has been observed within the overburden material at the subject site, the shallow depth of the overburden aquifer makes it an unlikely source for water supply wells. Water supply wells in the vicinity are expected to only be accessing the bedrock aquifer.

Based on the available geological mapping provided by the Ontario Geological survey (OGS, MRD 219), the bedrock aquifer system consists of limestone, dolostone, shale and sandstone of the Gull River Formation (Middle Ordovician).

Based on the Ministry of the Environment, Conservation and Parks (MECP) online well mapping and geoOttawa online municipal water supply mapping, the residential properties to the west of the subject site and along Flewellyn Road to the south and east are serviced by private water supply wells.

Groundwater Levels

Groundwater levels were measured at the piezometer installations after the initial field investigation and at the monitoring well installations as part of both field investigations using an electronic water level meter. Groundwater levels were measured relative to the ground surface elevation at each monitoring installation.

Multiple groundwater level measurement events have been completed to date as part of the approved Hydrogeological Existing Conditions Study with measurements occurring between January 2022 and May 2024. Groundwater levels in piezometers and the monitoring wells varied between -0.2 to 3.7 m bgs, respectively.

A groundwater monitoring program was undertaken at the subject site from October 2022 to May 2024 and showed a similar range of groundwater levels as to the range in manual groundwater readings above. It should be noted that groundwater levels can fluctuate both seasonally and in conjunction with precipitation events. As such, water levels may vary at the time of construction.

Horizontal Hydraulic Gradients

The direction of hydraulic gradients shows that groundwater flow travels predominantly from west to east towards the eastern corner of the subject site. The study area is located within the Flowing Creek subwatershed where local groundwater flow is generally in an eastward direction towards the Faulkner Drain. Regional groundwater flow is also in an eastward direction towards the Jock River.

The horizontal hydraulic gradient in the bedrock was observed to be in a general eastward direction with magnitudes of approximately, 0.001 to 0.026 based on groundwater measurements collected on October 11, 2022. Higher hydraulic gradients were observed within the western portion of the subject site. As for the horizontal hydraulic gradient in the overburden material, it was interpreted to have a similar magnitude and direction as the bedrock given the similarities in groundwater levels at the nested well locations and the topographic profile of the site.

Vertical Hydraulic Gradients

Vertical hydraulic gradients were calculated within two nested well installations across the study area based on a select number of groundwater level measurements collected between October 2022 and May 2023. The vertical hydraulic gradients provide insight on the hydraulic interactions between the bedrock and overburden units. BH 1-22 and BH 1A-22 (west portion of the study area) had a vertical upward gradient of approximately 0.012 to 0.016 while BH 3-22 and BH 3A-22 (east portion of the study area) had a vertical downward gradient of 0.004 to 0.035 or a vertical upward gradient of 0.010, depending on the time of year.

Hydraulic Conductivity

Based on the field hydraulic conductivity testing undertaken as part of this assessment, the hydraulic conductivity of the overburden materials were observed to range between 4.2×10^{-6} m/sec and 2.2×10^{-5} m/sec while the hydraulic conductivity of the bedrock was observed to range between 4.3×10^{-7} and 1.6×10^{-4} m/sec. These values are consistent with tabulated values from Freeze and Cherry (1979) and field values encountered at similar sites for similar materials.

Groundwater Recharge and Discharge

In general, groundwater will follow the path of least resistance from areas of higher hydraulic head to areas of lower hydraulic head. Upward and downward hydraulic gradients are typically indicative of areas of discharge and recharge, respectively.

Based on field saturated hydraulic conductivity testing in the overburden soils, the overburden soils are considered to have a moderate hydraulic conductivity, which are mapped as a significant groundwater recharge area (SGRA) by the Mississippi-Rideau Source Protection Region (MRSPR).

It is our interpretation that precipitation will intercept the soil surface where it will flow vertically downward through the unsaturated surficial soils before intercepting the shallow overburden aquifer where it will predominantly travel laterally at the bedrock interface. This interpretation is supported by the vertical gradient information discussed above coupled with the topographic relief of the site and high RQD bedrock. It should be noted that site specific testing provides better resolution than the high level SGRA mapping provided by the MRSPR.

There is inferred minor groundwater discharge to a man-made surface water feature in the western portion of the subject site due to topographic variations, however, is expected to be limited in nature.

The study area intersects one subwatershed as previously mentioned and will have flow generally travelling in an eastward direction within the western portion of the subject site, and in a southeastern direction within the eastern portion of the subject site, towards the Faulkner Drain which is tributary to the Jock River. The elevation of the Faulkner Drain at the southeastern edge of the subject site has an elevation similar to the groundwater elevations in that area, thus supporting the interpretation that shallow groundwater at the subject site is predominantly travelling east/southeast towards the Faulkner Drain.

4.0 Potential Impacts

4.1 Radius of Influence

Based on available civil drawings provided by DSEL which are included in Appendix 3, the anticipated depth of excavation for servicing installations will range from 2 to 9 m bgs. The deepest servicing excavations are expected to be on the north end of the subject site while the shallowest excavations being will be on the south end, along Flewellyn Road. The maximum depth of excavation for the stormwater management ponds is expected to be 5.5 m bgs. Given the observed groundwater levels in the monitoring wells installed at the subject site and proposed excavation depths, it is estimated that approximately 1.5 to 8.5 m of saturated material could be encountered within the open excavations.

In order to determine potential impacts, potential theoretical radii of influence have been calculated based on the anticipated saturated excavation depths, discussed above.

These calculations were completed based on Sichardt (1992) using the equation:

$R = 3000*\Delta h(k^{0.5})$

- R = Radius of influence (m)
- Δh = Drawdown of groundwater (m)
- k = Hydraulic conductivity (m/sec)

For the purposes of completing the calculations, the following assumptions were made:

- k = 2.47 x 10^{-5} m/sec (geometric mean of the measured hydraulic conductivities within the bedrock) to 7.00 to x 10^{-5} m/sec (corresponding k value used for safety factored dewatering assessment completed under a different cover).
- Δh = 1 to 8.5 m, to review potential minimum and maximum conditions

Using the above equation and assumptions, a radius of influence of approximately ≤ 22 to 127 m will develop as a steady state condition, extending from the edge of the excavations. A radius of influence up to 213 m may develop if bedrock with increased hydraulic properties is encountered at select dewatering locations.

4.2 Adverse Effects on Neighbouring Water Wells

A search of the Ontario Water Well Records (WWRs) database indicates there are several domestic water supply wells within 500 m of the subject site as depicted on Drawing PH5222-1 – MECP Water Well Location Plan included in Appendix 1. The wells that are currently in use were noted to be accessing the underlying

bedrock aquifer system with sufficient vertical separation between the maximum potential depth of excavation and the depth of the wells. Furthermore, WWRs note that the majority of water-bearing zones were encountered below the anticipated servicing depths at the subject site. As such, these wells are considered to have a relatively low potential to be impacted by construction dewatering activities at the subject site.

However, as a precautionary measure, a Baseline Water Sampling Program has been recommended to be completed prior to commencing construction on site. The premise of the program is to obtain groundwater quality information from the water supply wells in the vicinity of the proposed development prior to the project commencing. This ensures that all parties involved (developer, homeowners, and City of Ottawa) are protected should a concern arise during or after construction.

Baseline Water Sampling Program

As mentioned above, the theoretical radius of influence that may develop as a result of dewatering activities associated with the proposed development is expected to be ≤ 22 to 213 m, from the edge of the excavations at the time of construction, depending on the hydraulic properties and groundwater levels across the site. It should be noted that other construction activities such as blasting and hoe-ramming may can have an impact on adjacent well users depending on the location and duration of such activities. The domestic wells in the area were completed at depths well below the anticipated municipal servicing depths with WWRs noting that the majority of water-bearing zones were encountered below the anticipated servicing depths at the subject site.

Based on the water service mapping provided by the City of Ottawa, as well as all the available information, a total of twenty-nine (29) potential privately serviced lots have been identified to be included in the Baseline Water Sampling Program and are shown on the attached Drawing PH5222-1 MECP Water Well Location Plan. All privately serviced lots on either side of adjacent streets (i.e., Poplarwood Avenue and Flewellyn Road) were included in the program, which provides a sampling radius in excess of the potential theoretical radius of influence discussed above and is consistent with what was done for the development to the north of the subject site. Furthermore, given the size and layout of the proposed development, only servicing installations on the outer perimeter of the subject site will have a radius of influence that may intercept adjacent properties.

The following municipal addresses are proposed to be included in the Baseline Water Sampling Program:

- 1-21 Poplarwood Avenue
- 23 Poplarwood Avenue
- 5891 Flewellyn Road
- 6015 Flewellyn Road

- 6025 Flewellyn Road
- 6026 Flewellyn Road
- 6035 Flewellyn Road
- 6140 Flewellyn Road
- 6172 Flewellyn Road

The available water well records that are mapped within the aforementioned properties are included in Appendix 4.

The homeowners of the aforementioned properties will be invited to participate in the Baseline Water Sampling Program by providing one registered letter delivered by Canada Post. Upon receipt of the letter, homeowners will have approximately two to four weeks to contact Paterson to participate in the sampling program. To avoid the harassment of homeowners, homeowners that do not contact Paterson within four-weeks of receiving the notification letter will be considered to have elected not to participate in the program. Interested homeowners will be interviewed for the purpose of obtaining anecdotal baseline water quality/quantity information about their water supply well followed by the collection of a raw water sample that will be submitted to an accredited laboratory for analysis.

The parameters that are being analyzed as part of the sampling program consist of the "Subdivision Water Quality Package" offered by Eurofins Environmental Testing Canada Inc. This package includes; alkalinity, bacteria, colour, conductivity, pH, hardness, IC anions, NH_3, TKN, DOC, phenols, sulphide, trace metals (as listed in City of Ottawa's Hydrogeological and Terrain Analysis Guidelines), Tannin & Lignin, TDS and turbidity.

A draft copy of the registered letter has been appended to this report and will be submitted to the City of Ottawa for review prior to commencement of the Baseline Water Sampling Program outlined above.

4.3 Adverse Effects on Adjacent Structures

The overburden at the subject site generally consists of topsoil underlain by silty sand to a sandy silt deposit followed by glacial till. Clay was observed interbedded with the sandy silt layer on the eastern portion of the subject site. Bedrock was encountered between 0.8 to 6.0 m bgs across the subject site and was characterized as excellent quality dolostone interbedded with limestone. The majority of the expected groundwater infiltration will be encountered within the silty sand to sandy silt, glacial till and/or bedrock. The potential dewatering volumes due to groundwater infiltration into excavation footprints are anticipated to be moderate to high dependant on location across the site and majority composition of the materials at a given location. The structures in the surrounding area typically consist of low-rise residential buildings and are expected to be founded on the silty sand to sandy silt or glacial till. The compressibility of the sandy silty, glacial till and bedrock in the area as a result of dewatering is anticipated to be minimal.

Additionally, given the nature of the development, the duration of excavations on-site is expected to be short-term in duration. As such, any effects related to ground surface settlement due to the water taking activities are anticipated to be negligible.

If the taking of water is shown to cause negative impacts to surrounding structures, the Party responsible for water taking activities shall take action to remedy the impacts, compensate persons for reasonable costs associated to do so and shall reduce water taking amounts to alleviate the negative impacts.

4.4 Soil, Surface Water and Groundwater

A search of the MECP Environmental Site Registry for Records of Site Condition (RSC) was conducted as part of the assessment of the site, neighbouring properties and the general area. No RSC sites were identified within 500 m of the subject site.

It is anticipated that excess soil will be handled in accordance with O.Reg. 406-19 – On-site and Excess Soil Management.

With respect to surface water bodies within 500 m of the subject site, the Faulkner Drain transects the subject site from the northwest to the southeast. The west corner of the site contains a small shallow man-made excavation that was likely used for private aggregates. The excavation has been observed to be filled with water with a connection noted to extend to a man-made drainage ditch leading to the Faulkner Drain. There are also several unnamed drainage ditches within the country estate lots west of the subject site as well as the agricultural land to the east.

The Faulkner Drain is expected to be maintained while the small shallow man-made excavation is expected to be infilled as part of the development. As the remaining surface water features are drainage ditches within the surrounding properties, adverse effects to surface water features resulting from dewatering activities at the subject site are expected to be negligible.

If the discharged water is to be directed to overland drainage within 30 m of a watercourse, the turbidity of the water shall not exceed 8 NTU above background levels of the nearest water body. The contractor will be required to maintain appropriate Best Management Practices with respect to sediment and erosion control to ensure negative effects to the surrounding environment are minimized.

The groundwater that is pumped from the excavations must be managed in an appropriate manner. The contractor may be required to implement a water management and treatment program to dispose of the pumped water. It is expected the groundwater will be discharged to overland. Further treatment may be required should the discharge not meet the required guidelines.

4.5 Adjacent Permits to Take Water

A search of the MECP Environmental Site Registry provided no active Permit to Take Water (PTTW) and one (1) Environmental Activity and Sector Registry (EASR) within 500 m of the subject site.

EASR R-009-5406108159 has been registered to Taggart Construction Limited for construction dewatering associated with the installation of servicing for a residential development. The site is located approximately 235 m northwest of the subject site. The EASR contains one (1) source for construction dewatering with a maximum potential taking of 6,453,000 L/day.

Given the maximum potential water takings associated with EASR R-009-5406108159, the theoretical radius of influence calculated for water takings at the subject site may overlap with the radius of influence from EASR R-009-5406108159. As such, the potential does exist for cumulative drawdown to occur between the sources for both sites if dewatering is completed simultaneously. Structures identified within the potential zone of cumulative drawdown are low-rise residential homes and the hydro-corridor. Structures between the two sites are expected to be founded on the silty sand to sandy silt, glacial till or bedrock, with minimal compressibility. No domestic water supply wells are located within the potential zone of cumulative drawdown between the two sites. Furthermore, given the nature of the developments, dewatering is expected to be short term. Therefore, given the short-term nature of dewatering, cumulative impacts related to ground surface settlement or water taking activities between the two sites are expected to be minimal.

Based on the above, the risk of cumulative impacts resulting from multiple water taking permits in proximity to each other is considered negligible.

4.6 Existing Servicing

All existing wells within the subject site will be required to be properly decommissioned by a licensed well contractor as per O.Reg. 903 prior to construction.

5.0 Recommendations

The following aspects of the program should be performed prior to commencing construction for the proposed residential development:

- ❑ A Baseline Water Sampling Program should be completed based on the methodology described in Section 4.2 of this report.

- ❑ All existing wells within the proposed development should be properly decommissioned as per O.Reg. 903 prior to construction, if they are not intended to be maintained in accordance with the regulations.

- ❑ Prior to and during site development, it is recommended that construction best management practices with respect to fuels and chemical handling, spill prevention, erosion and sediment control be followed.

- ❑ Water taking volumes associated with the development are expected to be greater than 50,000 L/day. Therefore, a water taking permit will be required. An Environmental Activity and Sector Registry (EASR) is expected to be registered for water takings at the subject site.

6.0 Statement of Limitations

The recommendations provided in this report are in accordance with our present understanding of the project.

A hydrogeological review of this nature is a limited sampling of a site. The recommendations are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around the test locations. Should any conditions at the site be encountered which differ from those at the test locations, we request notification immediately in order to permit reassessment of our recommendations.

The present report applies only to the project described in this document. Use of this report for purposes other than those described herein or by person(s) other than Caivan (Stittsville) Inc. or their agent(s) is not authorized without review by Paterson Group for the applicability of our recommendations to the altered use of the report.

Paterson Group Inc.

Zavian Buchanan, EIT

Oliver Blume, P.Geo.

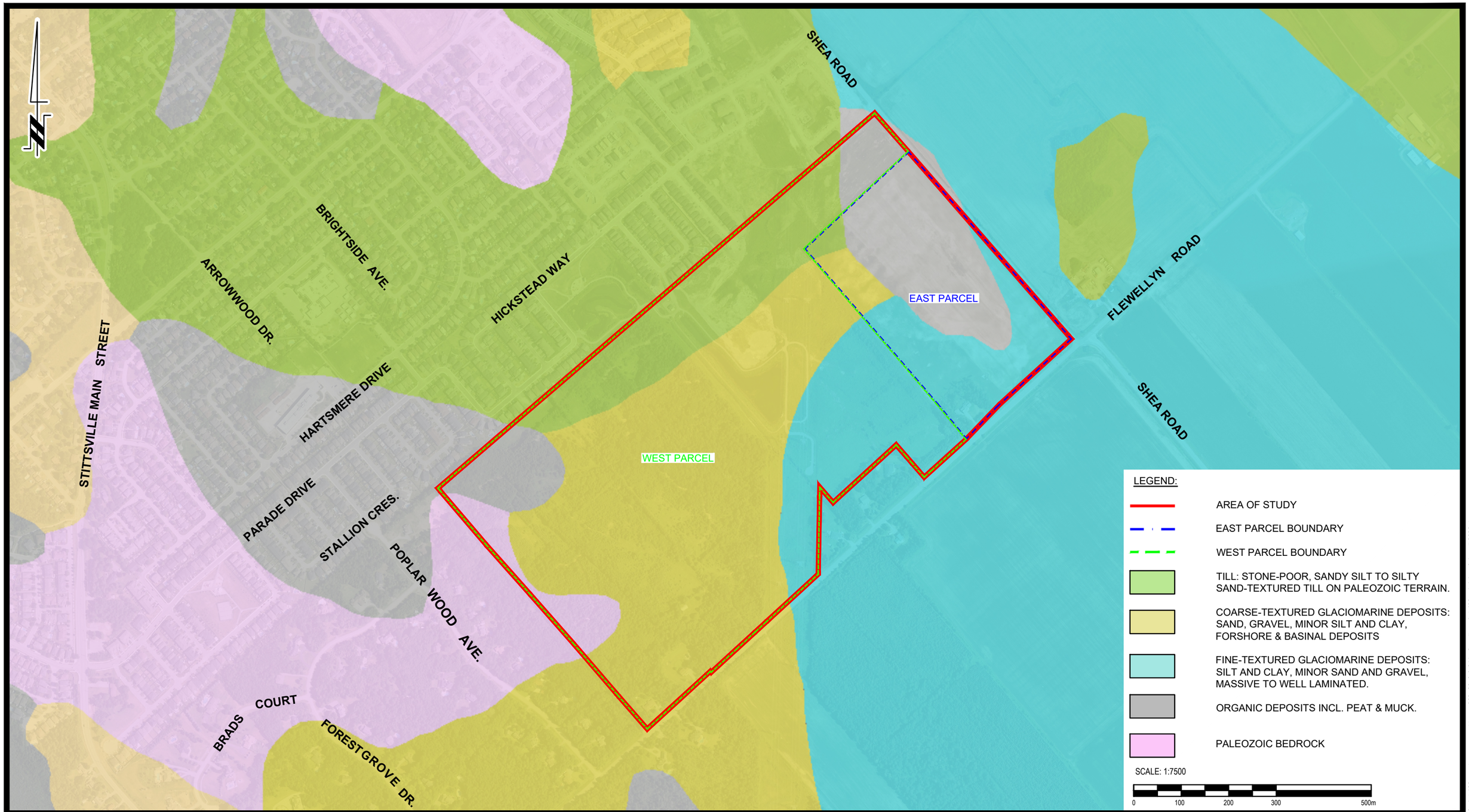
PROFESSIONAL GEOSCIENTIST
Apr. 24, 2026
OLIVER BLUME
PRACTISING MEMBER
3750
ONTARIO

APPENDIX 1

DRAWING PH4625-1 - SURFICIAL GEOLOGY PLAN

DRAWING PH4625-3 - BEDROCK GEOLOGY PLAN

DRAWING PH5222-1 - MECP WATER WELL LOCATION PLAN



PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL
5	REVISED SITE BOUNDARY	13/04/2026	OB
4	REVISED SITE BOUNDARY	29/05/2025	OB
3	REVISED SITE BOUNDARY	15/05/2025	OB
2	REVISED SITE BOUNDARY	04/07/2024	OB
1	UPDATED CLIENT'S NAME AND SITE ADDRESS	12/06/2023	OB

CAIVAN (STITTSVILLE) INC.

HYDROGEOLOGICAL EXISTING CONDITIONS
PROPOSED RESIDENTIAL DEVELOPMENT
5971, 5993, 6115, 6141 & 6159 FLEWELLYN ROAD, 6070 FERNBANK ROAD & 1770 & 1820 SHEA ROAD

OTTAWA, ONTARIO

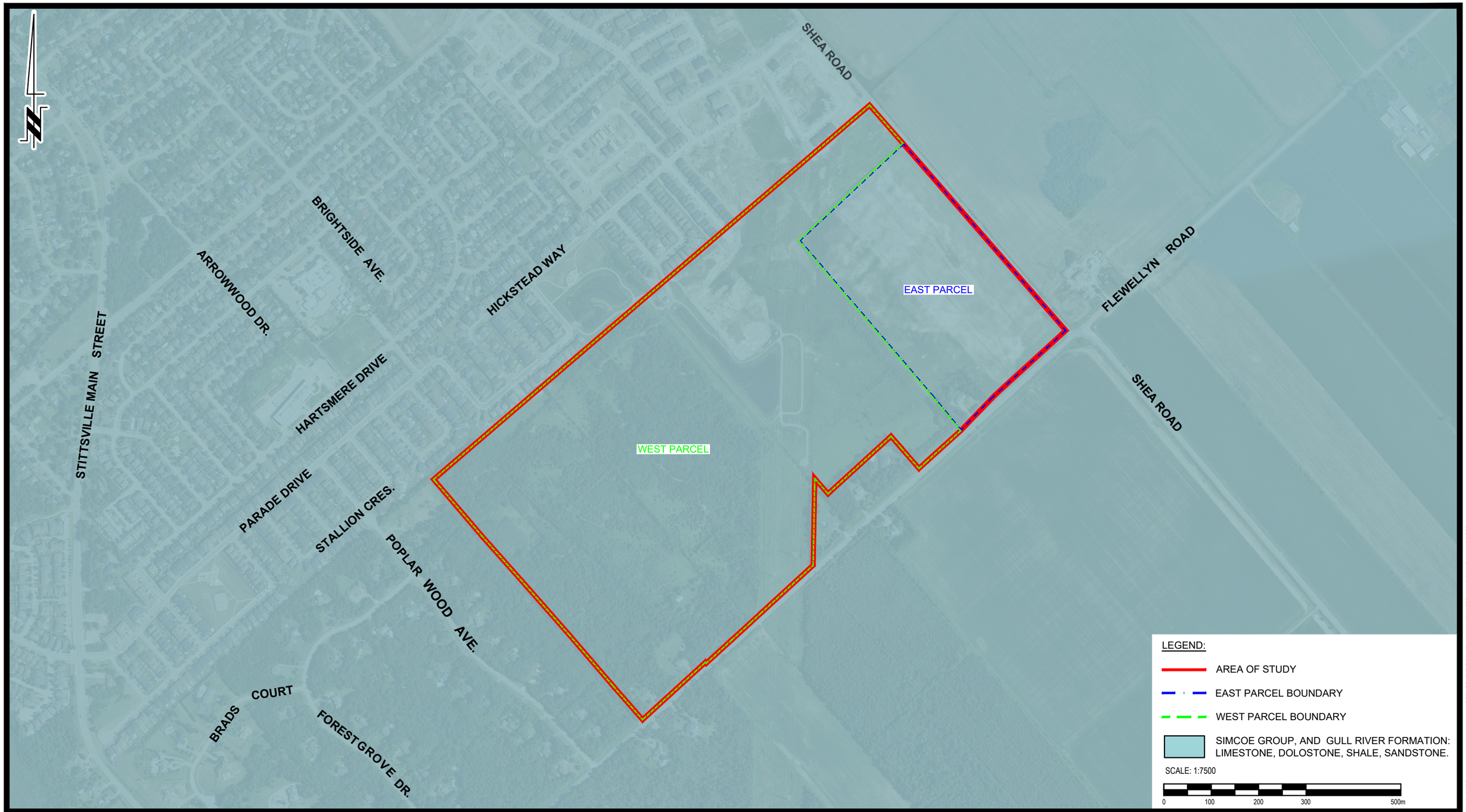
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SURFICIAL GEOLOGY PLAN

Scale: 1:7500	Date: 10/2022
Drawn by: JM	Report No.: PH4625-REP.01 PH4625-REP.02
Checked by: OB	Dwg. No.: PH4625-1
Approved by: MK	Revision No.: 5

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PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL
5	REVISED SITE BOUNDARY	13/04/2026	OB
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2	REVISED SITE BOUNDARY	04/07/2024	OB
1	UPDATED CLIENT'S NAME AND SITE ADDRESS	12/06/2023	OB

CAIVAN (STITTSVILLE) INC.

HYDROGEOLOGICAL EXISTING CONDITIONS
PROPOSED RESIDENTIAL DEVELOPMENT
5971, 5993, 6115, 6141 & 6159 FLEWELLYN ROAD, 6070 FERNBANK ROAD & 1770 & 1820 SHEA ROAD
OTTAWA, ONTARIO

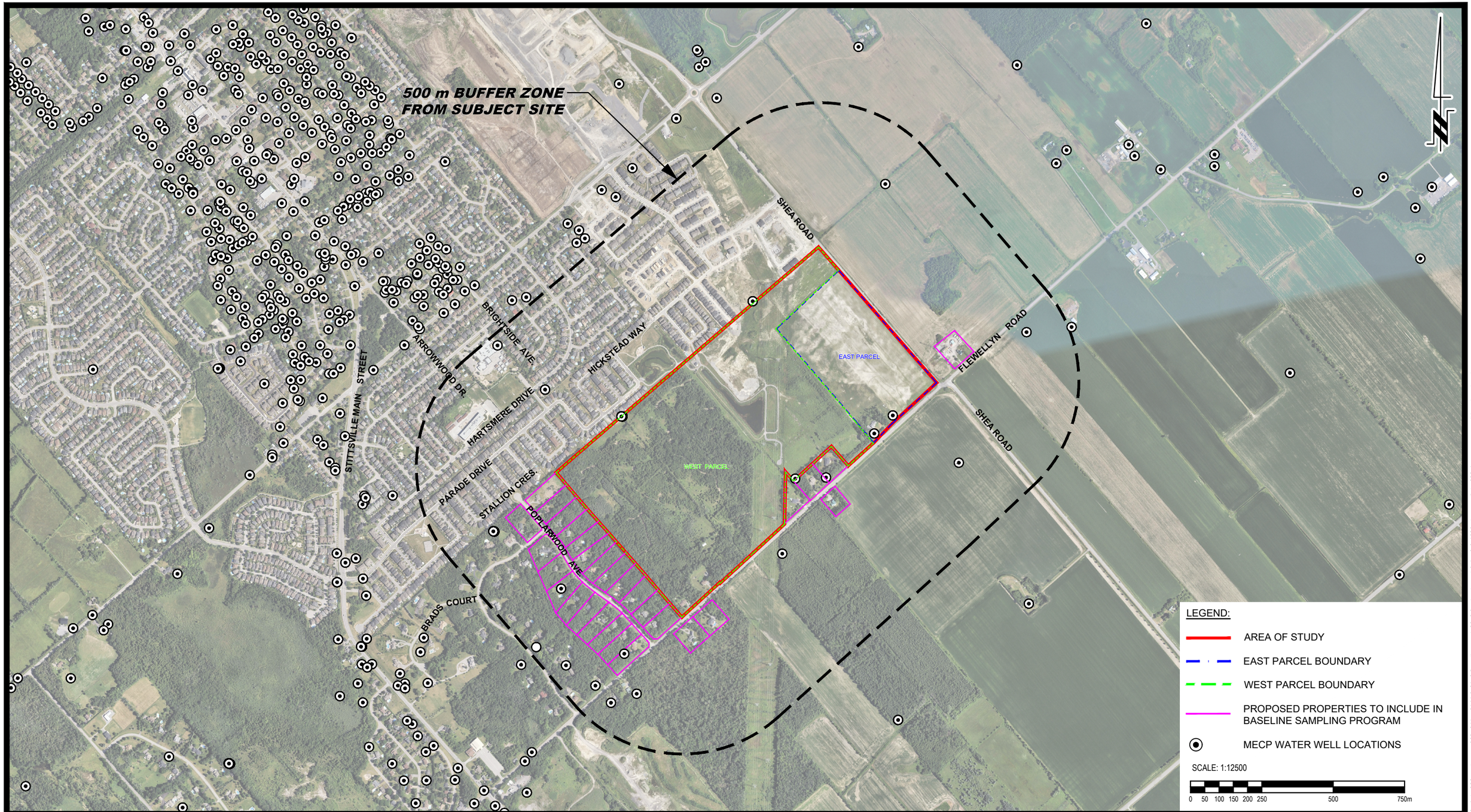
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BEDROCK GEOLOGY PLAN

Scale: 1:7500	Date: 10/2022
Drawn by: JM	Report No.: PH4625-REP.01 PH4625-REP.02
Checked by: OB	Dwg. No.: PH4625-3
Approved by: MK	Revision No.: 5

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PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

CAIVAN (STITTSVILLE) INC.

HYDROGEOLOGICAL REVIEW AND GROUNDWATER IMPACT ASSESSMENT
PROPOSED RESIDENTIAL DEVELOPMENT
5971, 5993, 6115, 6141 & 6159 FLEWELLYN ROAD, 6070 FERNBANK ROAD
& 1770 & 1820 SHEA ROAD

OTTAWA, ONTARIO

Title:

MECP WATER WELL LOCATION PLAN

Scale: 1:12500	Date: 04/2026
Drawn by: GK	Report No.: PH5222-REP.01
Checked by: ZB	Dwg. No.: PH5222-1
Approved by: OB	Revision No.:

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APPENDIX 2

PATERSON - SOIL PROFILE AND TEST DATA SHEETS

PG5570-1 - TEST HOLE LOCATION PLAN

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

6115 Flewelyn Road, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 352905.38 **NORTHING:** 5012191.28 **ELEVATION:** 101.90

PROJECT: Proposed Residential Development

ADVANCED BY: Track Mounted Drill Rig

REMARKS: Datum: NAD1983 (Canada) Geoid: HT2-2010 **DATE:** January 15, 2026

FILE NO. : **PG5570**

HOLE NO. : **BH 1-26**

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80	REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80	PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE											
TOPSOIL 0.20m [101.70m]											
Very loose to loose, brown **SILTY SAND** to **SANDY SILT**			AU 1			23					
		1	SS 2	67	3-2-3-5 5	28					
		2	SS 3	113	2-4-5-3 9	23					
- Grey by 2.6 m depth			SS 4	83	2-3-3-3 6	22 30					
3.51m [98.39m]		3	SS 5	75	1-2-1-2 3	33 13					
GLACIAL TILL: Compact, grey silty sand, with gravel		4	SS 6	4	7-7-11-10 18	12					
5.31m [96.59m]		5	SS 7		9-14-50-/ 64/0.28	13					
End of Borehole											
Practical refusal to augering at 5.31 m depth											
(GWL at 0.83 m depth - March 6, 2026)											

0.83 m 2026-03-06

3.71m

5.23m

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation

6115 Flewelyn Road, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 352849.53 **NORTHING:** 5012139.89 **ELEVATION:** 101.77

PROJECT: Proposed Residential Development

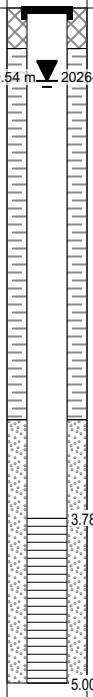
ADVANCED BY: Track Mounted Drill Rig

REMARKS: Datum: NAD1983 (Canada) Geoid: HT2-2010 **DATE:** January 15, 2026

FILE NO. : PG5570

HOLE NO. : BH 2-26

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) ▲ UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.18m [101.59m]									
Compact, brown **SILTY SAND** to **SANDY SILT**			AU 1			25			
		1	SS 2	83	4-5-5-7 10	24			
2.21m [99.56m]		2	SS 3	75	4-6-7-4 13	23			
GLACIAL TILL: Compact to very dense, brown silty sand, with gravel and cobbles		3	SS 4	50	3-7-6-9 13	10			
			SS 5	60	11-41-49-50 90	6			
		4	SS 6	73	16-49-47-50 96	7			
4.80m [96.97m]			SS 7	73	10-50-/-/ 50/0.05	6			
End of Borehole		5							
Practical refusal to augering at 4.80 m depth		6							
(GWL at 0.54 m depth - March 6, 2026)		7							
		8							
		9							
		10							



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation

6115 Flewelyn Road, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 352324.90 **NORTHING:** 5011723.17 **ELEVATION:** 102.91

PROJECT: Proposed Residential Development

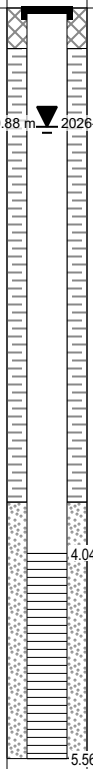
ADVANCED BY: Track Mounted Drill Rig

REMARKS: Datum: NAD1983 (Canada) Geoid: HT2-2010 **DATE:** February 26, 2026

FILE NO. : PG5570

HOLE NO. : BH 3-26

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.10m [102.81m]			AU 1			24			
GLACIAL TILL: Compact to very dense, brown silty sand, with gravel, cobbles and boulders		1	SS 2	67	4-4-9-10 13	25			
1.75m [101.16m]			SS 3	60	5-50-/-/ 50/0.05	9			
BEDROCK: Excellent quality, grey limestone		2	RC 1	100	RQD 100				
		3	RC 2	100	RQD 98				
		4							
5.66m [97.25m]		5	RC 3	100	RQD 98				
End of Borehole		6							
(GWL at 0.88 m depth - March 6, 2026)		7							
		8							
		9							
		10							



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation

6115 Flewelyn Road, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 352111.41 **NORTHING:** 5011460.99 **ELEVATION:** 104.56

PROJECT: Proposed Residential Development

ADVANCED BY: Track Mounted Drill Rig

REMARKS: Datum: NAD1983 (Canada) Geoid: HT2-2010 **DATE:** February 26, 2026

FILE NO. : PG5570

HOLE NO. : BH 4-26

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.13m [104.43m]									104
Compact, brown **SILTY SAND**		1	AU 1			19			
			SS 2	75	4-5-5-9 10	21		1.30 m 2026-03-06	103
2.21m [102.35m]		2	SS 3	50	5-13-12-14 25	19			
GLACIAL TILL: Compact to very dense, brown silty sand, with gravel, cobbles and boulders			SS 4	42	8-20-18-24 38	16			102
- Grey by 3.0 m depth		3	SS 5	50	8-26-24-26 50	20			101
		4	SS 6	48	4-13-12-50 25	18			
4.70m [99.86m]			SS 7	78	50-/-/-/ 50/0.13	11			100
						11			
End of Borehole		5							99
Practical refusal to augering at 4.70 m depth		6							98
(GWL at 1.30 m depth - March 6, 2026)		7							97
		8							96
		9							95
		10							

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation

6115 Flewelyn Road, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 352311.94 **NORTHING:** 5011659.47 **ELEVATION:** 103.31

PROJECT: Proposed Residential Development

ADVANCED BY: Track Mounted Drill Rig

REMARKS: Datum: NAD1983 (Canada) Geoid: HT2-2010 **DATE:** February 26, 2026

FILE NO. : PG5570

HOLE NO. : BH 5-26

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE WATER CONTENT (%)	PEN. RESIST. (BLOWS/0.3m) DCPT (50mm DIA. CONE) 20 40 60 80 / REMOULDED SHEAR STRENGTH (kPa) / UNDRAINED SHEAR STRENGTH (kPa) 20 40 60 80 / PL (%) WATER CONTENT (%) LL (%) 20 40 60 80	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
TOPSOIL 0.10m [103.21m]									103
Overburden		1						0.89 m 2026-03-06	102
		2							101
		3	RC 1	100	RQD 83				100
3.94m [99.37m]		4							99
BEDROCK: good to excellent quality, grey limestone		5	RC 2	100	RQD 86			4.50m	98
6.20m [97.11m]		6	RC 3	100	RQD 75			6.02m	97
End of Borehole		7							96
(GWL at 0.89 m depth - March 6, 2026)		8							95
		9							94
		10							

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

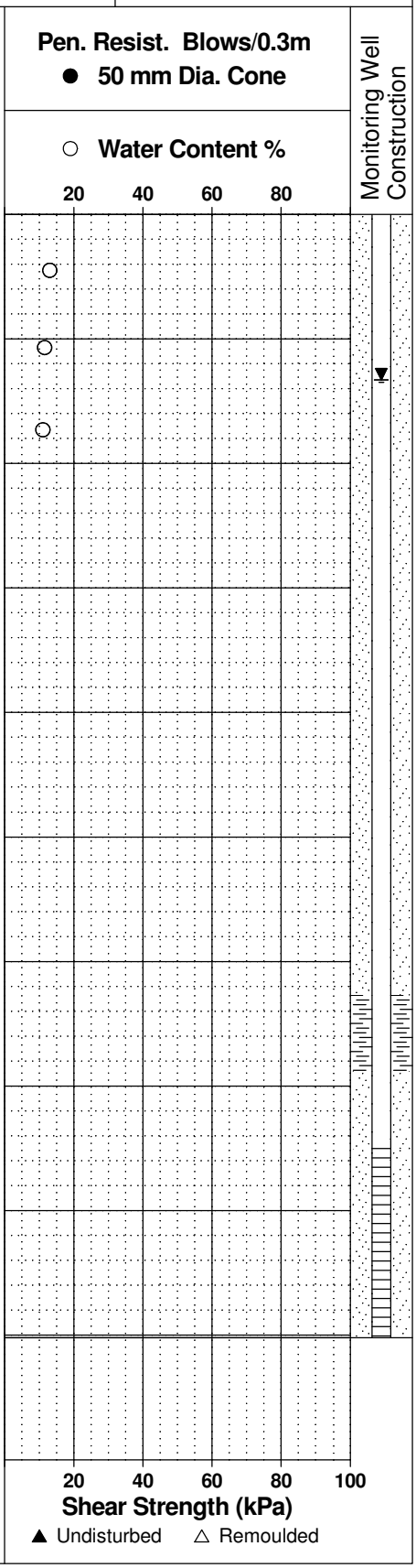
REMARKS

BORINGS BY CME-55 Low Clearance Drill **DATE** September 28, 2022

FILE NO. PG5570

HOLE NO. BH 1-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	107.31
TOPSOIL 0.30							
Loose to compact, brown **SILTY SAND,** trace gravel 0.60		AU	1				
		SS	2	45	17	1	106.31
GLACIAL TILL: Compact to dense, brown silty sand to sandy silt with gravel, cobbles and boulders		SS	3	14	65	2	105.31
2.34		RC	1	100	89	3	104.31
		RC	2	100	100	4	103.31
		RC	3	100	100	5	102.31
BEDROCK: Excellent quality, grey limestone interbedded with dolostone						6	101.31
		RC	4	98	98	7	100.31
		RC	5	100	100	8	99.31
9.02						9	98.31
End of Borehole							
(GWL @ 1.33m - Oct. 11, 2022)							



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SOIL PROFILE AND TEST DATA

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REMARKS

BORINGS BY CME-55 Low Clearance Drill **DATE** September 28, 2022

FILE NO. PG5570

HOLE NO. BH 1A-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Monitoring Well Construction
GROUND SURFACE						0	107.31	20 40 60 80	
OVERBURDEN						1	106.31		
1.62									
End of Borehole Practical refusal to augering at 1.62m depth (GWL @ 1.44m - Oct. 11, 2022)									

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

REMARKS

BORINGS BY CME-55 Low Clearance Drill **DATE** September 28, 2022

FILE NO. PG5570

HOLE NO. BH 2-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.58
TOPSOIL 0.30							
Compact, brown **SILTY SAND to SANDY SILT,** trace clay and gravel 0.76		AU	1				
		RC	1	100	77	1	102.58
		RC	2	100	97	2	101.58
		RC	3	100	100	3	100.58
BEDROCK: Good to excellent quality, grey limestone interbedded with dolostone						4	99.58
		RC	4	100	100	5	98.58
		RC	5	100	97	6	97.58
		RC	6	100	100	7	96.58
						8	95.58
9.02						9	94.58
End of Borehole							
(GWL @ 1.52m - Oct. 11, 2022)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %

20 40 60 80

Monitoring Well Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

REMARKS

BORINGS BY CME-55 Low Clearance Drill **DATE** September 29, 2022

FILE NO. PG5570

HOLE NO. BH 3-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.25
TOPSOIL 0.28		AU	1				
Compact, brown **SILTY SAND to SANDY SILT**		SS	2	58	19	1	101.25
		SS	3	58	17	2	100.25
2.21							
GLACIAL TILL: Grey silty sand to sandy silt with gravel, cobbles and boulders, trace clay		SS	4	67	3		
		SS	5	67	50+	3	99.25
3.43							
		RC	1	100	96	4	98.25
						5	97.25
		RC	2	100	98		
BEDROCK: Excellent quality, grey limestone interbedded with doloston						6	96.25
		RC	3	100	100	7	95.25
						8	94.25
		RC	4	100	100		
9.12						9	93.25
End of Borehole							
(GWL @ 0.84m - Oct. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**
20 40 60 80

Monitoring Well Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
5993, 6070 and 6115 Flewellyn Road
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DATUM Geodetic

REMARKS

BORINGS BY CME-55 Low Clearance Drill **DATE** September 29, 2022

FILE NO. PG5570

HOLE NO. BH 3A-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Monitoring Well Construction
GROUND SURFACE						0	102.25		
TOPSOIL 0.28									
Compact, brown **SILTY SAND to SANDY SILT**		AU	1			1	101.25		
2.20						2	100.25		
GLACIAL TILL: Grey silty sand to sandy silt with gravel, cobbles and boulders, trace clay 3.15						3	99.25		
End of Borehole									
Practical refusal to augering at 3.15m depth.									
(GWL @ 0.81m - Oct. 11, 2022)									

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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9 Auriga Drive, Ottawa, Ontario K2E 7T9

SOIL PROFILE AND TEST DATA

Geotechnical Investigation
5993, 6070 and 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY CME-55 Low Clearance Drill **DATE** September 29, 2022

FILE NO. PG5570

HOLE NO. BH 4-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	105.71
TOPSOIL 0.28		AU	1				
Compact, brown **SILTY SAND to SANDY SILT**		SS	2	75	22	1	104.71
		SS	3	75	21	2	103.71
2.21							
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders, trace clay		SS	4	67	17	3	102.71
- grey by 3.0m depth		SS	5	57	45		
3.61						4	101.71
		RC	1	100	84		
						5	100.71
		RC	2	100	98		
BEDROCK: Good to excellent quality, grey limestone interbedded with dolostone						6	99.71
		RC	3	100	100	7	98.71
						8	97.71
		RC	4	100	100		
9.04						9	96.71
End of Borehole							
(GWL @ 3.62m - Oct. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**
20 40 60 80

Monitoring Well Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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9 Auriga Drive, Ottawa, Ontario K2E 7T9

SOIL PROFILE AND TEST DATA

Geotechnical Investigation
5993, 6070 and 6115 Flewellyn Road
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DATUM Geodetic

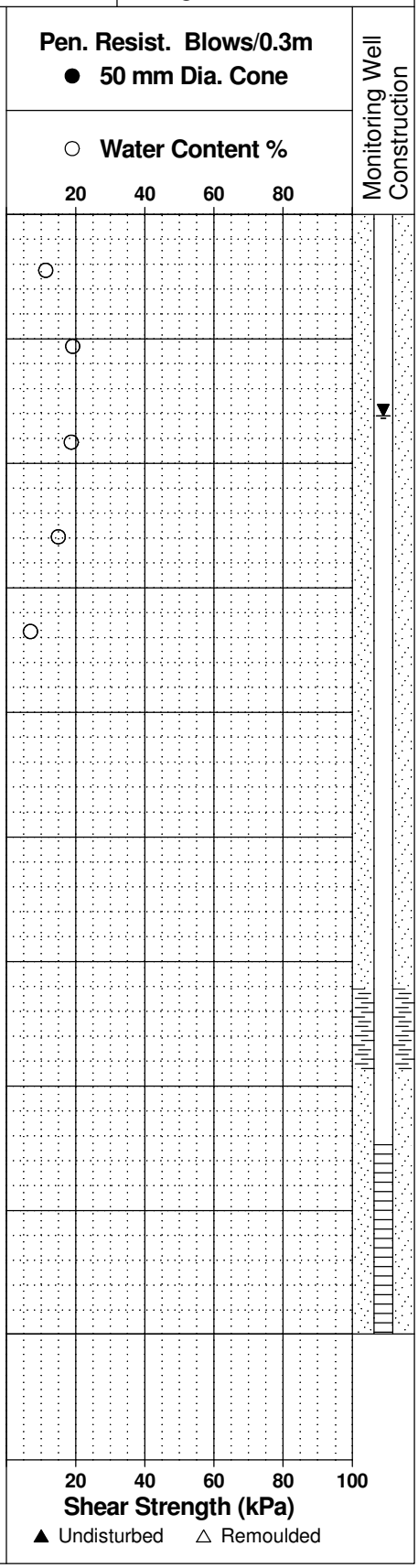
REMARKS

BORINGS BY CME-55 Low Clearance Drill **DATE** September 30, 2022

FILE NO. PG5570

HOLE NO. BH 5-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	105.70
TOPSOIL 0.28		AU	1				
Compact, brown **SILTY SAND to SANDY SILT**		SS	2	79	21	1	104.70
1.96		SS	3	71	29	2	103.70
GLACIAL TILL: Compact to dense, brown silty sand to sandy silt, trace gravel 2.29		SS	4	100	50+		
		RC	1	100	100	3	102.70
		RC	2	100	100	4	101.70
BEDROCK: Excellent quality, grey limestone interbedded with dolostone		RC	3	100	100	5	100.70
		RC	4	100	100	6	99.70
		RC	5	100	100	7	98.70
8.99						8	97.70
End of Borehole							
(GWL @ 1.62m - Oct. 11, 2022)							



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

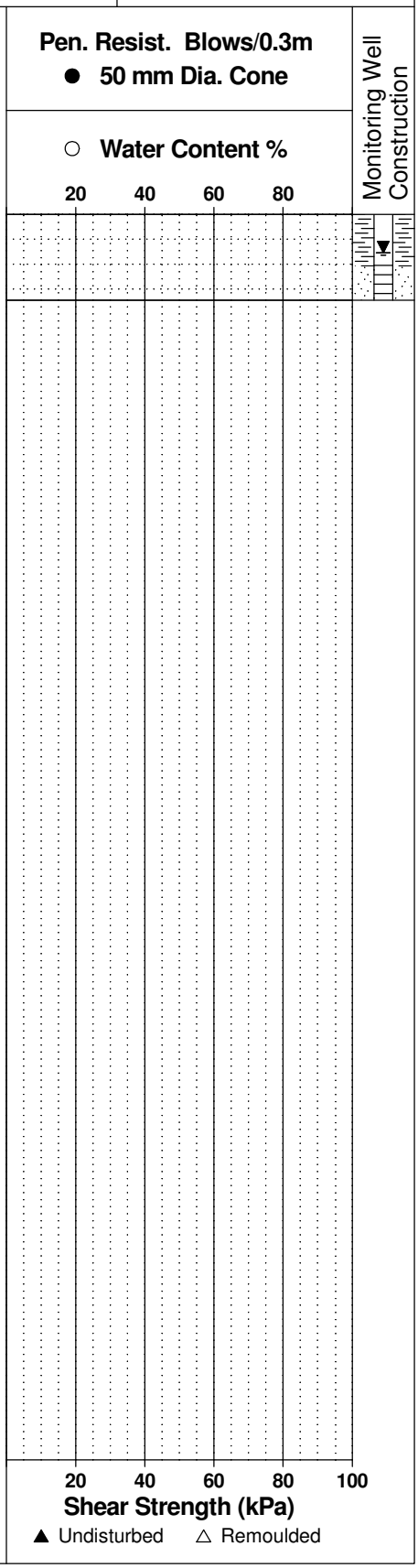
REMARKS

BORINGS BY Hand Auger **DATE** September 28, 2022

FILE NO. PG5570

HOLE NO. HA 1-22

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Monitoring Well Construction
GROUND SURFACE						0	106.78		
TOPSOIL 0.30									
Brown **SILTY SAND,** trace gravel 0.69									
End of Hand Auger Hole									
(GWL @ 0.31m - Oct. 11, 2022)									



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 14, 2021

FILE NO. PG5570

HOLE NO. BH 1-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	104.29
TOPSOIL 0.43							
Very loose, brown **SILTY SAND**		AU	1				
- some clay by 0.6m depth		SS	2	8	1	1	103.29
1.52							
GLACIAL TILL: Compact, brown silty sand with gravel, cobbles and boulders, trace clay 2.19		SS	3	25	23	2	102.29
		SS	4	100	50+		
		RC	1	100	57		
BEDROCK: Fair to excellent quality, grey limestone interbedded with dolostone		RC	2	100	68	3	101.29
- 20mm thick mud seam at 3.4m depth						4	100.29
- 12mm thick mud at 3.7m depth		RC	3	100	98	5	99.29
5.77							
End of Borehole							
(GWL @ 1.22m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Monitoring Well Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 14, 2021

FILE NO. PG5570

HOLE NO. BH 2-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	107.19
Mulch 0.10							
TOPSOIL 0.51							
Compact, brown **SILTY SAND**		AU	1				
0.91		SS	2	75	12	1	106.19
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders		SS	3	75	50		
2.21		SS	4	0	50+	2	105.19
		RC	1	100	80		
BEDROCK: Good to excellent quality, grey limestone		RC	2	100	100	3	104.19
- 12mm thick mud seam at 4.1m depth						4	103.19
		RC	3	100	95	5	102.19
5.61							
End of Borehole							
(GWL @ 0.82m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Monitoring Well Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH 3-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	108.41
Mulch 0.08							
TOPSOIL 0.43		AU	1				
Loose, brown **SILTY SAND** 0.63							
Loose to compact, brown **SILTY SAND to SANDY SILT**		SS	2	50	10	1	107.41
1.55		SS	3	0	50+		
		RC	1	100	100	2	106.41
BEDROCK: Good to excellent, grey limestone interbedded with dolostone		RC	2	100	72	3	105.41
						4	104.41
- 30mm thick mud seam at 4.3m depth		RC	3	100	100	5	103.41
5.72							
End of Borehole							
(GWL @ 0.89m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %

20 40 60 80

Monitoring Well Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH 4-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	108.95
Mulch 0.10							
TOPSOIL 0.30		AU	1				
Compact, brown **SILTY SAND,** trace shells 0.60		SS	2	50	12	1	107.95
GLACIAL TILL: Compact, brown silty sand with gravel, cobbles and boulders		SS	3	42	21	2	106.95
2.23							
End of Borehole							
Practical refusal to augering at 2.23m depth							
(GWL @ 1.23m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH 5-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	108.38
TOPSOIL 0.36		AU	1				
Loose, brown **SILTY SAND**		SS	2		4	1	107.38
1.22							
GLACIAL TILL: Dense, grey silty sand with gravel, cobbles and boulders 1.62		SS	3	0	50+		
End of Borehole							
Practical refusal to augering at 1.62m depth							
(BH dry - January 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH 6-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	106.32
TOPSOIL 0.41							
Loose, brown **SILTY SAND,** trace clay 0.60		AU	1				
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders 1.55		SS	2	83	17	1	105.32
End of Borehole							
Practical refusal to augering at 1.55m depth							
(BH dry - January 11, 2022)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH 7-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE							
Mulch 0.10		AU	1			0	107.04
TOPSOIL 0.41							
Loose, brown **SILTY SAND** 0.60		SS	2	100	19	1	106.04
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders		SS	3	67	44	2	105.04
		SS	4		52		
2.97							
End of Borehole							
Practical refusal to augering at 2.97m depth							
(GWL @ 1.09m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH 8-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	105.91
Mulch 0.05		AU	1				
TOPSOIL 0.38							
Loose, brown **SILTY SAND** 0.60							
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders		SS	2	67	20	1	104.91
1.60		SS	3	0	50+		
End of Borehole							
Practical refusal to augering at 1.60m depth							
(BH dry - January 11, 2022)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

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REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH 9-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	104.62
TOPSOIL 0.36							
Loose, brown **SILTY SAND,** trace clay 0.69		AU	1				
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders 1.22		SS	2		50+	1	103.62
End of Borehole							
Practical refusal to augering at 1.22m depth							
(Piezometer damaged - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

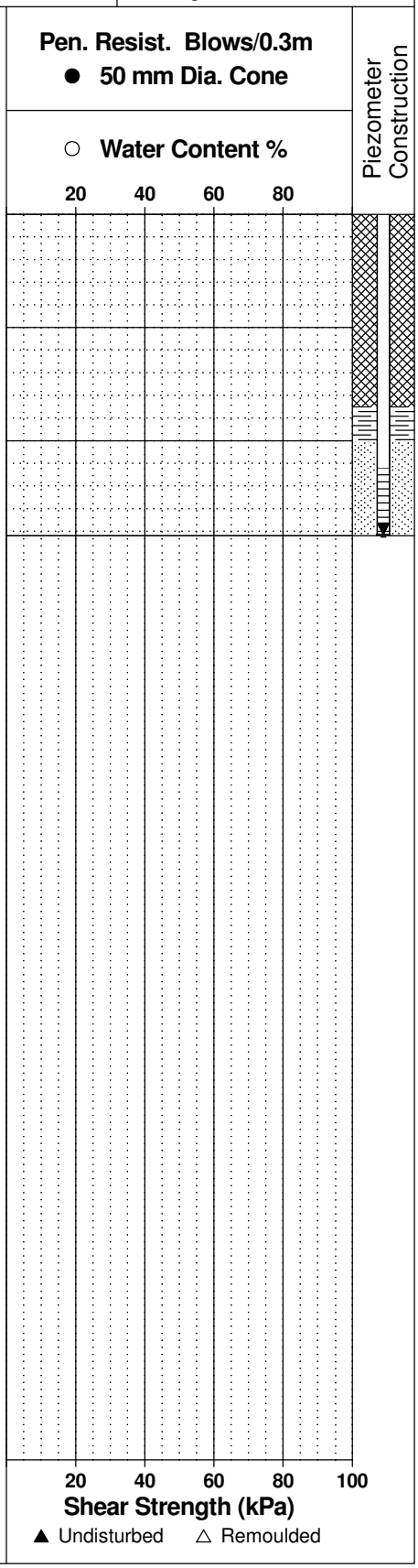
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 15, 2021

FILE NO. PG5570

HOLE NO. BH10-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	105.70
TOPSOIL 0.36		AU	1				
Compact, brown **SILTY SAND**		SS	2	67	23	1	104.70
		SS	3	67	16	2	103.70
		SS	4	64	25		
2.74							
GLACIAL TILL: Compact to dense, grey silty sand with gravel, cobbles and boulders 2.84							
End of Borehole							
Practical refusal to augering at 2.84m depth							
(GWL @ 2.83m - Jan. 11, 2022)							



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SOIL PROFILE AND TEST DATA

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REMARKS

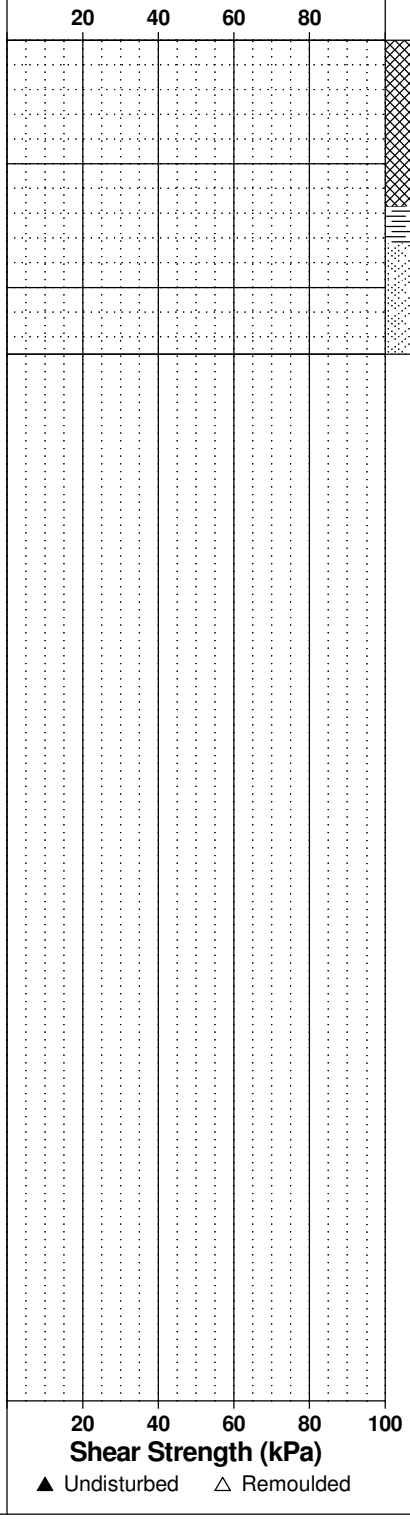
BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH11-21

SOIL DESCRIPTION		STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE							0	104.98
TOPSOIL	0.33							
Compact, brown **SILTY SAND**	0.66		AU	1				
Compact, brown **SILTY SAND to SANDY SILT**	1.12		SS	2	67	24	1	103.98
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders			SS	3	67	32		
	2.54		SS	4	80	50+	2	102.98
End of Borehole								
Practical refusal to augering at 2.54m depth								
(GWL @ 1.32m - Jan. 11, 2022)								

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %



Piezometer Construction

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SOIL PROFILE AND TEST DATA

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REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH12-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	104.05		
TOPSOIL 0.36									
Compact, brown **SILTY SAND** 0.69		AU	1						
Compact, brown **SILTY SAND to SANDY SILT** 1.45		SS	2	67	13	1	103.05		
GLACIAL TILL: Dense, brown silty sand with gravel, cobbles and boulders 2.26		SS	3	17	36	2	102.05		
End of Borehole									
Practical refusal to augering at 2.26m depth									
(GWL @ 1.58m - Jan. 11, 2022)									

Pen. Resist. Blows/0.3m: 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

REMARKS

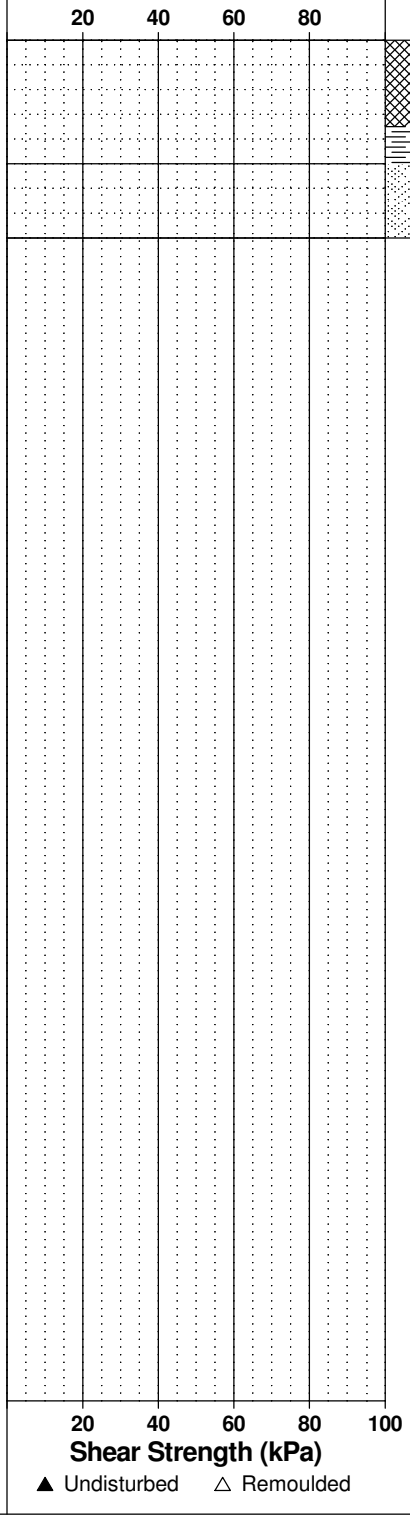
BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH13-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.54
TOPSOIL 0.36							
Loose, brown **SILTY SAND to SANDY SILT**		AU	1			1	102.54
		SS	2	25	6		
1.60		SS	3	0	50+		
End of Borehole							
Practical refusal to augering at 1.60m depth							
(GWL @ 1.44m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**



Piezometer Construction

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

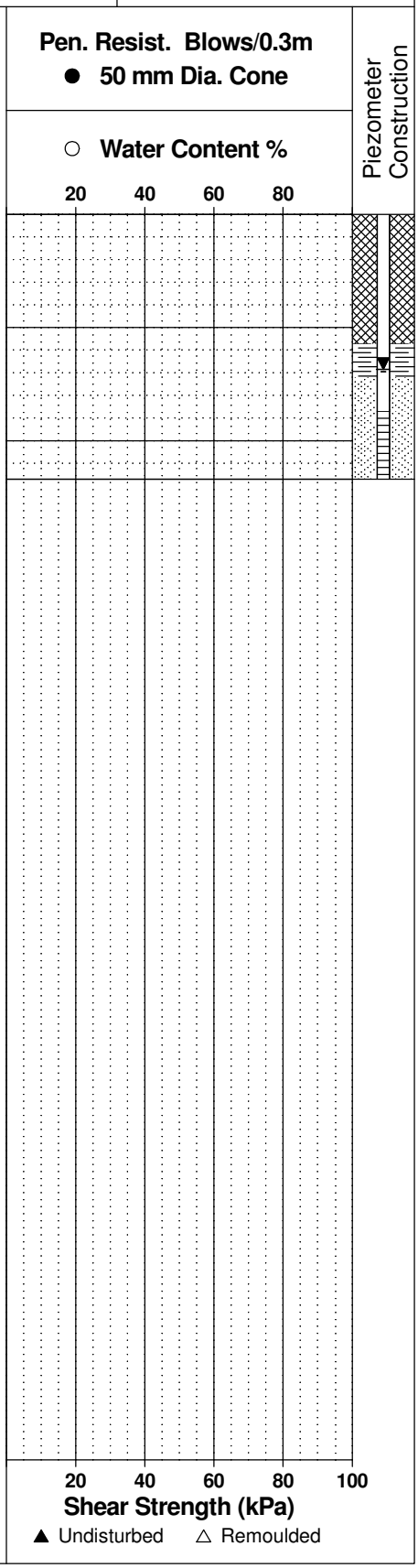
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH14-21

SOIL DESCRIPTION		STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE							0	103.28
TOPSOIL	0.36							
Loose, brown **SILTY SAND**	0.69		AU	1				
Loose, brown **SILTY SAND to SANDY SILT**	1.45		SS	2	67	6	1	102.28
GLACIAL TILL: Loose to dense, brown silty sand with clay, gravel, cobbles and boulders	2.34		SS	3	25	7	2	101.28
			SS	4	0	50+		
End of Borehole								
Practical refusal to augering at 2.34m depth								
(GWL @ 1.37m - Jan. 11, 2022)								



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

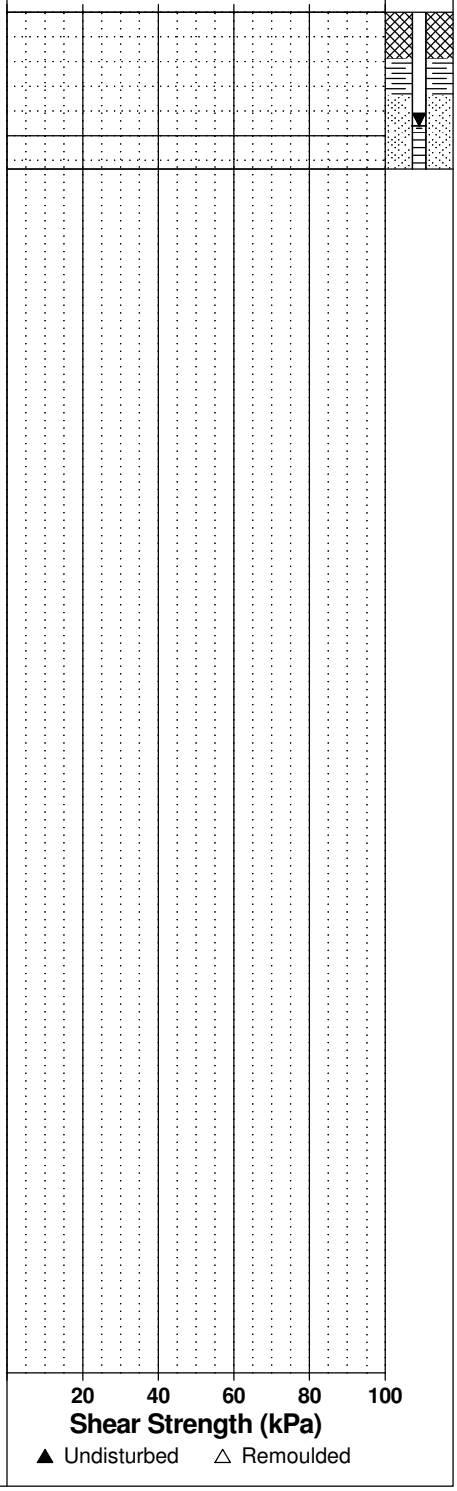
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH15-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE									
TOPSOIL 0.30						0	103.08		
Compact, brown **SILTY SAND to SANDY SILT** 0.91		AU	1						
GLACIAL TILT: Compact, brown silty sand with gravel, cobbles and boulders 1.27		SS	2	63	19	1	102.08		
End of Borehole									
Practical refusal to augering at 1.27m depth									
(GWL @ 0.92m - Jan. 11, 2022)									



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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH16-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE									
TOPSOIL 0.25						0	104.19		
Compact, brown **SILTY SAND,** trace gravel 0.69		AU	1						
GLACIAL TILL: Compact, brown silty sand with gravel, cobbles and boulders 1.50		SS	2		22	1	103.19		
End of Borehole									
Practical refusal to augering at 1.50m depth									
(GWL @ 1.32m - Jan. 11, 2022)									

Pen. Resist. Blows/0.3m: 20 40 60 80

Water Content %: 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

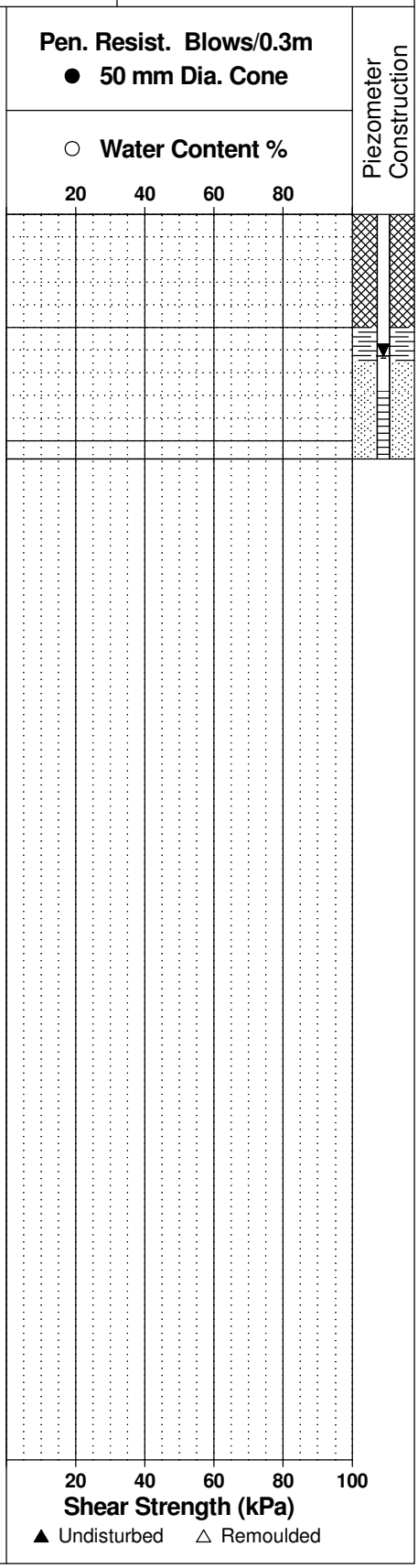
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH17-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	104.42
TOPSOIL 0.28		AU	1				
Loose, brown **SILTY SAND to SANDY SILT**		SS	2	75	5	1	103.42
		SS	3	91	11		
1.98						2	102.42
GLACIAL TILL: Compact, brown silty sand with gravel, cobbles and boulders 2.16							
End of Borehole							
Practical refusal to augering at 2.16m depth							
(GWL @ 1.25m - Jan. 11, 2022)							



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SOIL PROFILE AND TEST DATA

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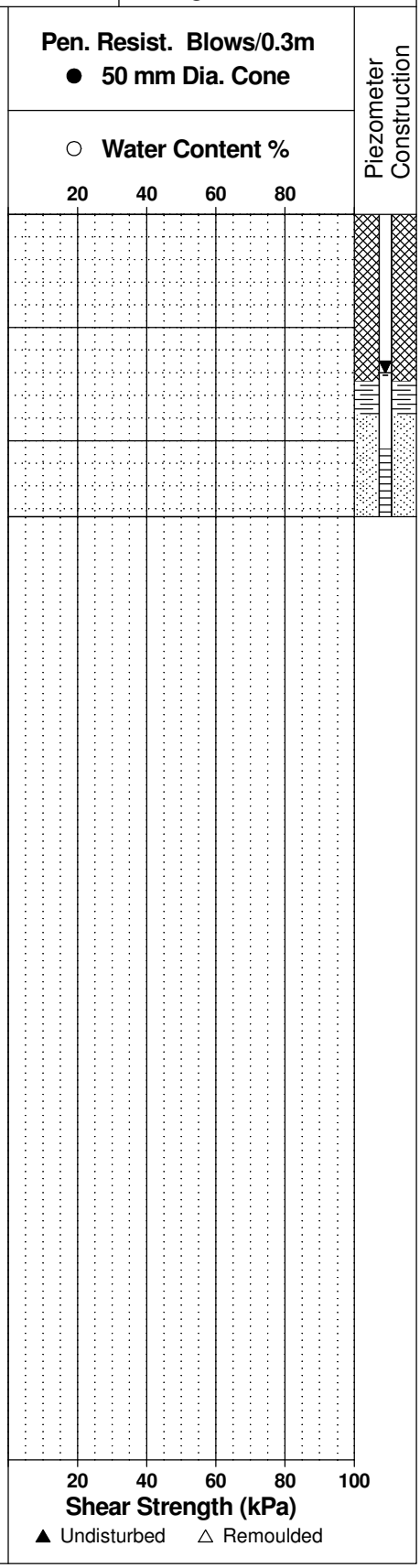
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH18-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	105.06
TOPSOIL 0.30		AU	1				
Compact, brown **SILTY SAND to SANDY SILT**		SS	2	75	10	1	104.06
		SS	3	100	19	2	103.06
- grey by 2.0m depth							
2.67		SS	4		50+		
End of Borehole							
Practical refusal to augering at 2.67m depth							
(GWL @ 1.40m - Jan. 11, 2022)							



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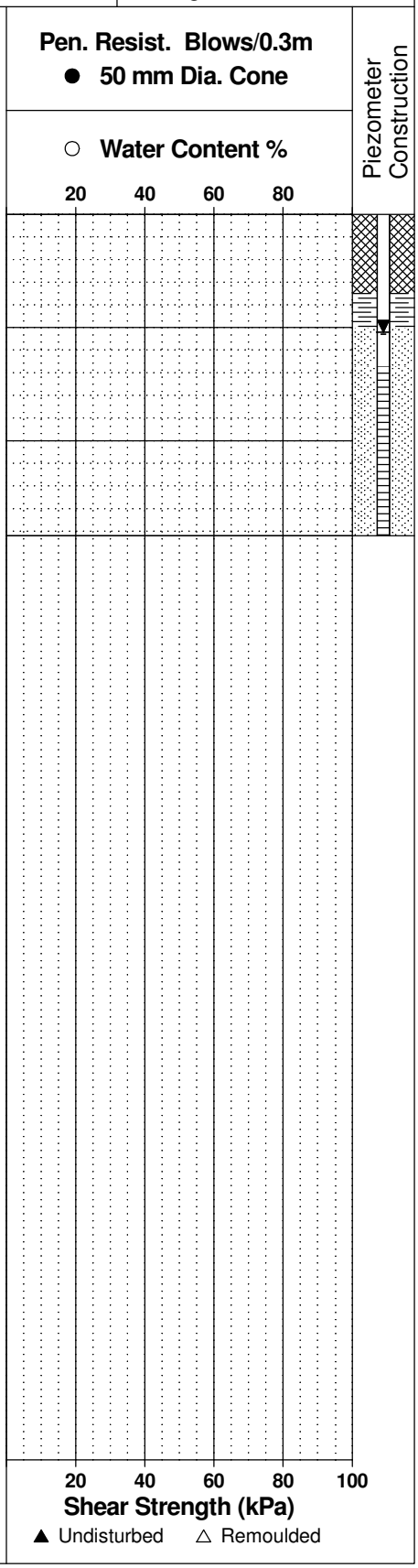
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 16, 2021

FILE NO. PG5570

HOLE NO. BH19-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	101.85
TOPSOIL 0.20		AU	1				
Compact, brown **SILTY SAND to SANDY SILT**		SS	2	50	12	1	100.85
1.73		SS	3	75	8		
Loose, brown **SILTY SAND,** some clay						2	99.85
2.59		SS	4	100	12		
GLACIAL TILL: Compact, grey silty sand with gravel, cobbles and boulders 2.84							
End of Borehole							
Practical refusal to augering at 2.84m depth							
(GWL @ 1.04m - Jan. 11, 2022)							



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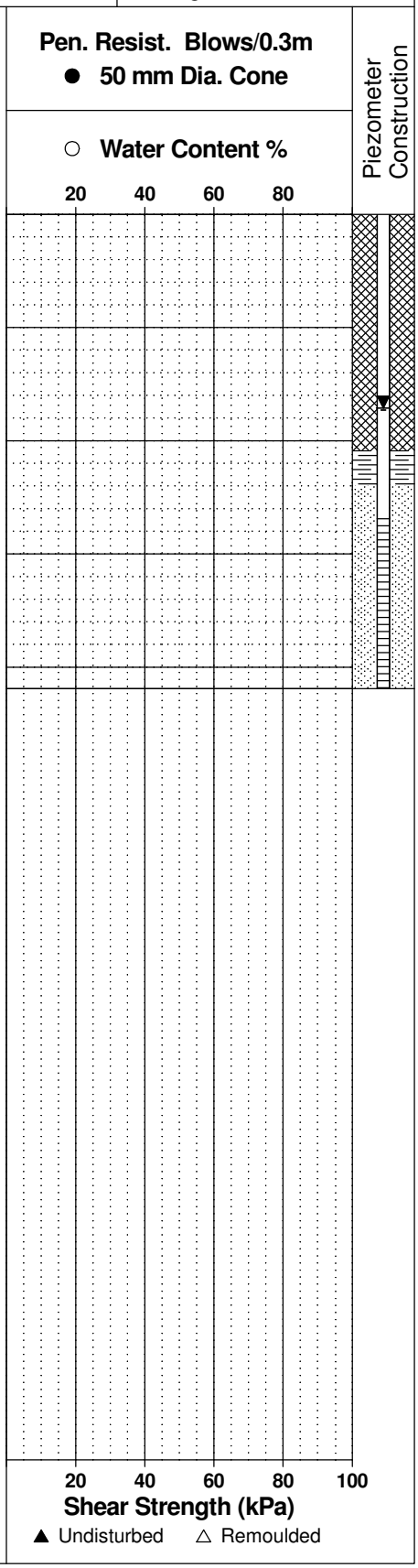
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 17, 2021

FILE NO. PG5570

HOLE NO. BH20-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.25
TOPSOIL 0.23		AU	1				
Compact to loose, brown **SILTY SAND to SANDY SILT**		SS	2	58	11	1	101.25
		SS	3	42	7	2	100.25
2.44							
Interlayered grey **SANDY SILT** and grey **SILTY CLAY**		SS	4	75	3	3	99.25
3.20							
GLACIAL TILL: Compact, grey silty sand with gravel, cobbles and boulders		SS	5	67	23		
4.19		SS	6		50+	4	98.25
End of Borehole							
Practical refusal to augering at 4.19m depth							
(GWL @ 1.71m - Jan. 11, 2022)							



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BORINGS BY Track-Mount Power Auger **DATE** December 17, 2021

FILE NO. PG5570

HOLE NO. BH21-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	102.92		
TOPSOIL 0.25									
Loose, brown **SILTY SAND to SANDY SILT**		AU	1						
1.07		SS	2	42	36	1	101.92		
GLACIAL TILL: Dense, brown silty sand with gravel, cobbles and boulders		SS	3	50	71				
2.23						2	100.92		
End of Borehole									
Practical refusal to augering at 2.23m depth									
(Piezometer damaged - Jan. 11, 2022)									

Pen. Resist. Blows/0.3m: 20 40 60 80

Water Content %: 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 20, 2021

FILE NO. PG5570

HOLE NO. BH22-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.98
TOPSOIL 0.20							
Loose, brown **SILTY SAND,** trace gravel 0.69		AU	1				
		SS	2	100	22	1	101.98
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders		SS	3	92	29	2	100.98
		SS	4	83	46		
		SS	5	50	50+	3	99.98
3.48							
End of Borehole							
Practical refusal to augering at 3.48m depth.							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**
20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** January 10, 2022

FILE NO. PG5570

HOLE NO. BH22A-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.98
TOPSOIL 0.20							
Loose, brown **SILTY SAND,** trace gravel 0.69		AU	1				
		SS	2	100	22	1	101.98
		SS	3	92	29	2	100.98
GLACIAL TILL: Compact to dense, brown silty sand with gravel, cobbles and boulders		SS	4	83	46		
		SS	5	50	50+	3	99.98
		RC	1	77		4	98.98
		RC	2	14		5	97.98
5.97						6	96.98
		RC	3	100	94	7	95.98
BEDROCK: Excellent quality, grey dolostone interbedded with grey limestone		RC	4	100	100	8	94.98
						9	93.98
		RC	5	100	100		
10.21						10	92.98
End of Borehole							
(GWL @ 2.49m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Monitoring Well Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 20, 2021

FILE NO. PG5570

HOLE NO. BH23-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	102.38		
TOPSOIL 0.28									
Stiff, brown **SILTY CLAY,** some sand		AU	1						
1.12		SS	2	25	32	1	101.38		
GLACIAL TILL: Dense, brown silty sand with gravel, cobbles and boulders, trace clay 1.83		SS	3	55					
End of Borehole									
Practical refusal to augering at 1.83m depth									
(Piezometer damaged - Jan. 11, 2022)									

Pen. Resist. Blows/0.3m: 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 20, 2021

FILE NO. PG5570

HOLE NO. BH24-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.07
TOPSOIL 0.30		AU	1				
Loose to dense, brown **SILTY SAND to SANDY SILT**		SS	2	58	8	1	102.07
1.83		SS	3	75	32	2	101.07
		SS	4	50	50+		
GLACIAL TILL: Dense, brown silty sand with gravel, cobbles and boulders		RC	1	100		3	100.07
- boulders cored from 2.46 to 4.42m depth		RC	2	19		4	99.07
4.42		RC	3	100	81	5	98.07
BEDROCK: Good to excellent quality, grey limestone interbedded with dolostone						6	97.07
- 15mm thick mud seam at 5.25m depth		RC	4	100	100	7	96.07
7.92		RC	5	100	100		
End of Borehole							
(GWL @ 0.67m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Monitoring Well Construction

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH25-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.73
TOPSOIL 0.25		AU	1				
Loose, brown **SILTY SAND,** trace clay and gravel		SS	2	71	50+	1	101.73
1.17							
End of Borehole							
Practical refusal to augering at 1.17m depth							
(GWL @ 0.71m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH26-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.04
TOPSOIL 0.25							
Stiff, brown **SILTY CLAY,** some sand 0.69		AU	1				
		SS	2	40	50+	1	102.04
GLACIAL TILL: Dense, brown silty sand with gravel, cobbles and boulders, trace clay		SS	3	61	33		
2.16						2	101.04
End of Borehole							
Practical refusal to augering at 2.16m depth							
(GWL @ 0.78m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

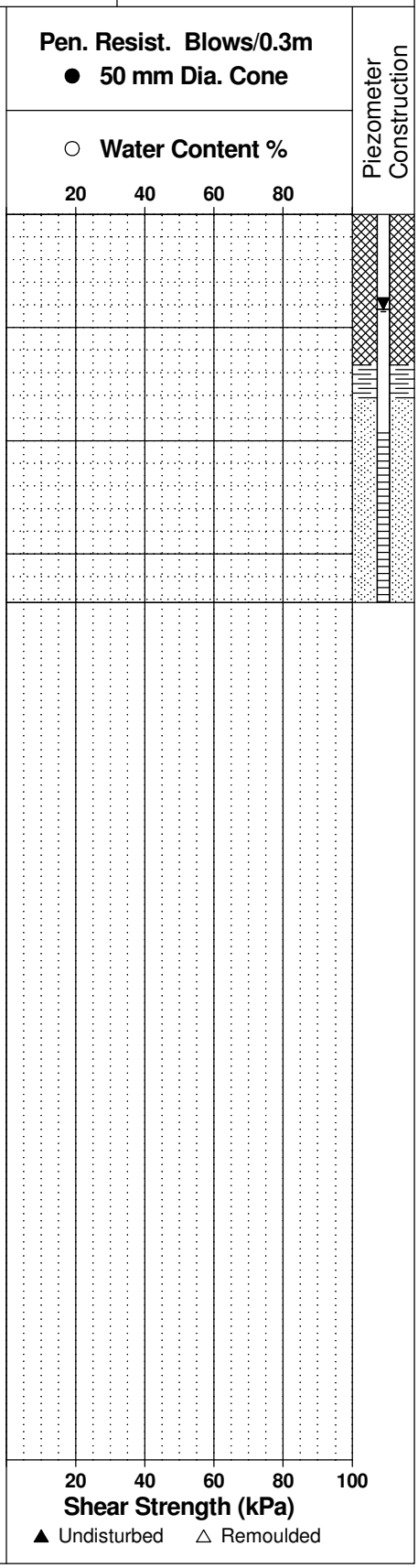
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH27-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.71
TOPSOIL 0.28		AU	1				
Compact to loose, brown **SILTY SAND to SANDY SILT,** trace clay		SS	2	67	19	1	101.71
		SS	3	83	21	2	100.71
- grey by 2.4m depth		SS	4	50	9		
3.12						3	99.71
GLACIAL TILL: Very loose, grey silty sand with gravel, cobbles and boulders 3.43		SS	5	86	3		
End of Borehole							
Practical refusal to augering at 3.43m depth							
(GWL @ 0.84m - Jan. 11, 2022)							



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Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH28-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	101.85
TOPSOIL 0.30		AU	1				
Loose, brown **SILTY SAND to SANDY SILT,** trace clay		SS	2	42	7	1	100.85
		SS	3	58	8	2	99.85
2.21							
Interbedded layers of grey **SILTY SAND** and grey **SILTY CLAY**		SS	4	100	2	3	98.85
2.97							
GLACIAL TILL: Very loose, grey silty sand with clay, gravel and cobbles		SS	5	100	3		
3.89		SS	6		50+		
End of Borehole							
Practical refusal to augering at 3.89m depth							
(GWL @ 1.79m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

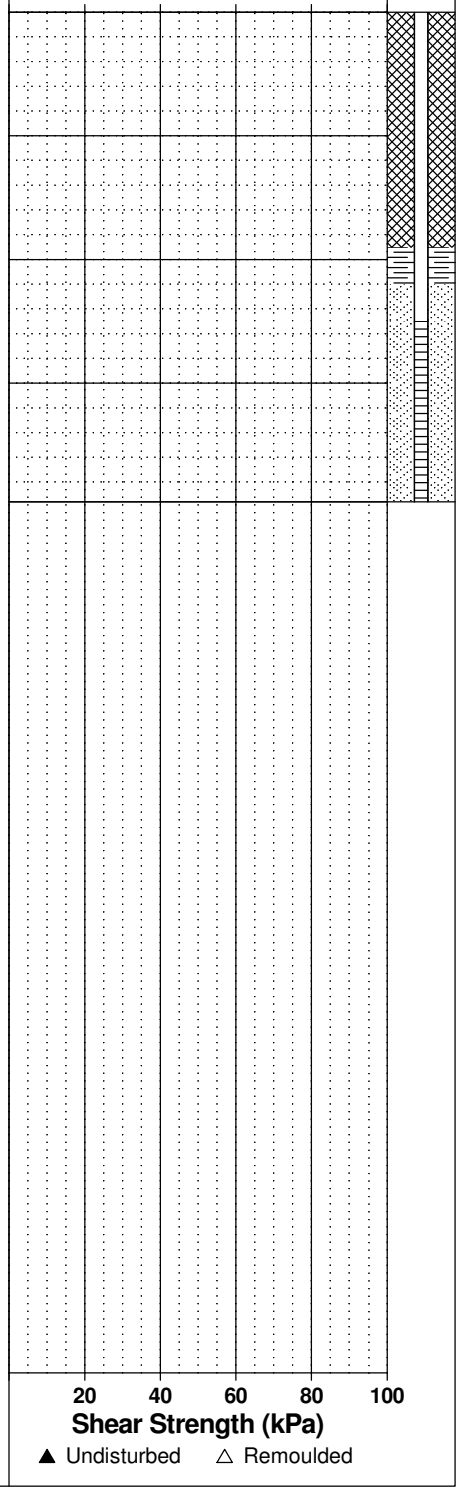
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH29-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE									
TOPSOIL 0.28		AU	1			0	102.31		
Loose to very loose, brown **SILTY SAND to SANDY SILT,** trace clay		SS	2	50	9	1	101.31		
		SS	3	67	8	2	100.31		
- grey by 1.9m depth		SS	4	67	4				
- intermittent layers of grey silty clay by 3.0m depth		SS	5	58	2	3	99.31		
3.96		SS	6	67					
End of Borehole									
Practical refusal to augering at 3.96m depth									
(Piezometer damaged - Jan. 11, 2022)									



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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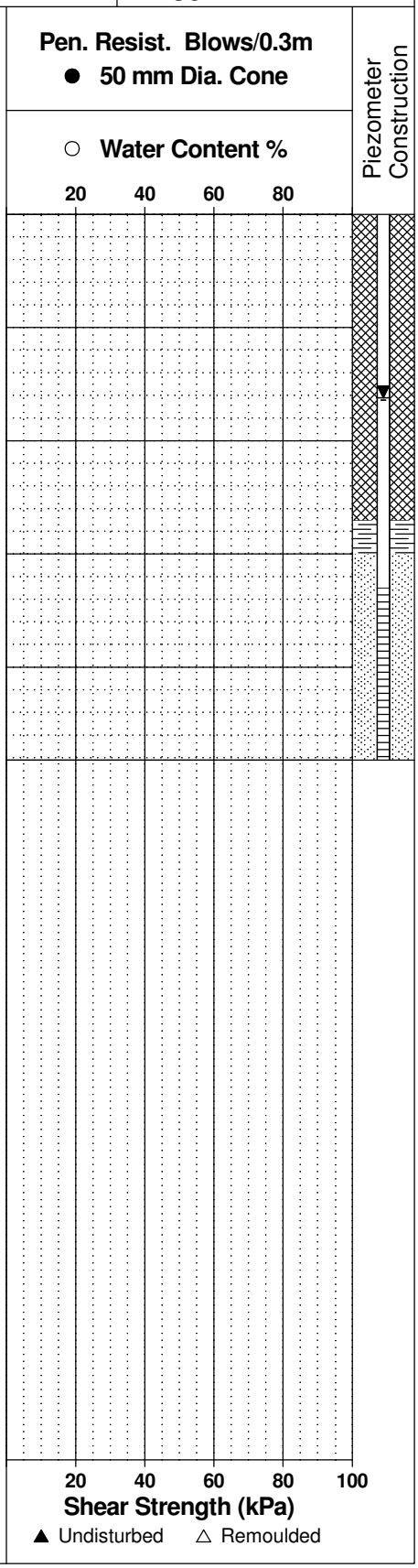
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH30-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.44
TOPSOIL 0.25		AU	1				
		SS	2	50	12	1	101.44
Compact to very loose, brown **SILTY SAND to SANDY SILT,** trace clay		SS	3	33	10	2	100.44
- grey by 2.0m depth		SS	4	92	1		
3.45		SS	5	83	2	3	99.44
GLACIAL TILL: Very loose to compact, grey silty sand with gravel, cobbles and boulders, trace clay		SS	6	33	24	4	98.44
4.82		SS	7	50	50+		
End of Borehole							
Practical refusal to augering at 4.82m depth							
(GWL @ 1.62m - Jan. 11, 2022)							



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH31-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.43
TOPSOIL 0.36		AU	1				
		SS	2	50	14	1	102.43
		SS	3	50	22	2	101.43
Compact to loose, brown **SILTY SAND to SANDY SILT,** trace clay		SS	4	42	9		
- grey by 3.2m depth		SS	5	58	5	3	100.43
		SS	6	42	12	4	99.43
4.72		SS	7	58	37		
GLACIAL TILL: Dense, grey silty sand with gravel, cobbles and boulders		SS	8		58	5	98.43
6.12		SS	9	0	50+	6	97.43
End of Borehole							
Practical refusal to augering at 6.12m depth							
(GWL @ 1.27m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

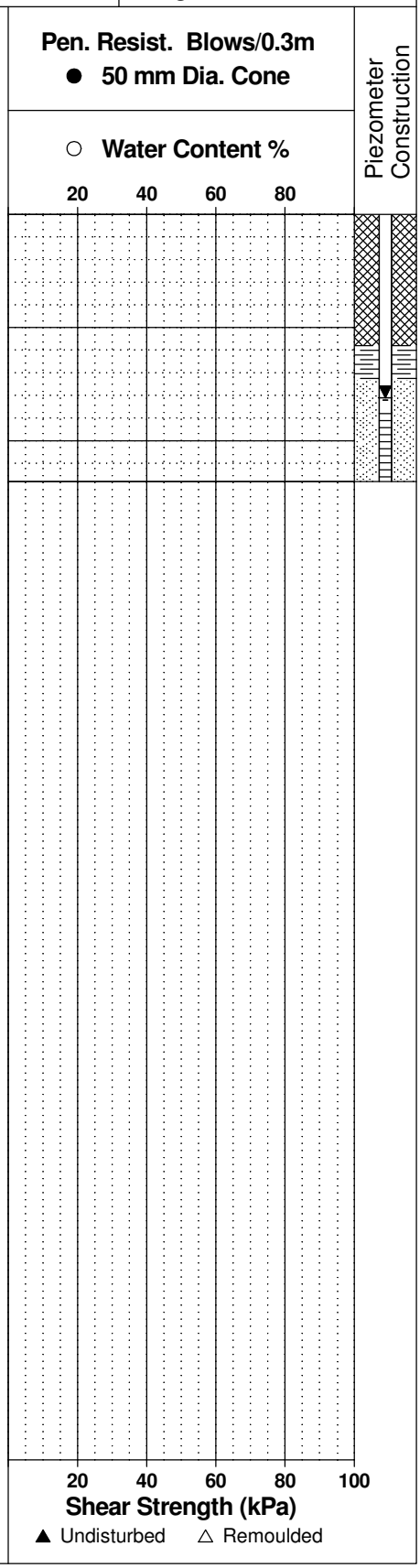
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 21, 2021

FILE NO. PG5570

HOLE NO. BH32-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.74
TOPSOIL 0.15		AU	1				
Compact to dense, brown **SILTY SAND to SANDY SILT**		SS	2	67	39	1	102.74
- grey 1.4m depth		SS	3	67	26		
2.21						2	101.74
GLACIAL TILL: Grey silty sand with gravel, cobbles and boulders 2.36		SS	4	50	50+		
End of Borehole							
Practical refusal to augering at 2.36m depth							
(GWL @ 1.62m - Jan. 11, 2022)							



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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DATUM Geodetic

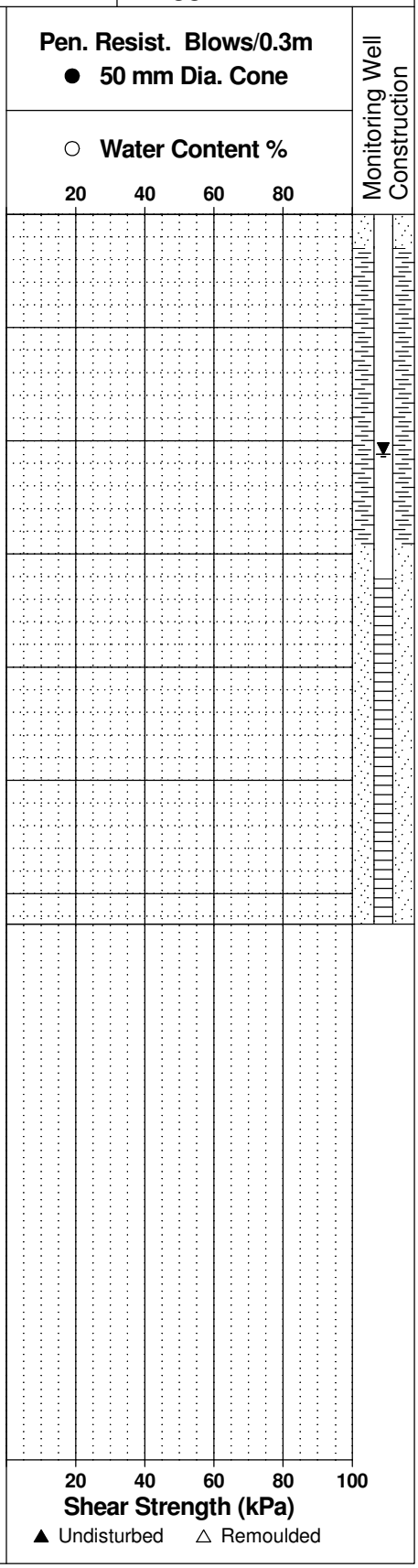
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 22, 2021

FILE NO. PG5570

HOLE NO. BH33-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	104.70
Compact, brown **SILTY SAND,** trace clay and organics		AU	1				
		SS	2	50	13	1	103.70
1.45							
GLACIAL TILL: Compact, brown silty sand with gravel, cobbles and boulders		SS	3	8	11	2	102.70
		RC	1	30			
2.74							
		RC	2	100	73	3	101.70
BEDROCK: Good to excellent quality, grey limestone						4	100.70
- 25mm thick mud seam at 3.7m depth		RC	3	95	85	5	99.70
- 30mm thick mud seam at 3.8m depth		RC	4	100	100	6	98.70
6.27							
End of Borehole							
(GWL @ 1.84m - Jan. 11, 2022)							



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SOIL PROFILE AND TEST DATA

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REMARKS

BORINGS BY Track-Mount Power Auger **DATE** December 22, 2021

FILE NO. PG5570

HOLE NO. BH34-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.65
TOPSOIL 0.25		SS	5	17	8		
		AU	1				
Compact to loose, brown **SILTY SAND to SANDY SILT**		SS	2	42	10	1	101.65
		SS	3	25	9	2	100.65
2.21							
		SS	4	17	2	3	99.65
GLACIAL TILL: Very loose to loose, grey silty sand with gravel, cobbles and boulders, trace clay		RC	1	31		4	98.65
		RC	2	100	100	5	97.65
5.21							
BEDROCK: Excellent quality, grey limestone interbedded with dolostone		RC	3	100	100	6	96.65
6.61							
End of Borehole							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

Piezometer Construction

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** January 7, 2022

FILE NO. PG5570

HOLE NO. BH35-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	105.03
TOPSOIL 0.28		AU	1				
Loose to compact, brown **SILTY SAND to SANDY SILT**		SS	2	50	7	1	104.03
1.68		SS	3	50	25	2	103.03
GLACIAL TILL: Compact to very dense, grey silty sand with gravel, cobbles and boulders		SS	4	25	56		
		SS	5	67	50+	3	102.03
3.51							
End of Borehole							
Practical refusal to augering at 3.51m depth.							
(GWL @ 1.22m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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DATUM Geodetic

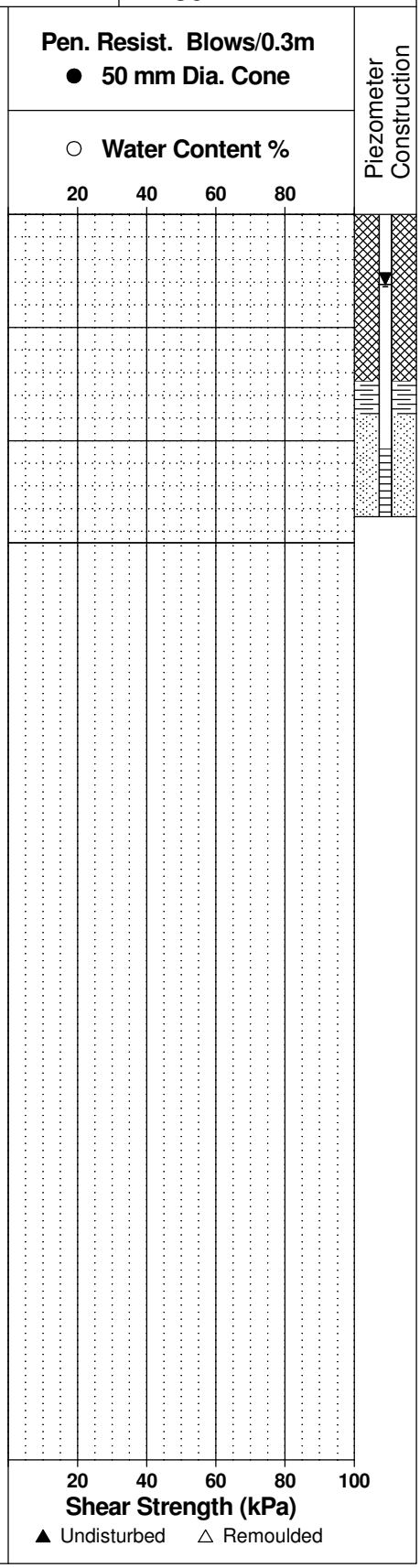
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** January 7, 2022

FILE NO. PG5570

HOLE NO. BH36-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.79
TOPSOIL 0.30		AU	1				
Compact, brown **SILTY SAND to SANDY SILT**		SS	2	42	15	1	101.79
1.45		SS	3	60	50+		
GLACIAL TILL: Very dense to compact, brown silty sand with gravel, cobbles and boulders		SS	4	8	15	2	100.79
2.90							
End of Borehole							
Practical refusal to augering at 2.90m depth.							
(GWL @ 0.62m - Jan. 11, 2022)							



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Prop. Residential Development - 6115 Flewellyn Road
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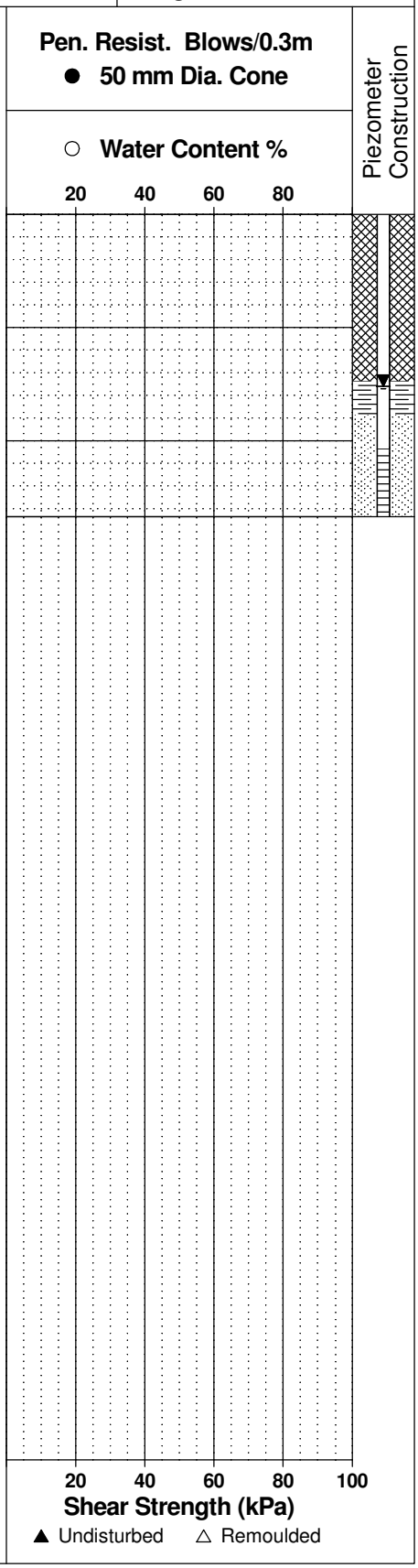
REMARKS

BORINGS BY Track-Mount Power Auger **DATE** January 7, 2022

FILE NO. PG5570

HOLE NO. BH37-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.54
TOPSOIL 0.36		AU	1				
Compact to dense, brown **SILTY SAND to SANDY SILT**		SS	2	42	22	1	102.54
		SS	3	58	34	2	101.54
2.21							
GLACIAL TILL: Very dense, grey silty sand with gravel, cobbles and boulders 2.67		SS	4	50	50+		
End of Borehole							
Practical refusal to augering at 2.67m depth.							
(GWL @ 1.52m - Jan. 11, 2022)							



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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

REMARKS

BORINGS BY Track-Mount Power Auger **DATE** January 7, 2022

FILE NO. PG5570

HOLE NO. BH38-21

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.62
FILL: Crushed stone and gravel 0.15		AU	1				
Dense to compact, brown **SILTY SAND to SANDY SILT**		SS	2		32	1	102.62
		SS	3		24		
- grey by 2.0m depth		SS	4	100	50+	2	101.62
2.64							
End of Borehole							
Practical refusal to augering at 2.64m depth.							
(GWL @ 1.94m - Jan. 11, 2022)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

Piezometer Construction

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
6070 and 6115 Flewellyn Road
Ottawa, Ontario

DATUM Geodetic

FILE NO. PG5570

REMARKS

HOLE NO. TP 1

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	105.94
TOPSOIL		G	1				
0.15							
GLACIAL TILL: Brown silty sand with gravel and some clay		G	2				
0.25							
BEDROCK Weathered interbedded limestone		G	3				
0.44							
End of Test Pit							
Practical refusal to excavation at 0.44m depth							
(TP dry upon completion)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %

20 40 60 80

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

Piezometer Construction

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SOIL PROFILE AND TEST DATA

Geotechnical Investigation
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DATUM Geodetic

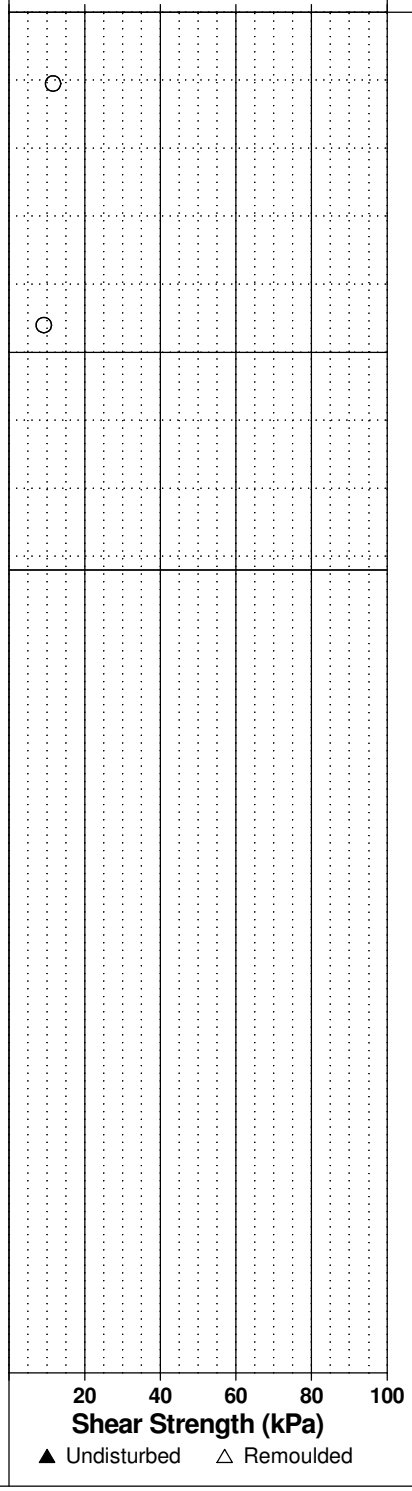
FILE NO. PG5570

REMARKS

HOLE NO. TP 2

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	105.06		
TOPSOIL 0.21		G	1						
Brown **SILTY SAND,** trace gravel 0.92		G	2			1	104.06		
GLACIAL TILL: Brown silty sand with gravel, cobbles and boulders 1.64		G	3						
End of Test Pit TP terminated on inferred bedrock surface at 1.64m depth (TP dry upon completion)									



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DATUM Geodetic

FILE NO. PG5570

REMARKS

HOLE NO. TP 3

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	102.10
TOPSOIL		G	1				
0.25							
Brown **SILTY SAND,** trace sea shells		G	2				
0.59							
GLACIAL TILL: Brown silty sand with gravel, cobbles and boulders		G	3			1	101.10
1.61							
End of Test Pit							
TP terminated on inferred bedrock surface at 1.61m depth							
(TP dry upon completion)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**

20 40 60 80

20 40 60 80 100

Shear Strength (kPa)
▲ Undisturbed △ Remoulded

Piezometer Construction

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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

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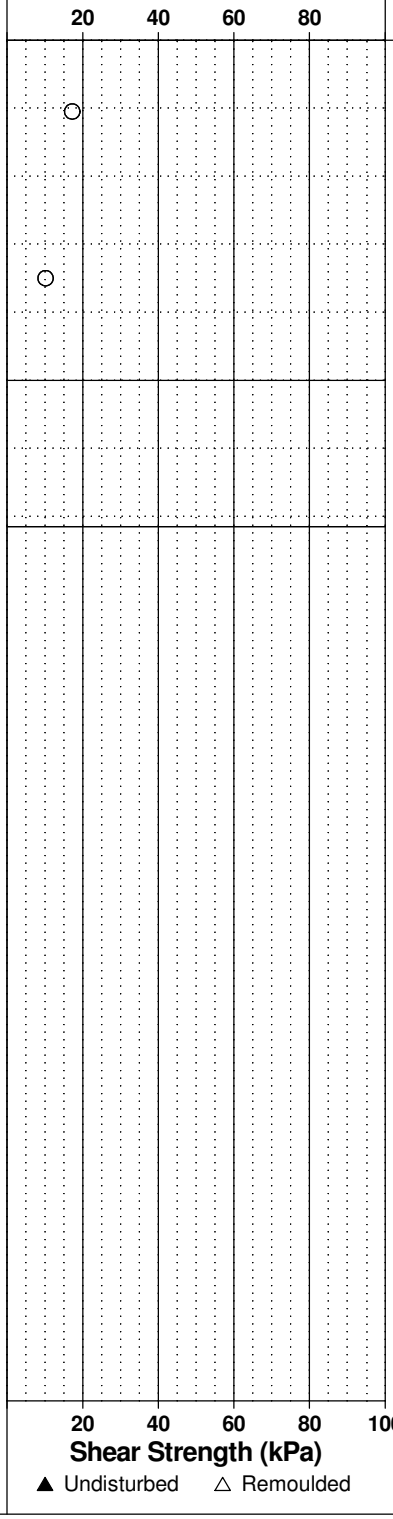
REMARKS

HOLE NO. TP 4

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	108.49
TOPSOIL 0.21		G	1				
Brown **SILTY SAND,** trace gravel, cobble and organics 0.70		G	2				
GLACIAL TILL: Brown silty sand, some gravel, cobble, boulder, trace clay 1.43		G	3			1	107.49
End of Test Pit							
Test Pit terminated on bedrock surface at 1.43m depth							
(TP dry upon completion)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %



Piezometer Construction

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DATUM Geodetic

FILE NO. PG5570

REMARKS

HOLE NO. TP 5

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	108.36		
TOPSOIL 0.22		G	1						
Brown **SILTY SAND**		G	2			1	107.36		
1.16									
GLACIAL TILL: Brown silty sand, some gravel, cobble, and boulder 1.46		G	3						▽
End of Test Pit									
TP terminated on inferred bedrock surface at 1.46m depth									
(Groundwater infiltration at 1.28m - Nov 20, 2020)									

Pen. Resist. Blows/0.3m: 20 40 60 80

Water Content %: 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100

▲ Undisturbed △ Remoulded

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SOIL PROFILE AND TEST DATA

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DATUM Geodetic

FILE NO. PG5570

REMARKS

HOLE NO. TP 6

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE									
TOPSOIL 0.27		G	1			0	107.91		
Brown **SILTY SAND,** trace cobble, boulders and seashells 1.70		G	2			1	106.91		
		G	3						▽
BEDROCK: Weathered interbedded limestone 2.89		G	4			2	105.91		
End of Test Pit									
TP terminated on inferred bedrock surface at 2.89m depth									
(Groundwater infiltration at 1.70m - Nov 20, 2020)									

○ Water Content %: 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100

▲ Undisturbed △ Remoulded

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DATUM Geodetic

FILE NO. PG5570

REMARKS

HOLE NO. TP 7

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	106.31		
TOPSOIL 0.22		G	1						
Brown **SILTY SAND,** trace clay 0.81		G	2			1	105.31		
GLACIAL TILL: Brown silty sand with gravel, cobbles and boulders		G	3			2	104.31		▽
		G	4			3	103.31		
End of Test Pit 3.37									
TP terminated on inferred bedrock surface at 3.37m depth									
(Groundwater infiltration at 2.24m - Nov 20, 2020)									

Pen. Resist. Blows/0.3m: ○ Water Content % — 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100 — ▲ Undisturbed △ Remoulded

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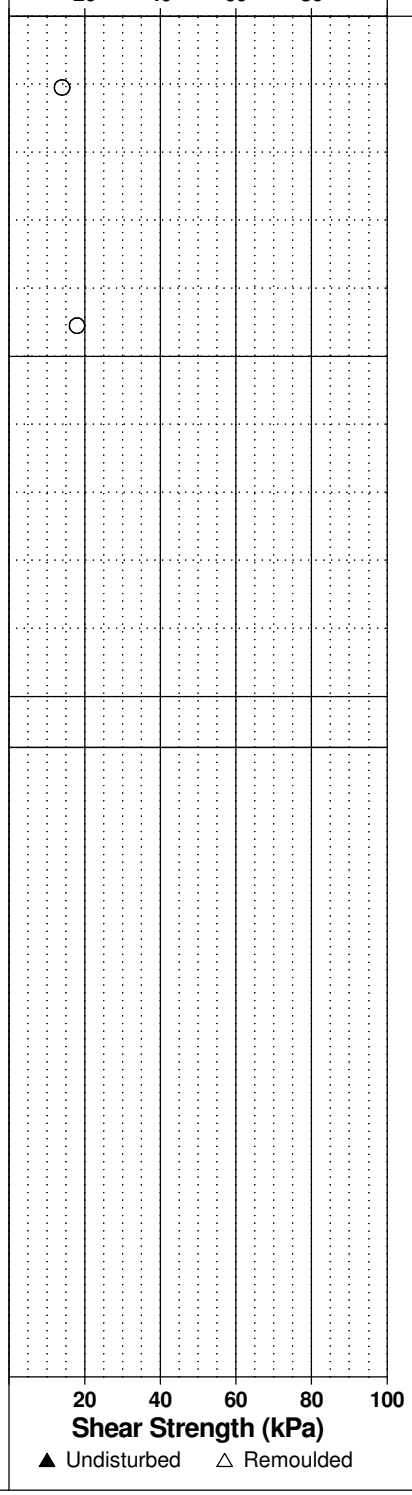
FILE NO. PG5570

REMARKS

HOLE NO. TP 8

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE									
TOPSOIL 0.21		G	1			0	105.48		
		G	2			1	104.48		
Brown **SILTY SAND,** trace clay and organics - increasing in silt content with depth		G	3			2	103.48		
2.15 End of Test Pit TP terminated on inferred bedrock surface at 2.15m depth (TP dry upon completion)									



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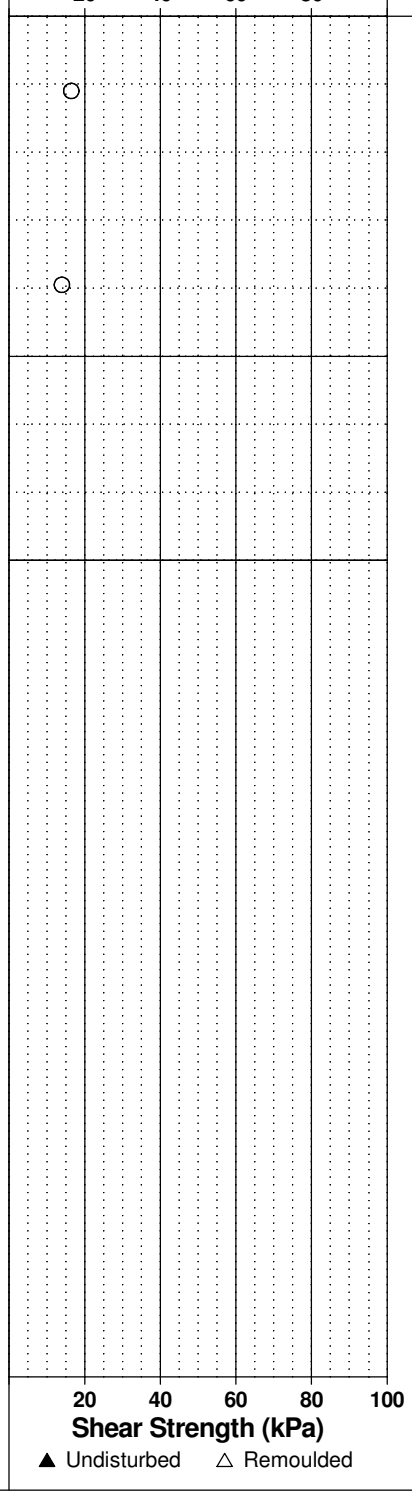
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REMARKS

HOLE NO. TP 9

BORINGS BY CME-55 Low Clearance Drill **DATE** November 20, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	104.47		
TOPSOIL 0.22		G	1						
Brown **SILTY SAND,** trace organics 0.79		G	2						
GLACIAL TILL: Brown silty sand trace gravel, cobbles, and boulders 1.60		G	3			1	103.47		
End of Test Pit									
TP terminated on inferred bedrock surface at 1.60m depth									
(TP dry upon completion)									



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DATUM Geodetic

FILE NO. PG5570

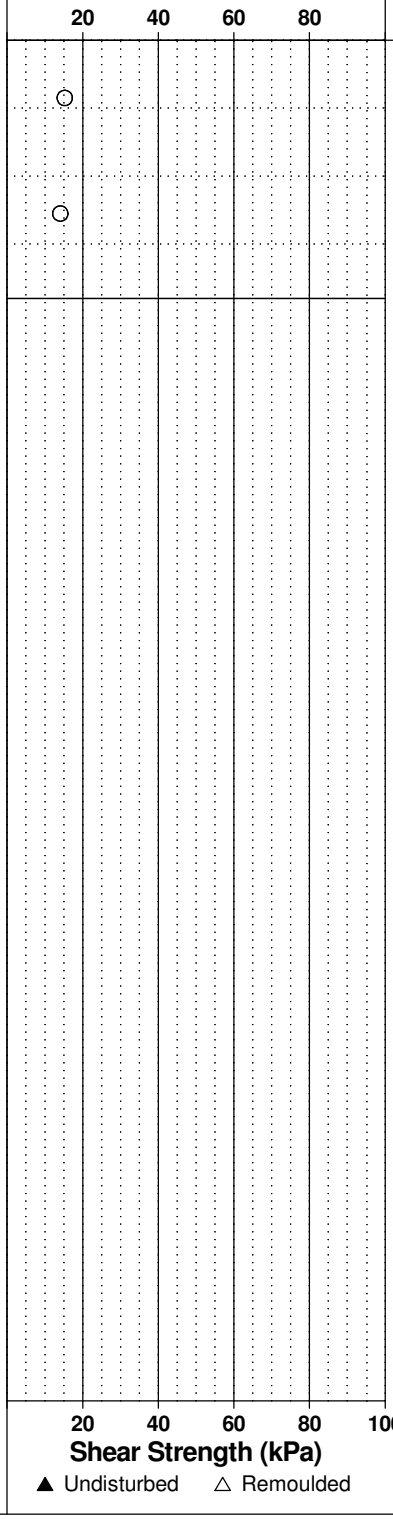
REMARKS

HOLE NO. TP 10

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.62
TOPSOIL 0.17		G	1				
Brown **SILTY SAND,** trace gravel and cobbles 0.51		G	2				
GLACIAL TILL: Brown silty sand, with gravel, trace cobble and boulders 0.76		G	3				
End of Test Pit							
TP terminated on inferred bedrock surface at 0.76m depth							
(Groundwater infiltration at 0.51m - Dec 10, 2020)							

Pen. Resist. Blows/0.3m
● **50 mm Dia. Cone**
○ **Water Content %**



Piezometer Construction

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DATUM Geodetic

FILE NO. PG5570

REMARKS

HOLE NO. TP 11

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	103.01		
TOPSOIL 0.15		G	1						
Brown **SILTY SAND,** trace gravel		G	2						
0.89		G	3						▽
GLACIAL TILL: Brown silty sand, with gravel, cobbles, and boulders		G	1			1	102.01		
1.49									
End of Test Pit									
TP terminated on inferred bedrock surface at 1.49m depth									
(Groundwater infiltration at 0.89m - Dec 10, 2020)									

Pen. Resist. Blows/0.3m: ○ Water Content % — 20 40 60 80

Shear Strength (kPa): 20 40 60 80 100

▲ Undisturbed △ Remoulded

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DATUM Geodetic

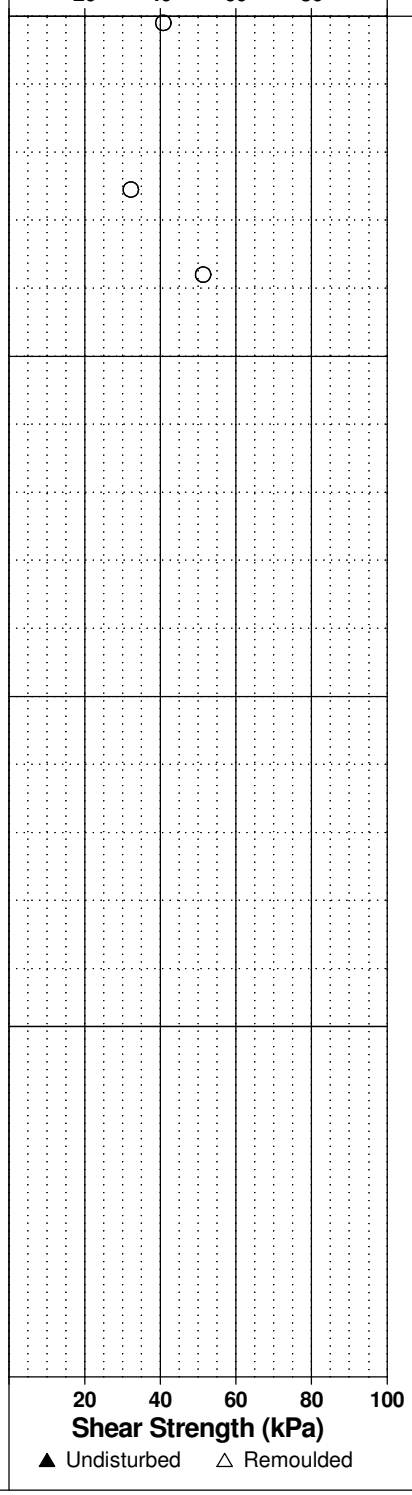
FILE NO. PG5570

REMARKS

HOLE NO. TP 12

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	103.21		
TOPSOIL 0.02		G	1						
		G	2						
Brown **SILTY SAND,** trace gravel 0.51									
Organic silt with **PEAT** fibers 0.76		G	3						
		G	4			1	102.21		
GLACIAL TILL: Brown silty sand with gravel, cobbles and boulders						2	101.21		▽
2.97									
End of Test Pit									
TP terminated on inferred bedrock surface at 2.97m depth									
(Groundwater infiltration at 1.82m - Dec 10, 2020)									



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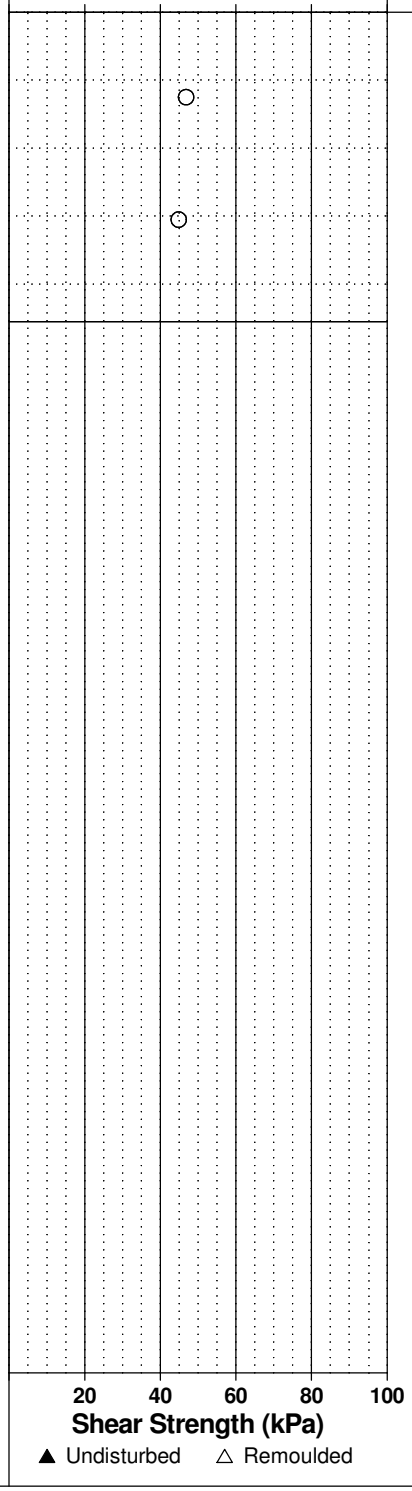
FILE NO. PG5570

REMARKS

HOLE NO. TP 13

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	104.30
TOPSOIL 0.25		G	1				
Brown **SILTY SAND,** trace organics 0.61		G	2				
GLACIAL TILL: Brown silty sand with gravel, cobbles and boulders 0.91		G	3				
End of Test Pit							
TP terminated on inferred bedrock surface at 0.91m depth							
(Groundwater infiltration at 0.61m - Dec 10, 2020)							



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FILE NO. PG5570

REMARKS

HOLE NO. TP 14

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	105.60		
TOPSOIL			1						
0.30									
Brown **SILTY SAND**			2						
0.56									
GLACIAL TILL: Brown silty sand with gravel, cobbles, and boulders.			3						
0.97									
End of Test Pit									
Practical refusal to excavation at 0.94m depth									
(TP dry upon completion)									

Pen. Resist. Blows/0.3m: ● 50 mm Dia. Cone; ○ Water Content %

20 40 60 80

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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DATUM Geodetic

FILE NO. PG5570

REMARKS

HOLE NO. TP 15

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	106.80		
TOPSOIL 0.18		G	1						
		G	2			1	105.80		
		G	3						
Brown **SILTY SAND**		G	4						
		G	5			2	104.80		
2.64									
GLACIAL TILL: Grey silty sand with gravel, cobbles and boulders 2.74		G	6						
End of Test Pit									
TP terminated on inferred bedrock surface at 2.74m depth									
(Groundwater infiltration at 2.28m - Dec 10, 2020)									

20 40 60 80

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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DATUM Geodetic

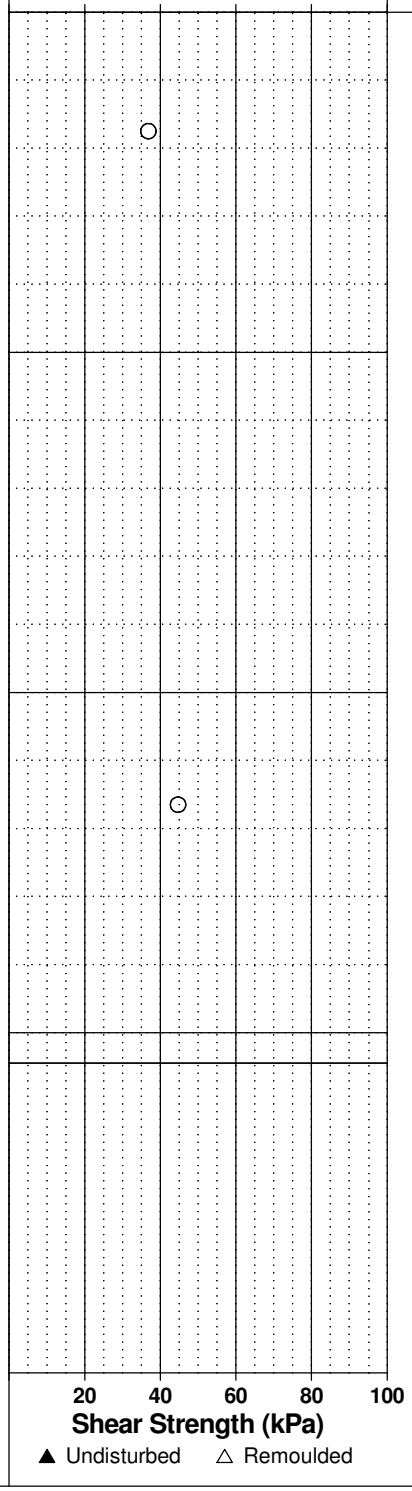
FILE NO. PG5570

REMARKS

HOLE NO. TP 16

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	104.62		
TOPSOIL		G	1						
0.35									
		G	2			1	103.62		
Brown **SILTY SAND,** trace gravel									
						2	102.62		
2.34									
GLACIAL TILL: Grey silty sand with gravel, cobbles and boulders.		G	3						
						3	101.62		
3.09									
End of Test Pit									
TP terminated on inferred bedrock surface at 3.09m depth									
(Groundwater infiltration at 2.33m - Dec 10, 2020)									



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FILE NO. PG5570

REMARKS

HOLE NO. TP 17

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	103.90		
TOPSOIL 0.33		G	1						
Brown **SILTY SAND,** trace gravel		G	2			1	102.90		▽
1.37									
GLACIAL TILL: Brown silty sand, with gravel cobbles and boulders 1.78		G	3						
End of Test Pit									

TP terminated on inferred bedrock surface at 1.78m depth

(Groundwater infiltration at 1.37m - Dec 10, 2020)

Pen. Resist. Blows/0.3m: ● 50 mm Dia. Cone; ○ Water Content %

20 40 60 80

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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FILE NO. PG5570

REMARKS

HOLE NO. TP 18

BORINGS BY CME-55 Low Clearance Drill **DATE** December 10, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	103.42
TOPSOIL		G	1				
0.30							
		G	2				
Brown **SILTY SAND,** some gravel							
		G	3			1	102.42
1.32							
End of Test Pit							
TP terminated on inferred bedrock surface at 1.32m depth							
(TP dry upon completion)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone
○ Water Content %

20 40 60 80

Piezometer Construction

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

SYMBOLS AND TERMS

SOIL DESCRIPTION

Behavioural properties, such as structure and strength, take precedence over particle gradation in describing soils. Terminology describing soil structure are as follows:

Desiccated	-	having visible signs of weathering by oxidation of clay minerals, shrinkage cracks, etc.
Fissured	-	having cracks, and hence a blocky structure.
Varved	-	composed of regular alternating layers of silt and clay.
Stratified	-	composed of alternating layers of different soil types, e.g. silt and sand or silt and clay.
Well-Graded	-	Having wide range in grain sizes and substantial amounts of all intermediate particle sizes (see Grain Size Distribution).
Uniformly-Graded	-	Predominantly of one grain size (see Grain Size Distribution).

The standard terminology to describe the relative strength of cohesionless soils is the compactness condition, usually inferred from the results of the Standard Penetration Test (SPT) 'N' value. The SPT N value is the number of blows of a 63.5 kg hammer, falling 760 mm, required to drive a 51 mm O.D. split spoon sampler 300 mm into the soil after an initial penetration of 150 mm. An SPT N value of "P" denotes that the split-spoon sampler was pushed 300 mm into the soil without the use of a falling hammer.

Compactness Condition	'N' Value	Relative Density %
Very Loose	<4	<15
Loose	4-10	15-35
Compact	10-30	35-65
Dense	30-50	65-85
Very Dense	>50	>85

The standard terminology to describe the strength of cohesive soils is the consistency, which is based on the undisturbed undrained shear strength as measured by the in situ or laboratory shear vane tests, unconfined compression tests, or occasionally by the Standard Penetration Test (SPT). Note that the typical correlations of undrained shear strength to SPT N value (tabulated below) tend to underestimate the consistency for sensitive silty clays, so Paterson reviews the applicable split spoon samples in the laboratory to provide a more representative consistency value based on tactile examination.

Consistency	Undrained Shear Strength (kPa)	'N' Value
Very Soft	<12	<2
Soft	12-25	2-4
Firm	25-50	4-8
Stiff	50-100	8-15
Very Stiff	100-200	15-30
Hard	>200	>30

SYMBOLS AND TERMS (continued)

SOIL DESCRIPTION (continued)

Cohesive soils can also be classified according to their "sensitivity". The sensitivity, S_t, is the ratio between the undisturbed undrained shear strength and the remoulded undrained shear strength of the soil. The classes of sensitivity may be defined as follows:

Low Sensitivity:	$S_t < 2$
Medium Sensitivity:	$2 < S_t < 4$
Sensitive:	$4 < S_t < 8$
Extra Sensitive:	$8 < S_t < 16$
Quick Clay:	$S_t > 16$

ROCK DESCRIPTION

The structural description of the bedrock mass is based on the Rock Quality Designation (RQD).

The RQD classification is based on a modified core recovery percentage in which all pieces of sound core over 100 mm long are counted as recovery. The smaller pieces are considered to be a result of closely-spaced discontinuities (resulting from shearing, jointing, faulting, or weathering) in the rock mass and are not counted. RQD is ideally determined from NQ or larger size core. However, it can be used on smaller core sizes, such as BQ, if the bulk of the fractures caused by drilling stresses (called "mechanical breaks") are easily distinguishable from the normal in situ fractures.

RQD %	**ROCK QUALITY**
90-100	Excellent, intact, very sound
75-90	Good, massive, moderately jointed or sound
50-75	Fair, blocky and seamy, fractured
25-50	Poor, shattered and very seamy or blocky, severely fractured
0-25	Very poor, crushed, very severely fractured

SAMPLE TYPES

SS	-	Split spoon sample (obtained in conjunction with the performing of the Standard Penetration Test (SPT))
TW	-	Thin wall tube or Shelby tube, generally recovered using a piston sampler
G	-	"Grab" sample from test pit or surface materials
AU	-	Auger sample or bulk sample
WS	-	Wash sample
RC	-	Rock core sample (Core bit size BQ, NQ, HQ, etc.). Rock core samples are obtained with the use of standard diamond drilling bits.

SYMBOLS AND TERMS (continued)

PLASTICITY LIMITS AND GRAIN SIZE DISTRIBUTION

WC%	-	Natural water content or water content of sample, %
LL	-	Liquid Limit, % (water content above which soil behaves as a liquid)
PL	-	Plastic Limit, % (water content above which soil behaves plastically)
PI	-	Plasticity Index, % (difference between LL and PL)
Dxx	-	Grain size at which xx% of the soil, by weight, is of finer grain sizes These grain size descriptions are not used below 0.075 mm grain size
D10	-	Grain size at which 10% of the soil is finer (effective grain size)
D60	-	Grain size at which 60% of the soil is finer
Cc	-	Concavity coefficient = $(D30)^2$ / (D10 x D60)
Cu	-	Uniformity coefficient = D60 / D10

Cc and Cu are used to assess the grading of sands and gravels:
Well-graded gravels have: $1 < Cc < 3$ and $Cu > 4$
Well-graded sands have: $1 < Cc < 3$ and $Cu > 6$
Sands and gravels not meeting the above requirements are poorly-graded or uniformly-graded.
Cc and Cu are not applicable for the description of soils with more than 10% silt and clay
(more than 10% finer than 0.075 mm or the #200 sieve)

CONSOLIDATION TEST

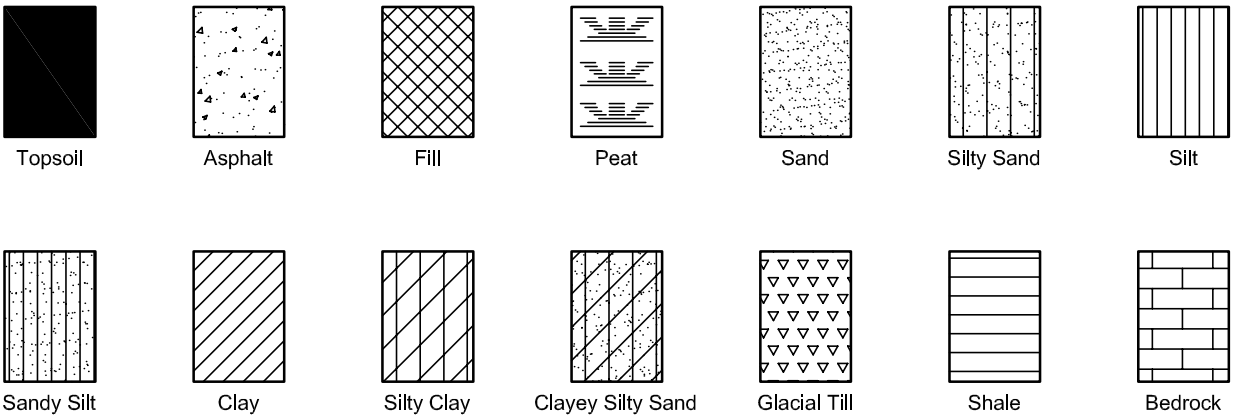
p'_o	-	Present effective overburden pressure at sample depth
p'_c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'_c)
Cc	-	Compression index (in effect at pressures above p'_c)
OC Ratio		Overconsolidaton ratio = p'_c / p'_o
Void Ratio		Initial sample void ratio = volume of voids / volume of solids
Wo	-	Initial water content (at start of consolidation test)

PERMEABILITY TEST

k	-	Coefficient of permeability or hydraulic conductivity is a measure of the ability of water to flow through the sample. The value of k is measured at a specified unit weight for (remoulded) cohesionless soil samples, because its value will vary with the unit weight or density of the sample during the test.

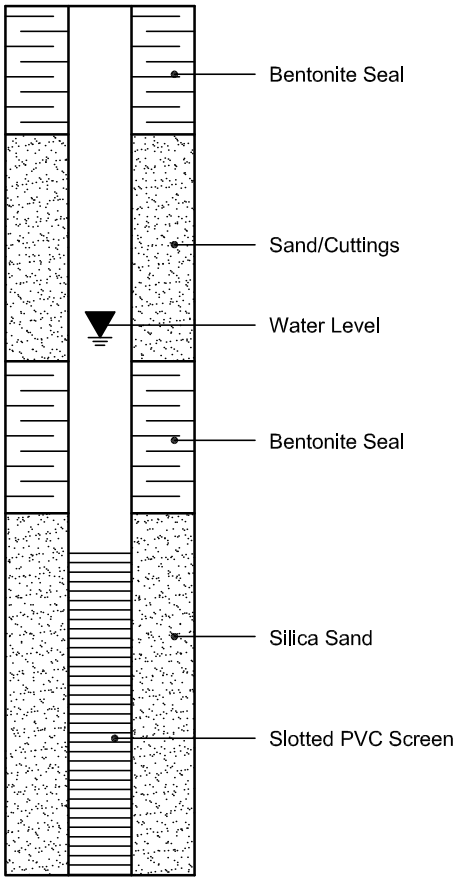
SYMBOLS AND TERMS (continued)

STRATA PLOT

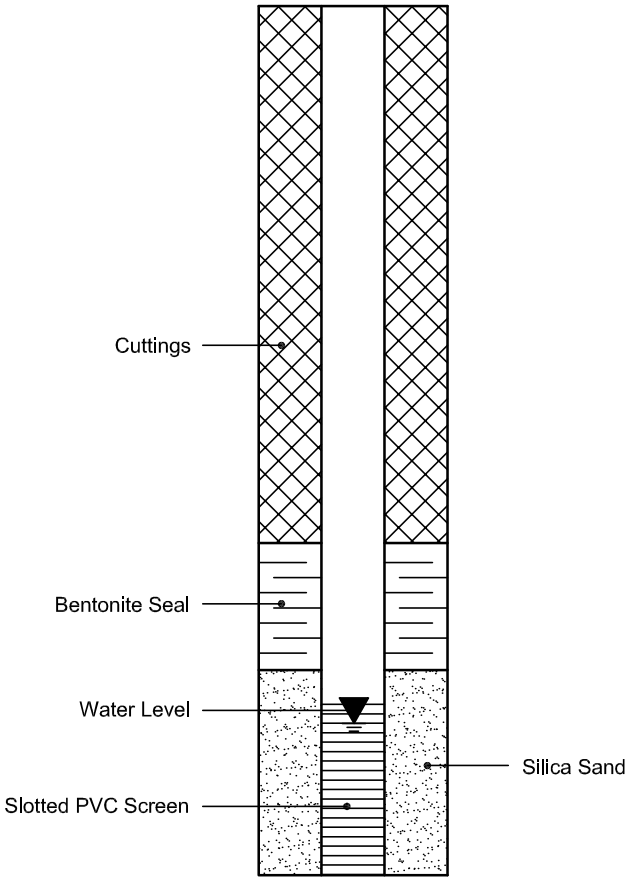


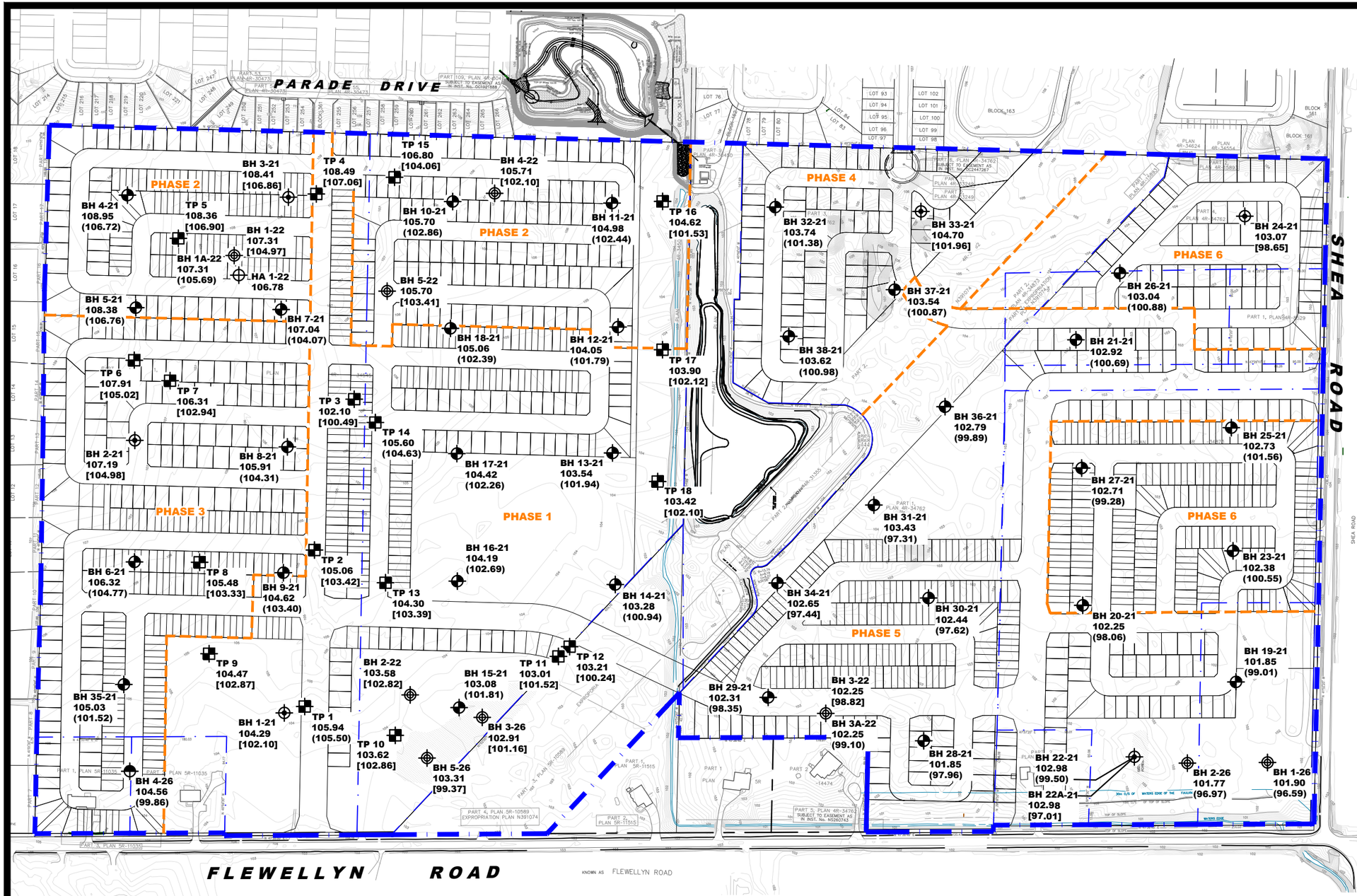
MONITORING WELL AND PIEZOMETER CONSTRUCTION

MONITORING WELL CONSTRUCTION



PIEZOMETER CONSTRUCTION





LEGEND:

- HAND AUGER LOCATION (CURRENT INVESTIGATION)
- BOREHOLE WITH MONITORING WELL LOCATION (CURRENT INVESTIGATION)
- BOREHOLE WITH PIEZOMETER LOCATION (CURRENT INVESTIGATION)
- BOREHOLE WITH PIEZOMETER LOCATION (PATERSON GROUP REPORT; PG5570-2, JAN 20, 2022)
- BOREHOLE WITH MONITORING WELL LOCATION (PATERSON GROUP REPORT; PG5570-2, JAN 20, 2022)
- TEST PIT LOCATION (PATERSON GROUP REPORT; PG5570-1, JAN 3, 2021)

104.29 GROUND SURFACE ELEVATION (m)

[102.10] BEDROCK SURFACE ELEVATION (m)

(102.39) PRACTICAL REFUSAL TO AUGERING / EXCAVATION ELEVATION (m)

BASE PLAN PREPARED BY J.D. BARNES LIMITED.

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:4000

0 50 100 150 200 250m

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DD/MM/YYYY	INITIAL
9	ADDED 2026 BOREHOLE LOCATIONS	24/04/2026	KP
8	UPDATED TO NEW CONCEPTUAL PLAN	10/04/2026	KP
7	UPDATED SITE BOUNDARY	15/05/2025	OB
6	UPDATED TO NEW CONCEPTUAL PLAN	03/07/2024	KP
5	UPDATED TO NEW CONCEPTUAL PLAN	28/08/2023	KP

CAIVAN (STITTSVILLE) INC.
GEOTECHNICAL INVESTIGATION
PROPOSED RESIDENTIAL DEVELOPMENT
OTTAWA, 5971, 5993, 6115, 6141 & 6159 FLEWELLYN ROAD, 6070 FERNBANK ROAD & 1770 & 1820 SHEA ROAD ONTARIO

Title:

TEST HOLE LOCATION PLAN

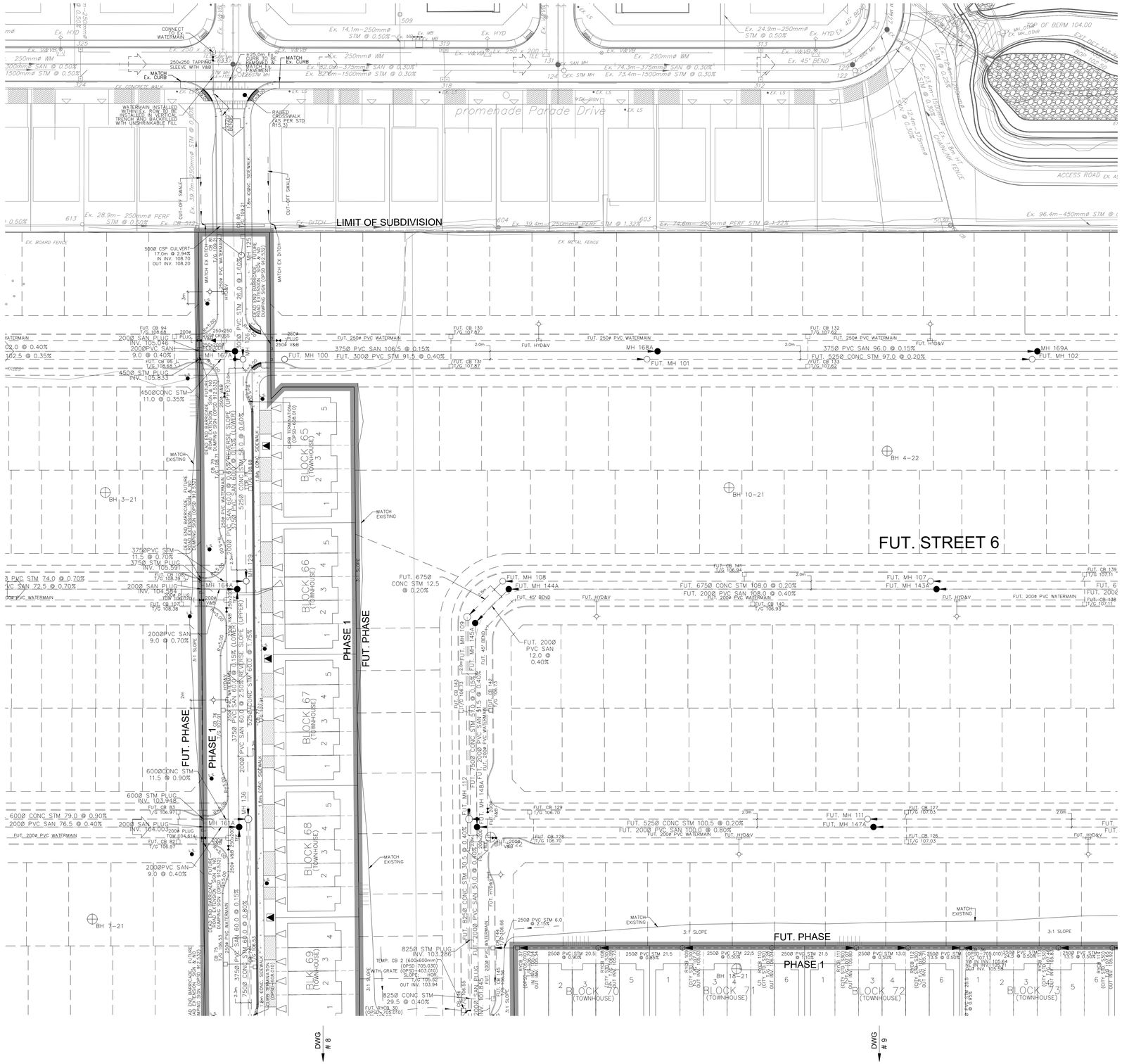
Scale: 1:4000	Date: 01/2022
Drawn by: YA	Report No.: PG5570-3
Checked by: KP	Dwg. No.: PG5570-1
Approved by: DJG	Revision No.: 9

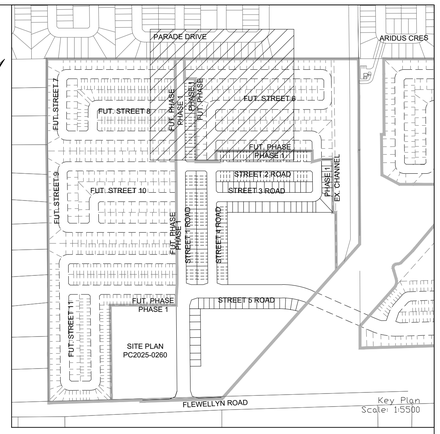
11x17

p:\autocad drawings\geotechnical\pg55xx\pg5570\pg5570-1 tbtp (rev.09).dwg

APPENDIX 3

DSEL - CIVIL DRAWINGS





DWG # 7

LEGEND

- CROSS
- 45° BEND
- LATERAL
- HYDRANT, VALVE & VB
- TEE
- VALVE & VC
- VALVE & VB
- 22.5° BEND
- 11.25° BEND
- REDUCER
- CAP
- STREET CATCHBASIN & LEAD
- STREET CATCHBASIN WITH CLOSED LID & LEAD
- STORM MAINTENANCE HOLE
- CURB INLET CATCH-BASIN & LEAD
- CATCHBASIN/ MAINTENANCE HOLE INTERCONNECTED
- CATCH BASIN & LEADS
- CAP
- TEE CATCHBASIN
- PERFORATED PIPE
- ELBOW CATCHBASIN
- SANITARY MAINTENANCE HOLE (WATERTIGHT LID PER OPSD 401.030)
- SANITARY MAINTENANCE HOLE
- CAP
- RETAINING WALL (SEE NOTES ON DWG. 1 AND STRUCTURAL DWG'S FOR DETAIL)
- SINGLE SERVICE LOCATION (ST, SAN & WM)
- SINGLE SERVICE LOCATION (ST, SAN & WM)
- HYDRO SWITCHGEAR
- HYDRO TRANSFORMER
- STREET LIGHT STANDARD
- DITCH AND CULVERT
- CONCRETE SIDEWALK (PER CITY OF OTTAWA STD SC1.4)
- BARRIER CURB, BARRIER CURB WITH GUTTER & DEPRESSED CURB (PER CITY OF OTTAWA STD SC1.1, SC1.2, SC1.3)
- EX. TELEPHONE CONDUIT
- EX. SECONDARY POWER
- ASPHALT SIDEWALK
- BLACK VINYL COATED CHAINLINK FENCE (1.5m UNLESS OTHERWISE NOTED)
- NOISE BARRIER
- WOODEN POST AND RAIL FENCE
- CONSTRUCTION FENCE
- POST AND RAIL FENCE
- PHASING LIMITS
- PROPERTY BOUNDARY
- OVERLAND FLOW DIRECTION
- EXTERNAL OVERLAND FLOW DIRECTION
- EMERGENCY OVERLAND FLOW DIRECTION
- TACTILE WALKING SURFACE INDICATOR (AS PER CITY OF OTTAWA STD. SC6, SC7, SC7.1, SC7.2, SC7.3)
- CLAY SEAL (REFER TO GENERAL NOTES, No. 18. ON DWG. No. 1, AND GEOTECHNICAL CONSULTANT'S SPECIFICATIONS)
- EXISTING SANITARY MAINTENANCE HOLE
- EXISTING STORM MAINTENANCE HOLE
- SPEED HUMP PER CITY STD. R19

NOT FOR CONSTRUCTION

NOTES:

1. ANY DISTURBED AREA DURING CONSTRUCTION TO BE RESTORED TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION
2. CONTRACTOR TO VERIFY THE PRECISE LOCATIONS AND INVERT ELEVATIONS OF Ex. UNDERGROUND SERVICES AND Ex. UTILITIES PRIOR TO STARTING CONSTRUCTION
3. ALL EXISTING ABOVE GROUND FEATURES, E.G. MH/CHAMBER COVERS, PEDESTALS, HYDRO AND LIGHT POLES, ETC. AFFECTED BY THE DEVELOPMENT TO BE ADJUSTED TO SUIT TO THE SATISFACTION OF PARTIES AFFECTED
4. ALL EXISTING BUILDING, SHED, POST & WIRE FENCE, CHAIN LINK FENCE, TREE, UTILITY WIRE, POLE, CULVERT AND POOL WITHIN LOTS AND BLOCKS TO BE REMOVED, UNLESS OTHERWISE NOTED
5. ALL EXISTING POST & WIRE FENCE, CULVERTS, UTILITY WIRE / POLES, TREES, SHRUBS ETC. WITHIN LOTS, BLOCKS AND ROADS TO BE REMOVED, UNLESS OTHERWISE NOTED
6. PERMISSION REQUIRED FOR REMOVAL OF EXISTING TREES ON EXTERNAL LANDS WHERE APPLICABLE
7. PERMISSION REQUIRED FOR WORK ON ADJACENT LANDS
8. FOR RLCB LAYOUT & TYPICAL EASEMENT DETAIL REFER TO DRAWING No. 4
9. ANY DISTURBED MATERIAL ENCOUNTERED BELOW THE SUBGRADE LEVEL WITHIN A BUILDING FOOTPRINT TO BE SUB-EXCAVATED AND BACKFILLED WITH COMPACTED ENGINEERED FILL AS PER GEOTECHNICAL ENGINEERS RECOMMENDATION.
10. FOR WATERMAIN CROSSING BELOW AND ABOVE SEWERS, REFER TO CITY STD. W25 AND W25.2, RESPECTIVELY, WHERE APPLICABLE
11. ALL WATERMAIN CONNECTIONS AND DECOMMISSIONING OF EXISTING WATERMAINS TO BE COMPLETED BY CITY FORCES. TRENCH BACKFILL/REINSTATEMENT TO BE COMPLETED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF OTTAWA
12. FOR WATERMAIN STUBS, 2.4m MIN. COVER TO BE PROVIDED
13. THE COVER OF EX. MH, CB, CHAMBER AND OTHER ABOVEGROUND FEATURES TO BE ADJUSTED TO SUIT THE NEW FINISHED GRADE, WHERE APPLICABLE
14. INSULATION REQUIRED FOR WATERMAIN / WATER SERVICE WHERE THE SEPARATION BETWEEN WATERMAIN / WATER SERVICE AND OTHER SERVICES AND STRUCTURES IS LESS THAN 1.2m AND THE COVER IS LESS THAN 2.4m. REFER TO CITY STD. W23 FOR DETAIL.
15. FOR SERVICE INSTALLATION AT SEWER CROSSING, REFER TO CITY STD. W38 FOR DETAIL
16. FOR HOUSE CONNECTIONS INSTALLED UNDER DRIVEWAYS, SLEEVE SHALL BE USED UNDER THE GARAGE SLAB.
17. FOR CATCHBASIN AND ICD DATA, REFER TO DWG. No. 3 FOR DETAILS

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED
PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

W. LIU 100167932 26-02-25 LICENSED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)

PHASE 1

DSEL
120 Iber Road, Unit 103
Stittsville, ON K2S 1E9
Tel. (613) 836-0856
Fax. (613) 836-7183
www.DSEL.ca

© DSEL

GENERAL PLAN

DRAWN BY:	M.S & A.S.	CHECKED BY:	W.L.
DESIGNED BY:	W.L.	CHECKED BY:	C.M.
SCALE:	1:500	DATE:	FEBRUARY 2026

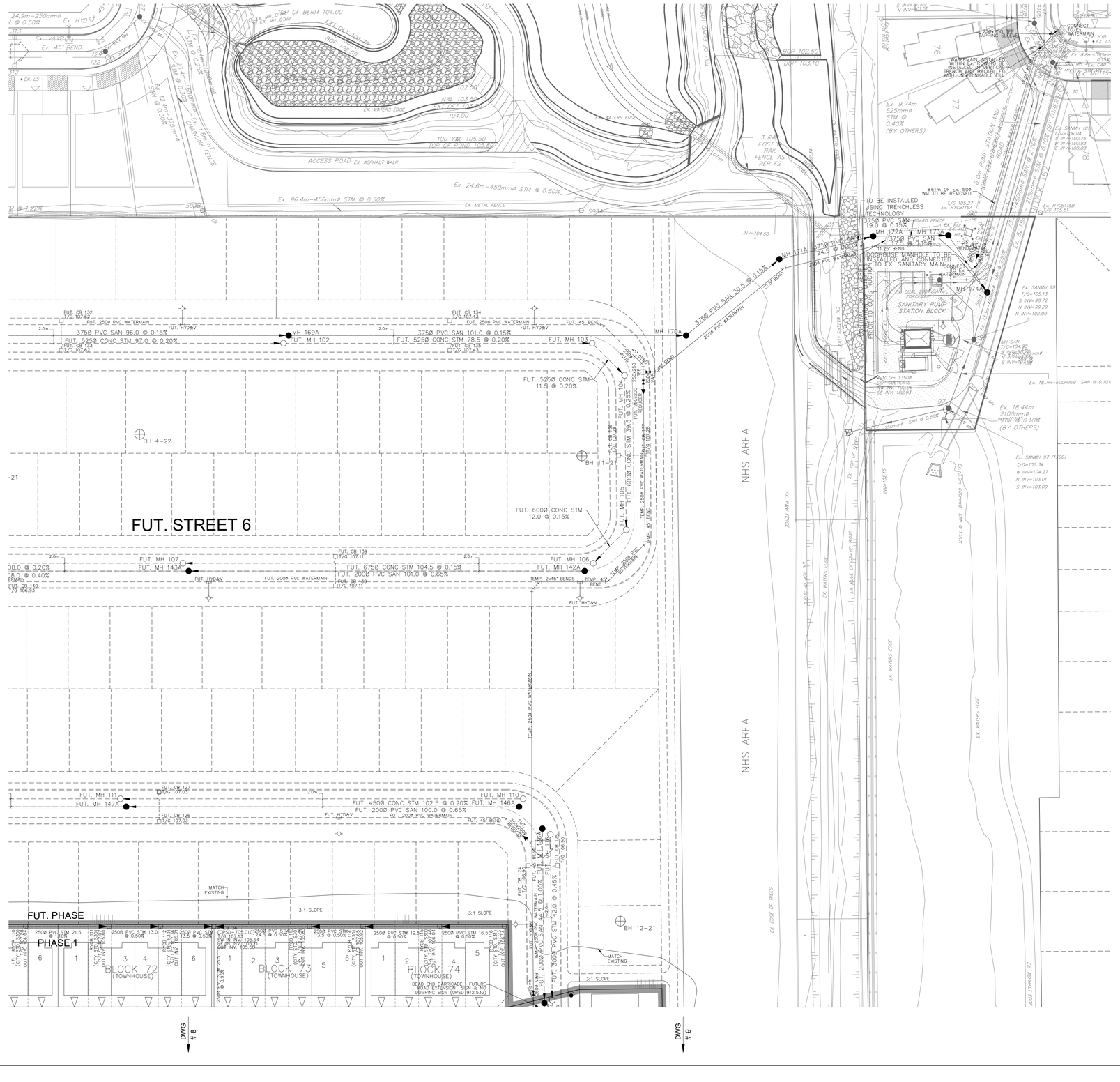
SHEET NO. 6 OF 52

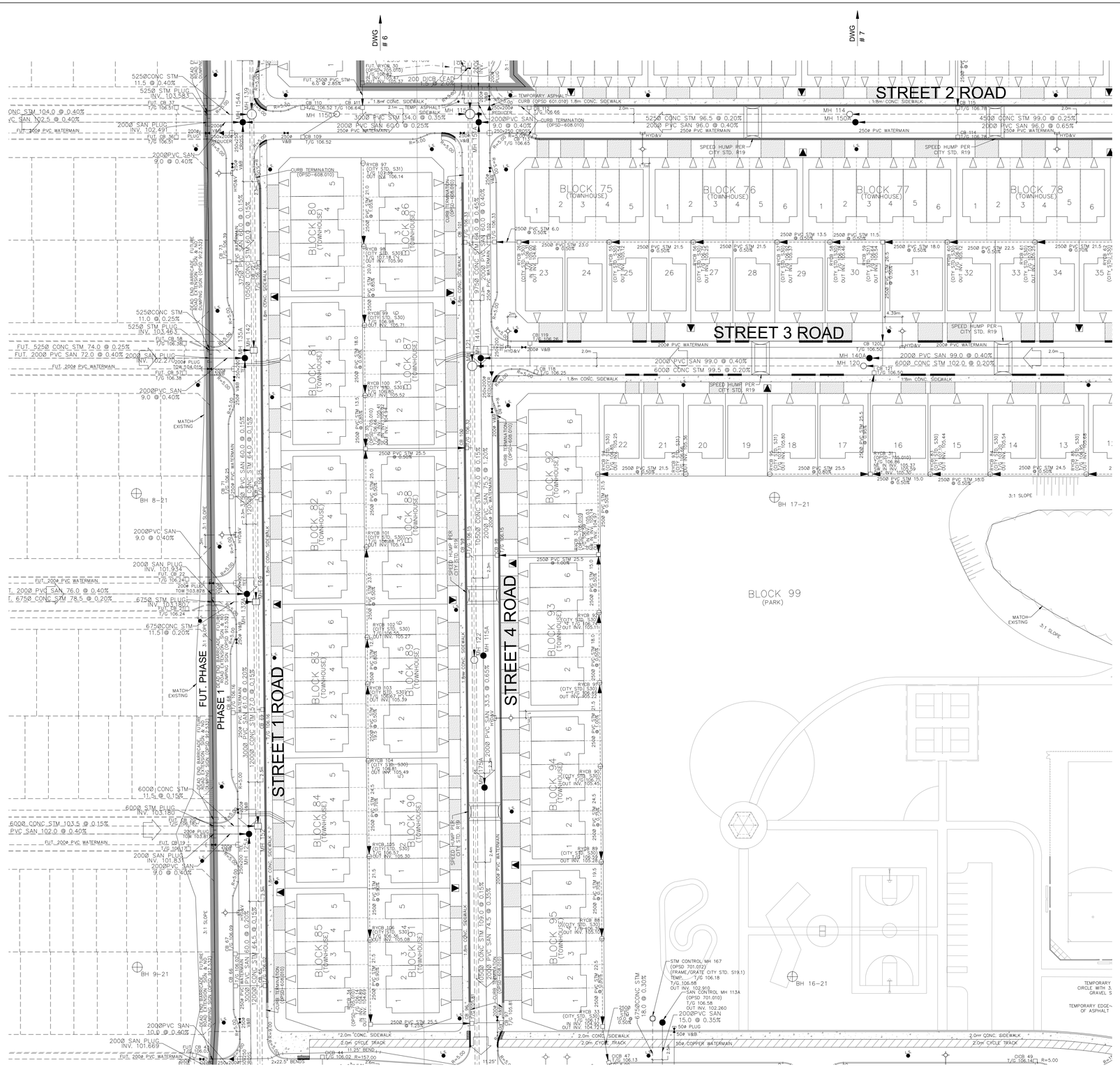
CITY PLAN No. XXXXXX

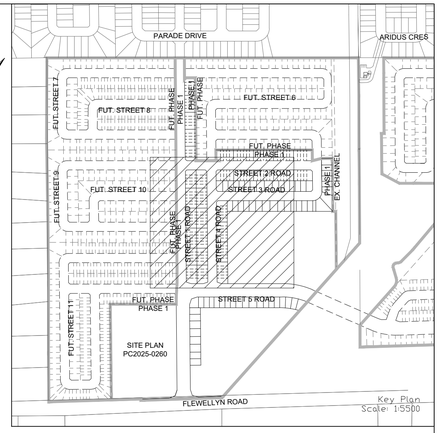
CITY FILE No. D07-16-24-0020

DWG # 8

DWG # 9


FUT. STREET 6
FUT. PHASE PHASE 1
NHS AREA
BLOCK 72 (TOWNHOUSE)
BLOCK 73 (TOWNHOUSE)
BLOCK 74 (TOWNHOUSE)
SANITARY PUMP STATION BLOCK
TOP OF BERM 104.00
ACCESS ROAD Ex. ASPHALT WALK
Ex. 24.6m–450mmø STM @ 0.50%
Ex. 96.4m–450mmø STM @ 0.50%
Ex. 9.74m 525mmø STM @ 0.40% (BY OTHERS)
Ex. 18.44m 2100mmø STM @ 0.10% (BY OTHERS)
3750 PVC SAN 96.0 @ 0.15%
3750 PVC SAN 101.0 @ 0.15%
3750 PVC SAN 39.5 @ 0.15%
FUT. 5250 CONC STM 97.0 @ 0.20%
FUT. 5250 CONC STM 78.5 @ 0.20%
FUT. 5250 CONC STM 11.9 @ 0.20%
FUT. 6000 CONC STM 12.0 @ 0.15%
FUT. 6750 CONC STM 104.5 @ 0.15%
FUT. 2000 PVC SAN 101.0 @ 0.65%
FUT. 4500 CONC STM 102.5 @ 0.20%
FUT. 2000 PVC SAN 100.0 @ 0.65%
FUT. 3000 PVC STM 70.0 @ 0.45%
FUT. 2000 PVC SAN 44.5 @ 1.00%
2500 PVC WATERMAIN
TEMP. 2500 PVC WATERMAIN
TEMP. 2x45° BENDS
TEMP. 45° BEND
TEMP. DOG HOUSE MANHOLE
DOGHOUSE MANHOLE TO BE INSTALLED AND CONNECTED TO EX. SANITARY MAINTENANCE HOLE
TO BE INSTALLED USING TRENCHLESS TECHNOLOGY
61m OF Ex. 50Ø WM TO BE REMOVED
CONNECT TO EX. WATERMAIN
250x250 TEE TAPPING SLEEVE
WATERMAIN, INSTALLED WITHIN 5.0m OF BY INSTALLED IN VERTICAL TRENCH WITH BACKFILL WITH UNSUITABLE FILL
6.0m PUMP STATION AND WATER ACCESS ROAD
3 RAIL POST & RAIL FENCE AS PER F2
CHAINLINK FENCE
Ex. METAL FENCE
Ex. WATERS EDGE
Ex. EDGE OF TREES
Ex. EDGE OF GRAVEL ROAD
Ex. HYD
Ex. 45° BEND
Ex. V&VB
Ex. 12.4m–375mmø STM @ 0.30%
Ex. 2.5m–375mmø STM @ 0.25%
Ex. 24.9m–250mmø STM @ 0.50%
Ex. 4.8m–375mmø STM @ 0.75%
Ex. 8.8m–375mmø STM @ 0.75%
Ex. 2.1m–375mmø STM @ 0.75%
Ex. SANMH 101 T/C=106.04 S INV=100.76 W INV=100.83 E INV=100.83
Ex. SANMH 99 T/C=105.13 S INV=98.72 N INV=99.29 N INV=102.99
Ex. SANMH 97 (1500) T/C=105.34 W INV=104.27 N INV=103.01 S INV=103.00
Ex. 18.7m–600mmø SAN @ 0.10%
Ex. 82.1m–600mmø SAN @ 0.56%
Ex. 2x525mmø STM
Ex. 1350ø STM
Ex. 1050ø STM
Ex. 1200ø STM
Ex. 1800ø STM
Ex. 2100ø STM
Ex. 2x1800ø STM
Ex. 2x1200ø STM
Ex. 2x1350ø STM
Ex. 2x1050





LEGEND

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- VALVE & VC
- VALVE & VB
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- CAP
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- STREET CATCHBASIN WITH CLOSED LID & LEAD
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PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

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LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

LICENSED PROFESSIONAL ENGINEER W. LIU 100167932 26-02-26 PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)

PHASE 1

DSEL
120 Iber Road, Unit 103
Stittsville, ON K2S 1E9
Tel. (613) 836-0856
Fax. (613) 836-7183
www.DSEL.ca

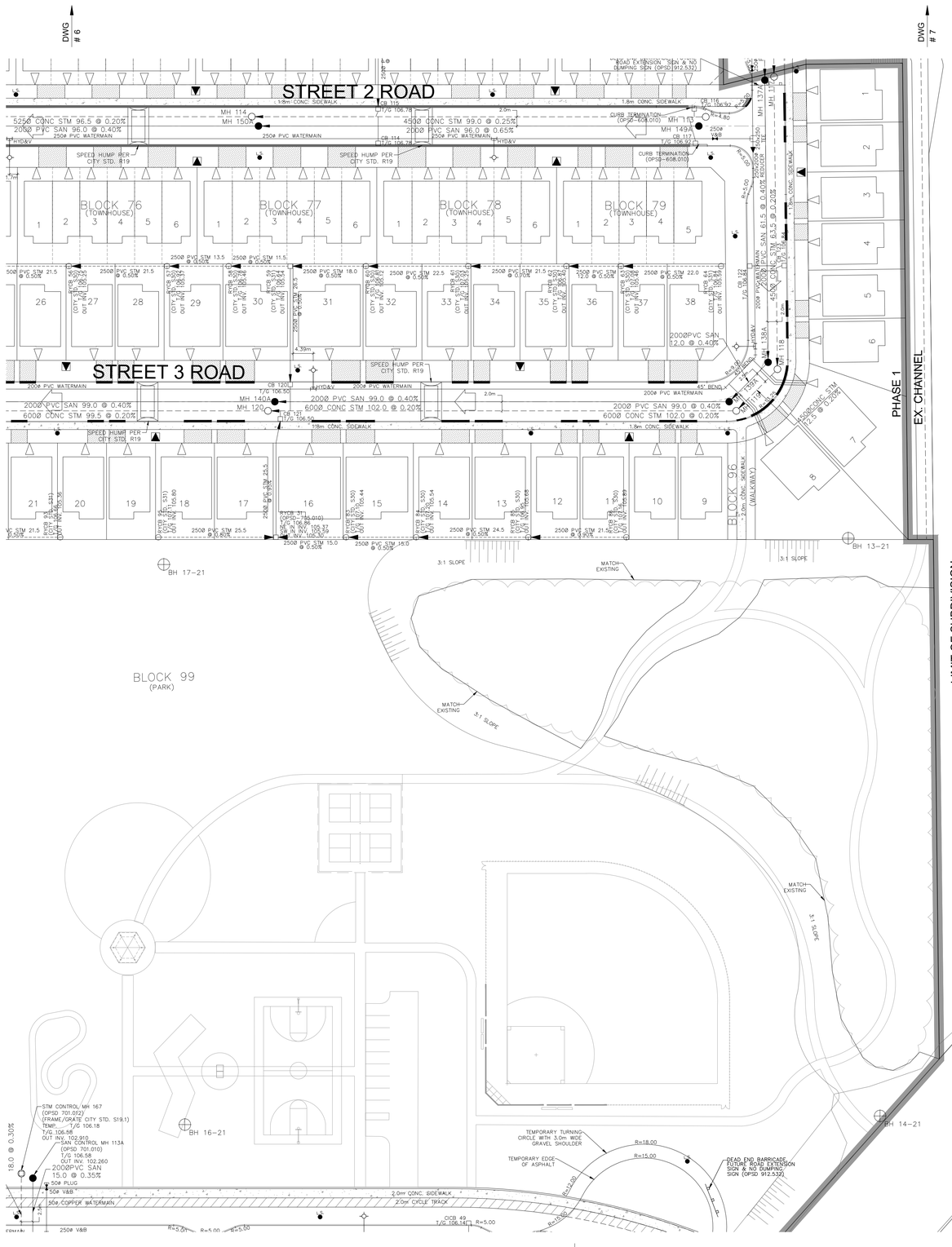
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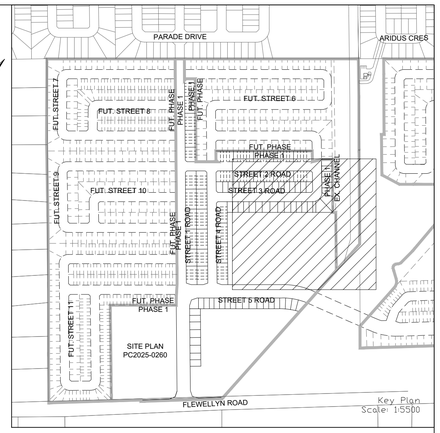
GENERAL PLAN

DRAWN BY:	M.S & A.S.	CHECKED BY:	W.L.	SHEET NO.
DESIGNED BY:	W.L.	CHECKED BY:	C.M.	8 OF 52
SCALE:	1:500	DATE:	FEBRUARY 2026	

CITY PLAN No. XXXXXX

CITY FILE No. _D07-16-24-0020





LEGEND

- CROSS
- 45° BEND
- LATERAL
- HYDRANT, VALVE & VB
- TEE
- VALVE & VC
- VALVE & VB
- 22.5° BEND
- 11.25° BEND
- REDUCER
- CAP
- STREET CATCHBASIN & LEAD
- STREET CATCHBASIN WITH CLOSED LID & LEAD
- STORM MAINTENANCE HOLE
- CURB INLET CATCH-BASIN & LEAD
- CATCHBASIN/ MAINTENANCE HOLE INTERCONNECTED
- CATCH BASIN & LEADS
- CAP
- TEE CATCHBASIN
- PERFORATED PIPE
- ELBOW CATCHBASIN
- SANITARY MAINTENANCE HOLE (WATERTIGHT LID PER OPSD 401.030)
- SANITARY MAINTENANCE HOLE
- CAP
- RETAINING WALL (SEE NOTES ON DWG. 1 AND STRUCTURAL DWG'S FOR DETAIL)
- SINGLE SERVICE LOCATION (ST, SAN & WM)
- SINGLE SERVICE LOCATION (ST, SAN & WM)
- HYDRO SWITCHGEAR
- HYDRO TRANSFORMER
- STREET LIGHT STANDARD
- DITCH AND CULVERT
- CONCRETE SIDEWALK (PER CITY OF OTTAWA STD SC1.4)
- BARRIER CURB, BARRIER CURB WITH GUTTER & DEPRESSED CURB (PER CITY OF OTTAWA STD SC1.1, SC1.2, SC1.3)
- EX. TELEPHONE CONDUIT
- EX. SECONDARY POWER
- ASPHALT SIDEWALK
- BLACK VINYL COATED CHAINLINK FENCE (1.5m UNLESS OTHERWISE NOTED)
- NOISE BARRIER
- WOODEN POST AND RAIL FENCE
- CONSTRUCTION FENCE
- POST AND RAIL FENCE
- PHASING LIMITS
- PROPERTY BOUNDARY
- OVERLAND FLOW DIRECTION
- EXTERNAL OVERLAND FLOW DIRECTION
- EMERGENCY OVERLAND FLOW DIRECTION
- TACTILE WALKING SURFACE INDICATOR (AS PER CITY OF OTTAWA STD. SC6, SC7, SC7.1, SC7.2, SC7.3)
- CLAY SEAL (REFER TO GENERAL NOTES, No. 18. ON DWG. No. 1, AND GEOTECHNICAL CONSULTANT'S SPECIFICATIONS)
- EXISTING SANITARY MAINTENANCE HOLE
- EXISTING STORM MAINTENANCE HOLE
- SPEED HUMP PER CITY STD. R19

NOT FOR CONSTRUCTION

NOTES:

1. ANY DISTURBED AREA DURING CONSTRUCTION TO BE RESTORED TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION
2. CONTRACTOR TO VERIFY THE PRECISE LOCATIONS AND INVERT ELEVATIONS OF Ex. UNDERGROUND SERVICES AND Ex. UTILITIES PRIOR TO STARTING CONSTRUCTION
3. ALL EXISTING ABOVE GROUND FEATURES, E.G. MH/CHAMBER COVERS, PEDESTALS, HYDRO AND LIGHT POLES, ETC. AFFECTED BY THE DEVELOPMENT TO BE ADJUSTED TO SUIT TO THE SATISFACTION OF PARTIES AFFECTED
4. ALL EXISTING BUILDING, SHED, POST & WIRE FENCE, CHAIN LINK FENCE, TREE, UTILITY WIRE, POLE, CULVERT AND POOL WITHIN LOTS AND BLOCKS TO BE REMOVED, UNLESS OTHERWISE NOTED
5. ALL EXISTING POST & WIRE FENCE, CULVERTS, UTILITY WIRE / POLES, TREES, SHRUBS ETC. WITHIN LOTS, BLOCKS AND ROADS TO BE REMOVED, UNLESS OTHERWISE NOTED
6. PERMISSION REQUIRED FOR REMOVAL OF EXISTING TREES ON EXTERNAL LANDS WHERE APPLICABLE
7. PERMISSION REQUIRED FOR WORK ON ADJACENT LANDS
8. FOR RLCB LAYOUT & TYPICAL EASEMENT DETAIL REFER TO DRAWING No. 4
9. ANY DISTURBED MATERIAL ENCOUNTERED BELOW THE SUBGRADE LEVEL WITHIN A BUILDING FOOTPRINT TO BE SUB-EXCAVATED AND BACKFILLED WITH COMPACTED ENGINEERED FILL AS PER GEOTECHNICAL ENGINEERS RECOMMENDATION.
10. FOR WATERMAIN CROSSING BELOW AND ABOVE SEWERS, REFER TO CITY STD. W25 AND W25.2, RESPECTIVELY, WHERE APPLICABLE
11. ALL WATERMAIN CONNECTIONS AND DECOMMISSIONING OF EXISTING WATERMAINS TO BE COMPLETED BY CITY FORCES. TRENCH BACKFILL/REINSTATEMENT TO BE COMPLETED BY THE CONTRACTOR TO THE SATISFACTION OF THE CITY OF OTTAWA
12. FOR WATERMAIN STUBS, 2.4m MIN. COVER TO BE PROVIDED
13. THE COVER OF EX. MH, CB, CHAMBER AND OTHER ABOVEGROUND FEATURES TO BE ADJUSTED TO SUIT THE NEW FINISHED GRADE, WHERE APPLICABLE
14. INSULATION REQUIRED FOR WATERMAIN / WATER SERVICE WHERE THE SEPARATION BETWEEN WATERMAIN / WATER SERVICE AND OTHER SERVICES AND STRUCTURES IS LESS THAN 1.2m AND THE COVER IS LESS THAN 2.4m. REFER TO CITY STD. W23 FOR DETAIL.
15. FOR SERVICE INSTALLATION AT SEWER CROSSING, REFER TO CITY STD. W38 FOR DETAIL
16. FOR HOUSE CONNECTIONS INSTALLED UNDER DRIVEWAYS, SLEEVE SHALL BE USED UNDER THE GARAGE SLAB.
17. FOR CATCHBASIN AND ICD DATA, REFER TO DWG. No. 3 FOR DETAILS

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

W. LIU 100167932 26-02-25 LICENSED PROFESSIONAL ENGINEER PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)

PHASE 1

DSEL
120 Iber Road, Unit 103
Stittsville, ON K2S 1E9
Tel. (613) 836-0856
Fax. (613) 836-7183
www.DSEL.ca

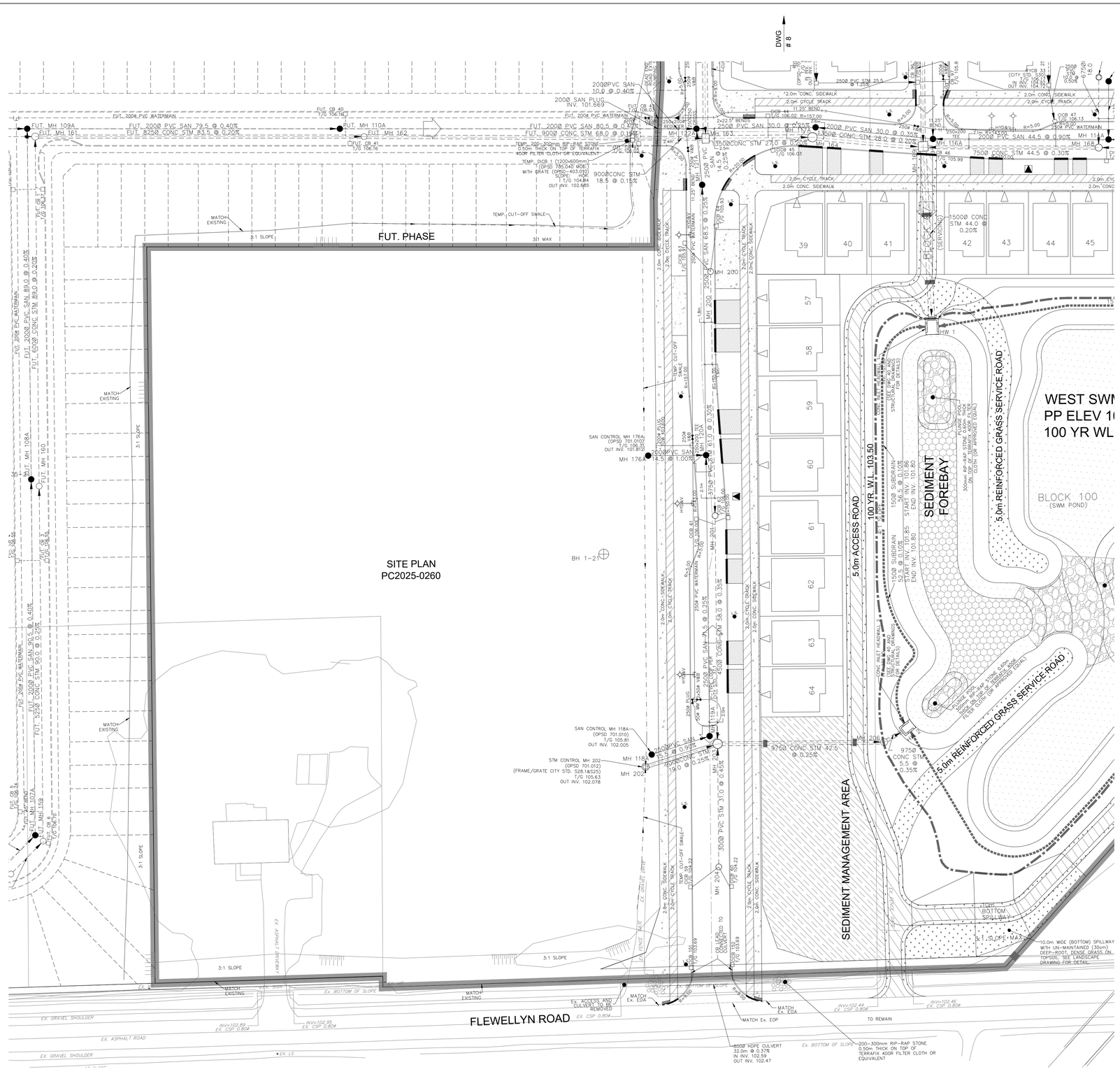
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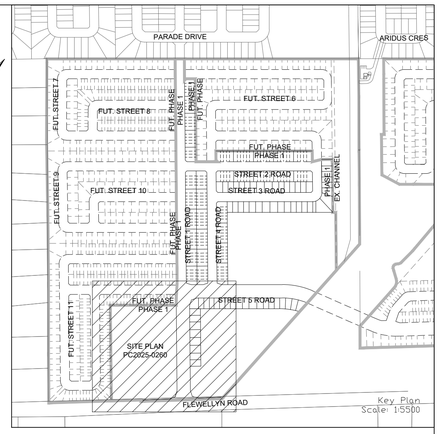
GENERAL PLAN

DRAWN BY: M.S & A.S.	CHECKED BY: W.L.	SHEET NO.	
DESIGNED BY: W.L.	CHECKED BY: C.M.	9	OF 52
SCALE: 1:500	DATE: FEBRUARY 2026		

CITY PLAN No. XXXXXX

CITY FILE No. _D07-16-24-0020





LEGEND

- CROSS
- 45° BEND
- LATERAL
- HYDRANT, VALVE & VB
- TEE
- VALVE & VC
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- TEE CATCHBASIN
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17. FOR CATCHBASIN AND ICD DATA, REFER TO DWG. No. 3 FOR DETAILS

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

Ottawa

CITY OF OTTAWA

PROJECT No. 21-1247

LICENSED PROFESSIONAL ENGINEER
W. LIU
100167932
26-02-25
PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)

PHASE 1

DSEL
120 Iber Road, Unit 103
Stittsville, ON K2S 1E9
Tel. (613) 836-0856
Fax. (613) 836-7183
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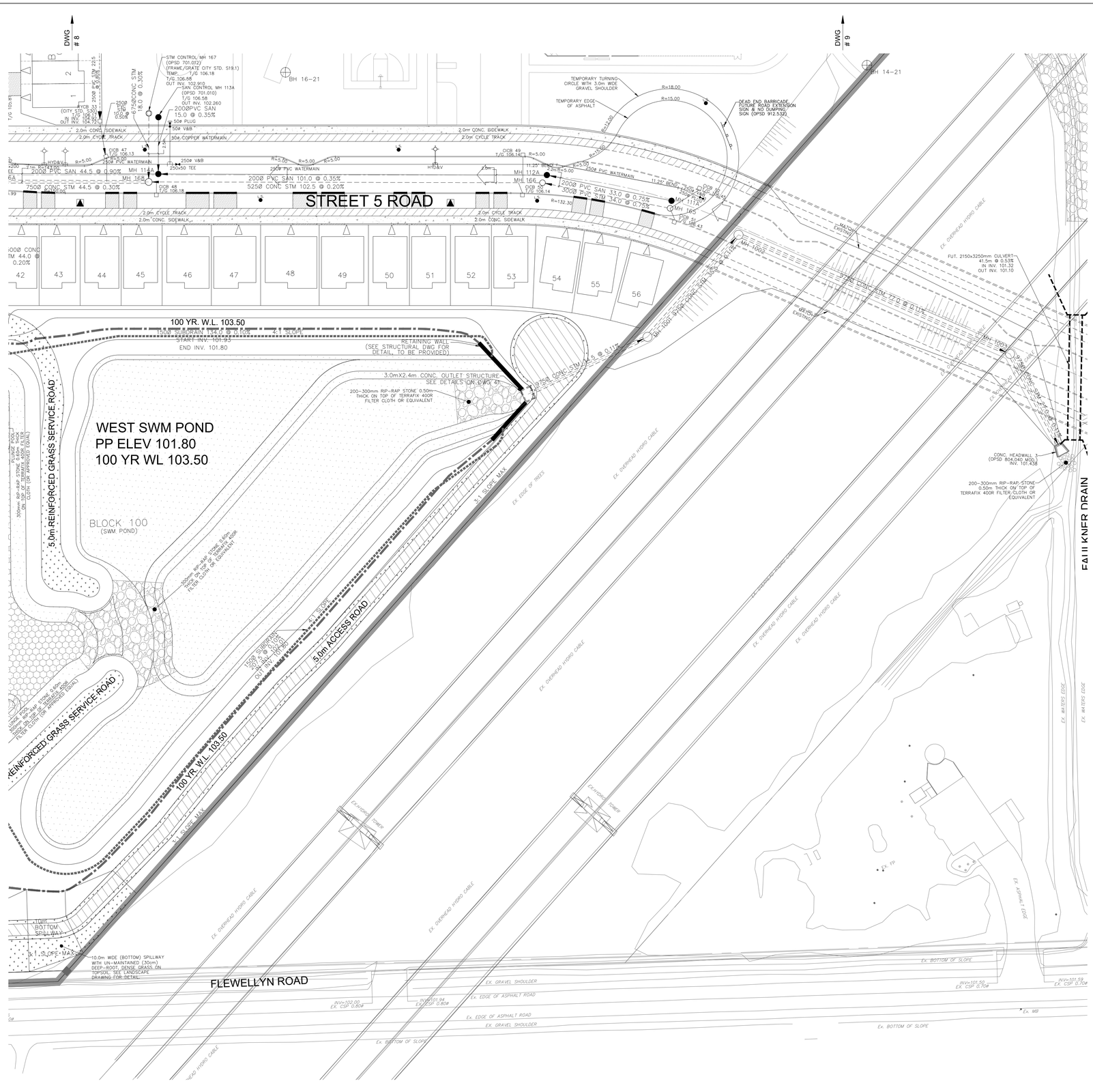
GENERAL PLAN

DRAWN BY:	M.S & A.S.	CHECKED BY:	W.L.
DESIGNED BY:	W.L.	CHECKED BY:	C.M.
SCALE:	1:500	DATE:	FEBRUARY 2026

SHEET NO. 10 OF 52

CITY PLAN No. XXXXXX

CITY FILE No. _D07-16-24-0020

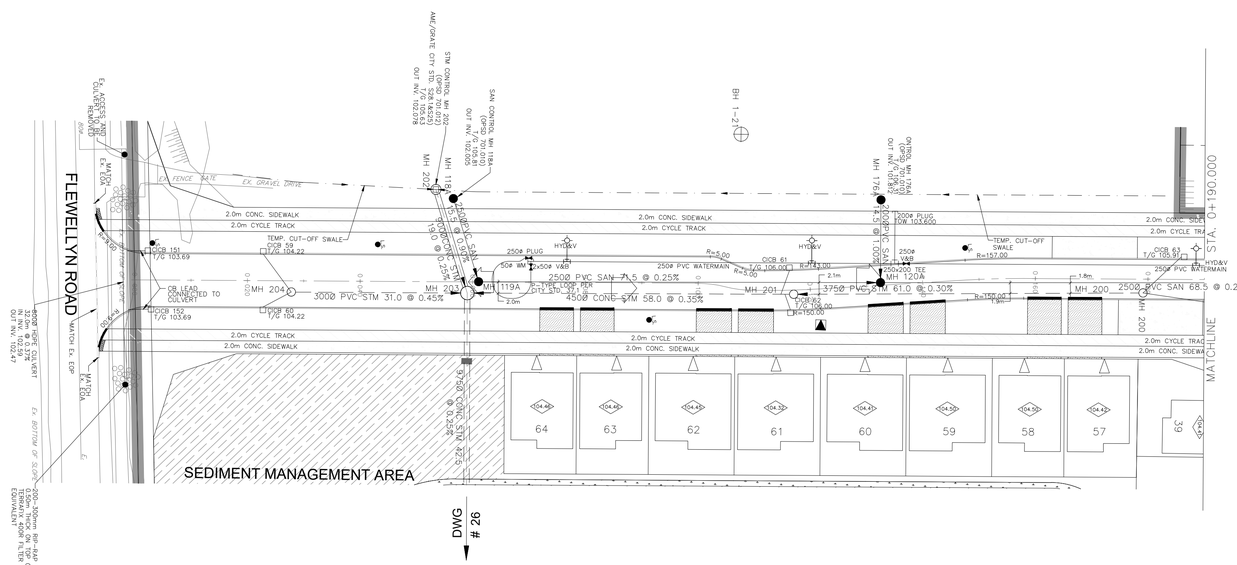

STREET 5 ROAD
WEST SWM POND
PP ELEV 101.80
100 YR WL 103.50
BLOCK 100
(SWM POND)
100 YR. W.L. 103.50
FLEWELLYN ROAD
5.0m ACCESS ROAD
5.0m REINFORCED GRASS SERVICE ROAD
FAITH KNER DRAIN
DWG # 8
DWG # 9
DWG # 10
BH 16-21
BH 14-21
MH 165
MH 166
MH 112A
MH 114
MH 168
MH 100
MH 101
MH 102
MH 103
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
TEMPORARY TURNING CIRCLE WITH 3.0m WIDE GRAVEL SHOULDER
TEMPORARY EDGE OF ASPHALT
DEAD END BARRICADE FUTURE ROAD EXTENSION SIGN & NO DUMPING SIGN (OPSD 912.532)
2.0m CONC. SIDEWALK
2.0m CYCLE TRACK
50ø COPPER WATERMAIN
250ø PVC WATERMAIN
200ø PVC SAN 44.5 @ 0.90%
750ø CONC. STM 44.5 @ 0.30%
200ø PVC SAN 101.0 @ 0.35%
525ø CONC STM 102.5 @ 0.20%
200ø PVC SAN 33.0 @ 0.75%
300ø PVC STM 34.0 @ 0.75%
STM CONTROL MH 167 (OPSD 701.012) (FRAME/GRATE CITY STD. S19.1)
SAN CONTROL MH 113A (OPSD 701.010)
CBCB 47
CBCB 48
CBCB 49
CBCB 50
CBCB 51
CBCB 52
HYD&V
250x50 TEE
50ø V&B
50ø PLUG
11.25° BEND
22.5° BEND
R=5.00
R=15.00
R=18.00
R=132.30
R=132.00
R=132.60
R=132.90
R=133.20
R=133.50
R=133.80
R=134.10
R=134.40
R=134.70
R=135.00
R=135.30
R=135.60
R=135.90
R=136.20
R=136.50
R=136.80
R=137.10
R=137.40
R=137.70
R=138.00
R=138.30
R=138.60
R=138.90
R=139.20
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R=139.80
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R=140.70
R=141.00
R=141.30
R=141.60
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R=144.00
R=144.30

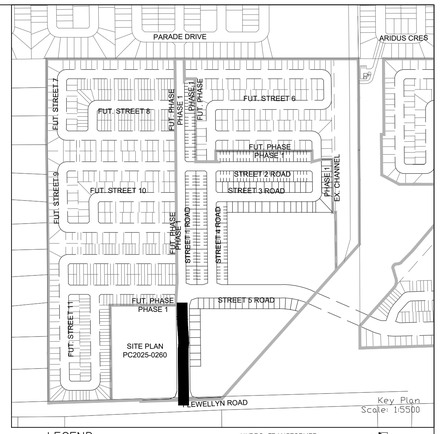
PAVEMENT DESIGN

40mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
100mm HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm OPSS GRANULAR A CRUSHED STONE
600mm OPSS GRANULAR B TYPE II

NOTES:

1. ANY DISTURBED AREA DURING CONSTRUCTION TO BE RESTORED TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION
2. CONTRACTOR TO VERIFY THE PRECISE LOCATIONS AND INVERT ELEVATIONS OF Ex. UNDERGROUND SERVICES AND Ex. UTILITIES PRIOR TO STARTING CONSTRUCTION
3. ALL EXISTING TREES, SHRUBS ETC. WITHIN LOTS, BLOCKS AND ROADS TO BE REMOVED, UNLESS OTHERWISE NOTED
4. PERMISSION REQUIRED FOR WORK ON ADJACENT LANDS
5. FOR WATERMAIN STUBS, 2.4m MIN. COVER TO BE PROVIDED
6. ANY DISTURBED MATERIAL ENCOUNTERED BELOW THE SUBGRADE LEVEL WITHIN A BUILDING FOOTPRINT TO BE SUB-EXCAVATED AND BACKFILLED WITH COMPACTED ENGINEERED FILL AS PER GEOTECHNICAL ENGINEERS RECOMMENDATION
7. FOR CATCHBASIN AND ICD DATA, REFER TO DWG. No. 3 FOR DETAILS





LEGEND

- CROSS
- 45° BEND
- LATERAL
- HYDRANT, VALVE & VB
- TEE
- VALVE & VC
- VALVE & VB
- 22.5° BEND
- 11.25° BEND
- REDUCER
- CAP
- SANITARY MAINTENANCE HOLE (WATERTIGHT LID PER OPSD 401.030)
- SANITARY MAINTENANCE HOLE
- CAP
- STREET CATCHBASIN & LEAD
- STREET CATCHBASIN WITH CLOSED LID & LEAD
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- CATCH BASIN & LEADS
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- SINGLE SERVICE LOCATION (ST, SAN & WM)
- SINGLE SERVICE LOCATION (ST, SAN & WM)
- TEE CATCHBASIN
- PERFORATED PIPE
- ELBOW CATCHBASIN
- DITCH AND CULVERT
- EXISTING SANITARY MAINTENANCE HOLE
- EXISTING STORM MAINTENANCE HOLE
- HYDRO TRANSFORMER
- STREET LIGHT STANDARD
- CONCRETE SIDEWALK
- CURB & DEPRESSED CURB
- ASPHALT SIDEWALK
- CHAINLINK FENCE (1.5m UNLESS OTHERWISE NOTED)
- NOISE BARRIER
- WOODEN POST AND RAIL FENCE
- CONSTRUCTION FENCE
- POST AND RAIL FENCE
- PHASING LIMITS
- PROPERTY BOUNDARY
- BOREHOLE (BH)
- TEST PIT (TP)
- AUGER HOLE (AH)
- MONITORING WELL LOCATION
- CONCEPTUAL WELL LOCATION
- LOT/BLOCK NUMBER
- UNDERSIDE OF FOOTING ELEVATION
- OVERLAND FLOW DIRECTION
- EXTERNAL OVERLAND FLOW DIRECTION
- EMERGENCY OVERLAND FLOW DIRECTION
- TACTILE WALKING SURFACE INDICATOR (AS PER CITY OF OTTAWA STD. SC6, SC7, SC7.1, SC7.2, SC7.3)
- CLAY SEAL (REFER TO GENERAL NOTES. No. 18. ON DWG. No. 1, AND GEOTECHNICAL CONSULTANT'S SPECIFICATIONS)
- RETAINING WALL (SEE NOTES ON DWG 3 AND STRUCTURAL DWG'S FOR DETAIL)
- SPEED HUMP PER CITY STD. R19
- BEDROCK CONTOUR
- EX. TELEPHONE CONDUIT
- EX. SECONDARY POWER

AS PER GEOTECHNICAL REPORT

NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED
PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

LICENSED PROFESSIONAL ENGINEER
W. LIU
100167932
26-02-25
PROVINCE OF ONTARIO

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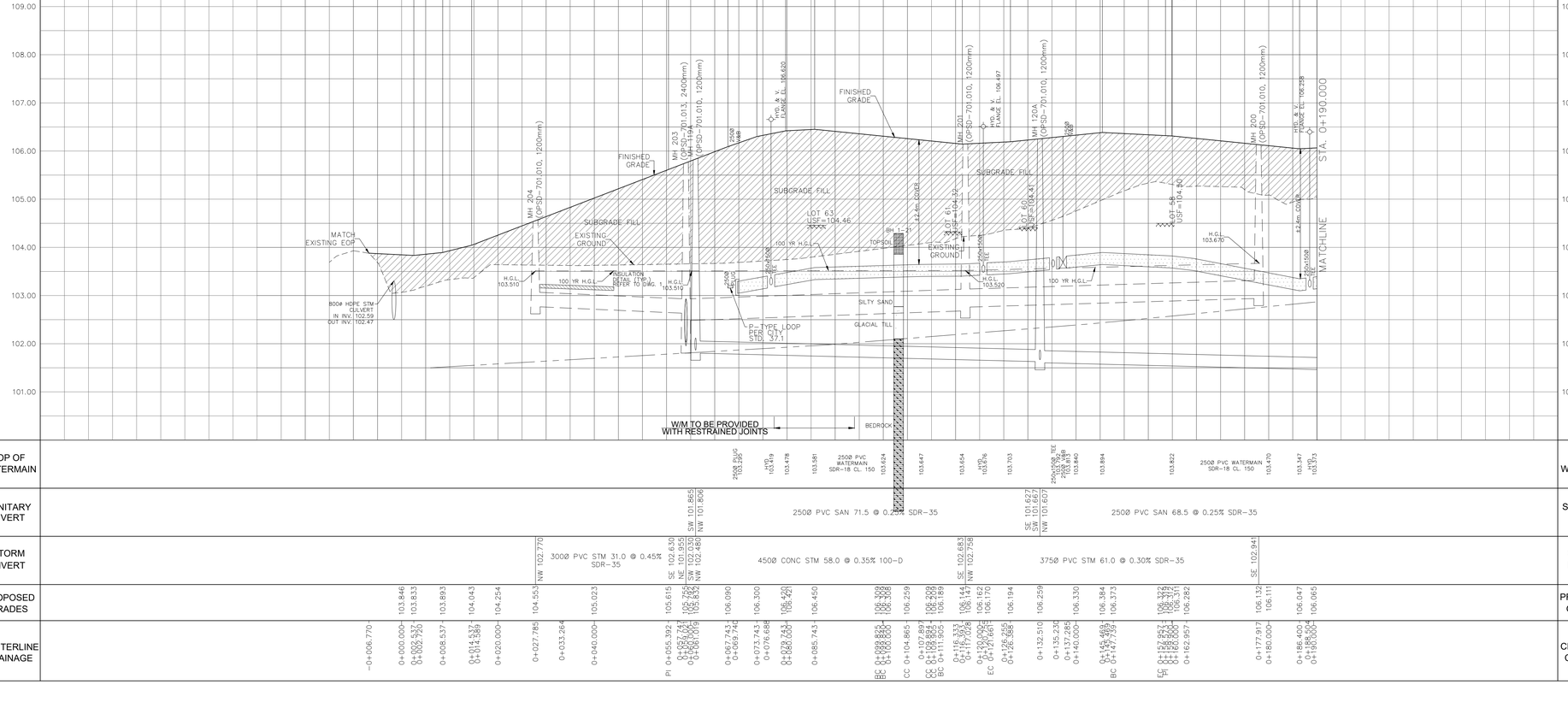
STREET 1

STA. 0+000.000 TO STA. 0+190.000

DRAWN BY: M.S & A.S.	CHECKED BY: W.L.	SHEET NO.
DESIGNED BY: W.L.	CHECKED BY: C.M.	12 OF 52
SCALE: H=1:500/ V=1:50	DATE: FEBRUARY 2026	

CITY PLAN No. XXXXXX

CITY FILE No. _D07-16-24-0020



| | | |

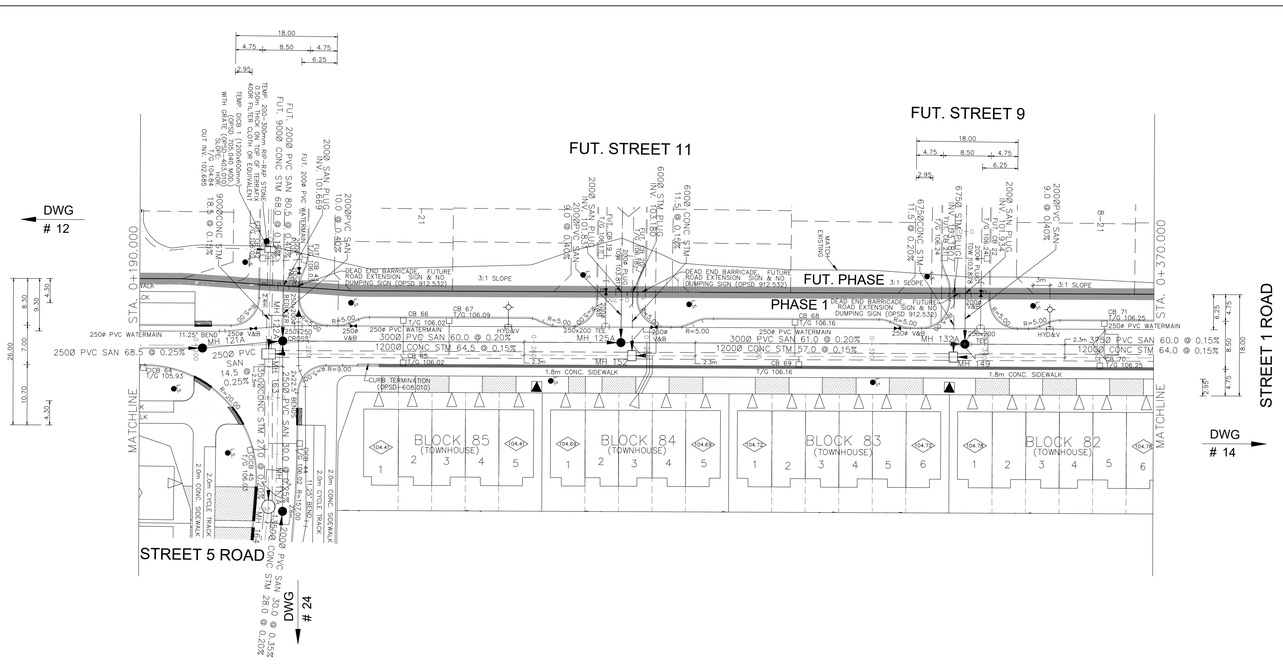
PAVEMENT DESIGN

40mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
100mm HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm OPSS GRANULAR A CRUSHED STONE
600mm OPSS GRANULAR B TYPE II
COLLECTOR PAVEMENT ENDS AT STA +220

40mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50mm HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm OPSS GRANULAR A CRUSHED STONE
450mm OPSS GRANULAR B TYPE II
LOCAL PAVEMENT STARTS FROM STA +220

NOTES:

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7. FOR CATCHBASIN AND ICD DATA, REFER TO DWG. No. 3 FOR DETAILS





LEGEND

CROSS
45° BEND
LATERAL
HYDRANT, VALVE & VB
TEE
VALVE & VC
VALVE & VB
22.5° BEND
11.25° BEND
REDUCER
CAP
SANITARY MAINTENANCE HOLE (WATERTIGHT LID PER OPSD 401.030)
SANITARY MAINTENANCE HOLE
CAP
STREET CATCHBASIN & LEAD
STREET CATCHBASIN WITH CLOSED LID & LEAD
STORM MAINTENANCE HOLE
CURB INLET CATCHBASIN & LEAD
CATCHBASIN/ MAINTENANCE HOLE INTERCONNECTED CATCH BASIN & LEADS
CAP
SINGLE SERVICE LOCATION (ST, SAN & WM)
SINGLE SERVICE LOCATION (ST, SAN & WM)
TEE CATCHBASIN
PERFORATED PIPE
ELBOW CATCHBASIN
DITCH AND CULVERT
EXISTING SANITARY MAINTENANCE HOLE
EXISTING STORM MAINTENANCE HOLE

HYDRO TRANSFORMER
STREET LIGHT STANDARD
CONCRETE SIDEWALK
CURB & DEPRESSED CURB
ASPHALT SIDEWALK
CHAINLINK FENCE (1.5m UNLESS OTHERWISE NOTED)
NOISE BARRIER
WOODEN POST AND RAIL FENCE
CONSTRUCTION FENCE
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PHASING LIMITS
PROPERTY BOUNDARY
BOREHOLE (BH)
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MONITORING WELL LOCATION
CONCEPTUAL WELL LOCATION
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SPEED HUMP PER CITY STD. R19
BEDROCK CONTOUR
EX. TELEPHONE CONDUIT
EX. SECONDARY POWER

AS PER GEOTECHNICAL REPORT

NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED
PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

LICENSED PROFESSIONAL ENGINEER
W. LIU
100167932
26-02-25
PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)
PHASE 1

DSEL
120 Iber Road, Unit 103
Stittsville, ON K2S 1E9
Tel. (613) 836-0856
Fax. (613) 836-7183
www.DSEL.ca

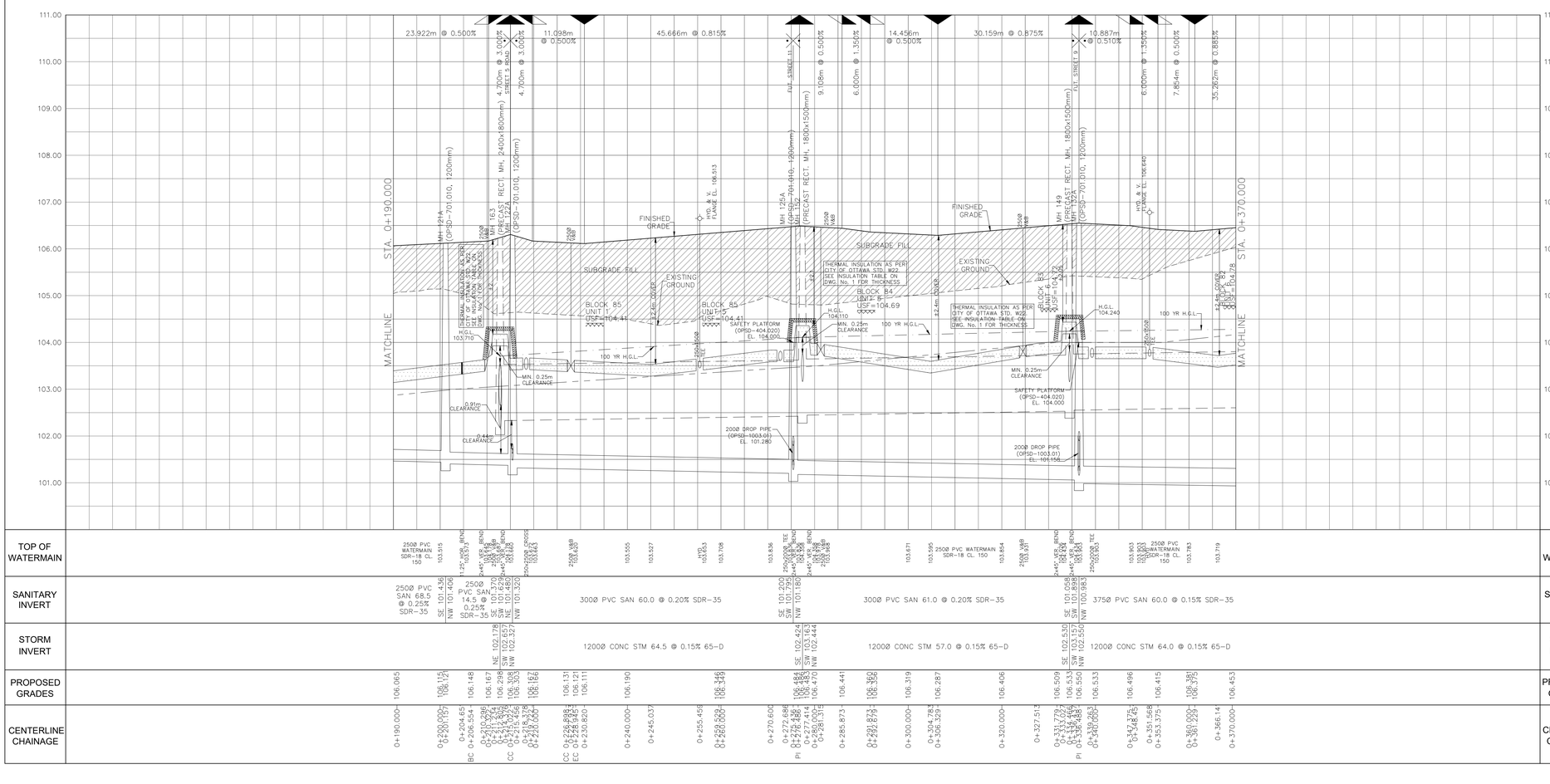
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STREET 1

STA. 0+190.000 TO STA. 0+370.000

DRAWN BY: M.S & A.S.	CHECKED BY: W.L.	SHEET NO.
DESIGNED BY: W.L.	CHECKED BY: C.M.	13 OF 52
SCALE: H=1:500/ V=1:50	DATE: FEBRUARY 2026	

CITY PLAN No. XXXXXX
CITY FILE No. D07-16-24-0020



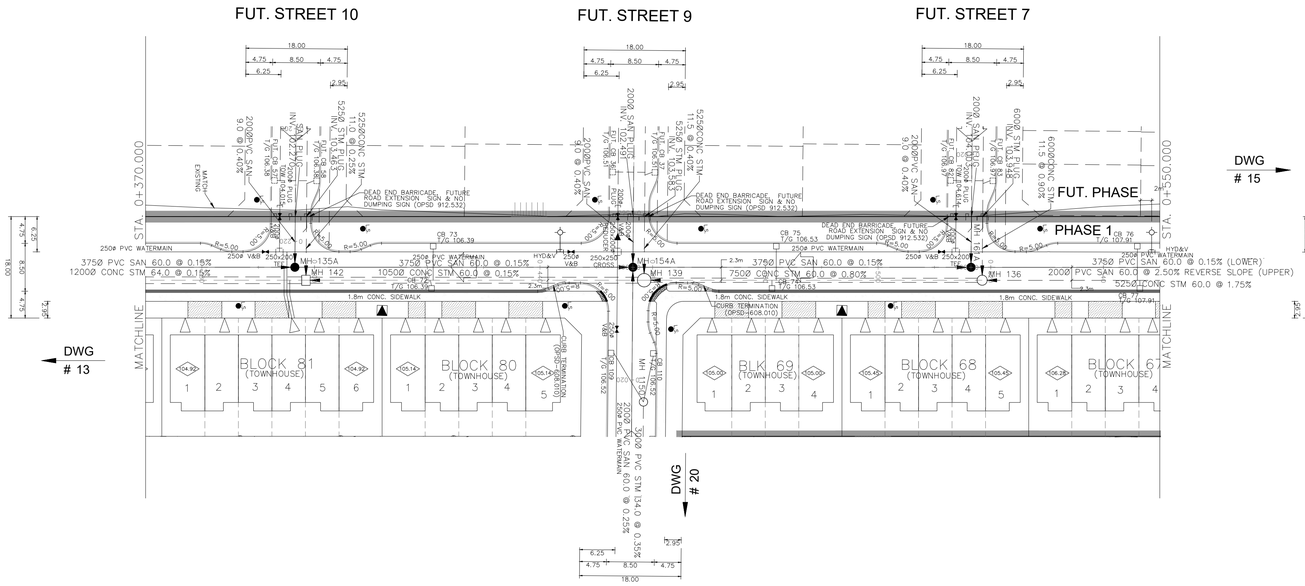
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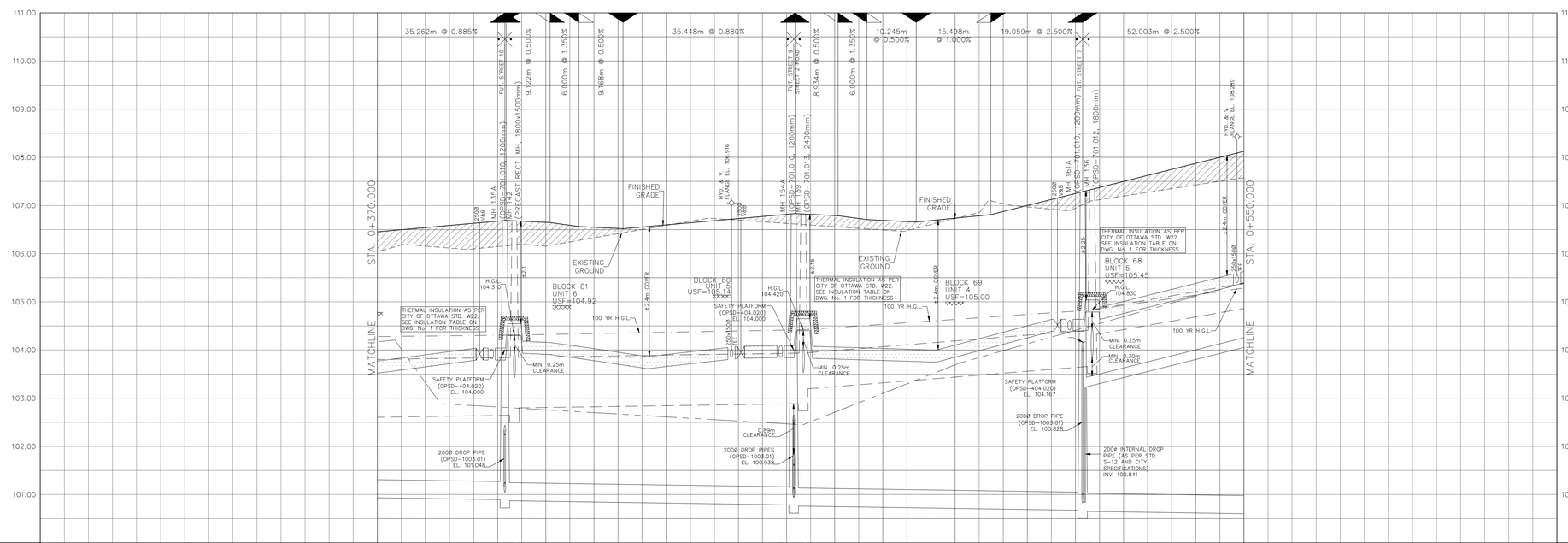
PAVEMENT DESIGN

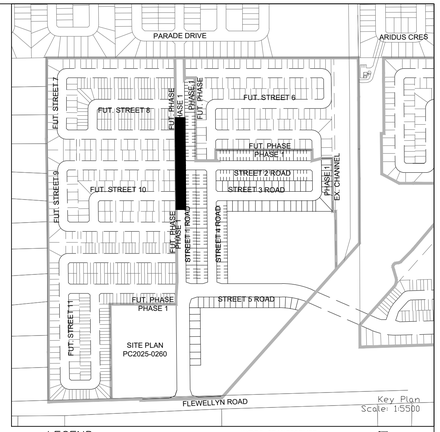
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AS PER GEOTECHNICAL REPORT

NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED
PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

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LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

W. LIU 100167932 26-02-25 LICENCE PROFESSIONAL ENGINEER PROVINCE OF ONTARIO

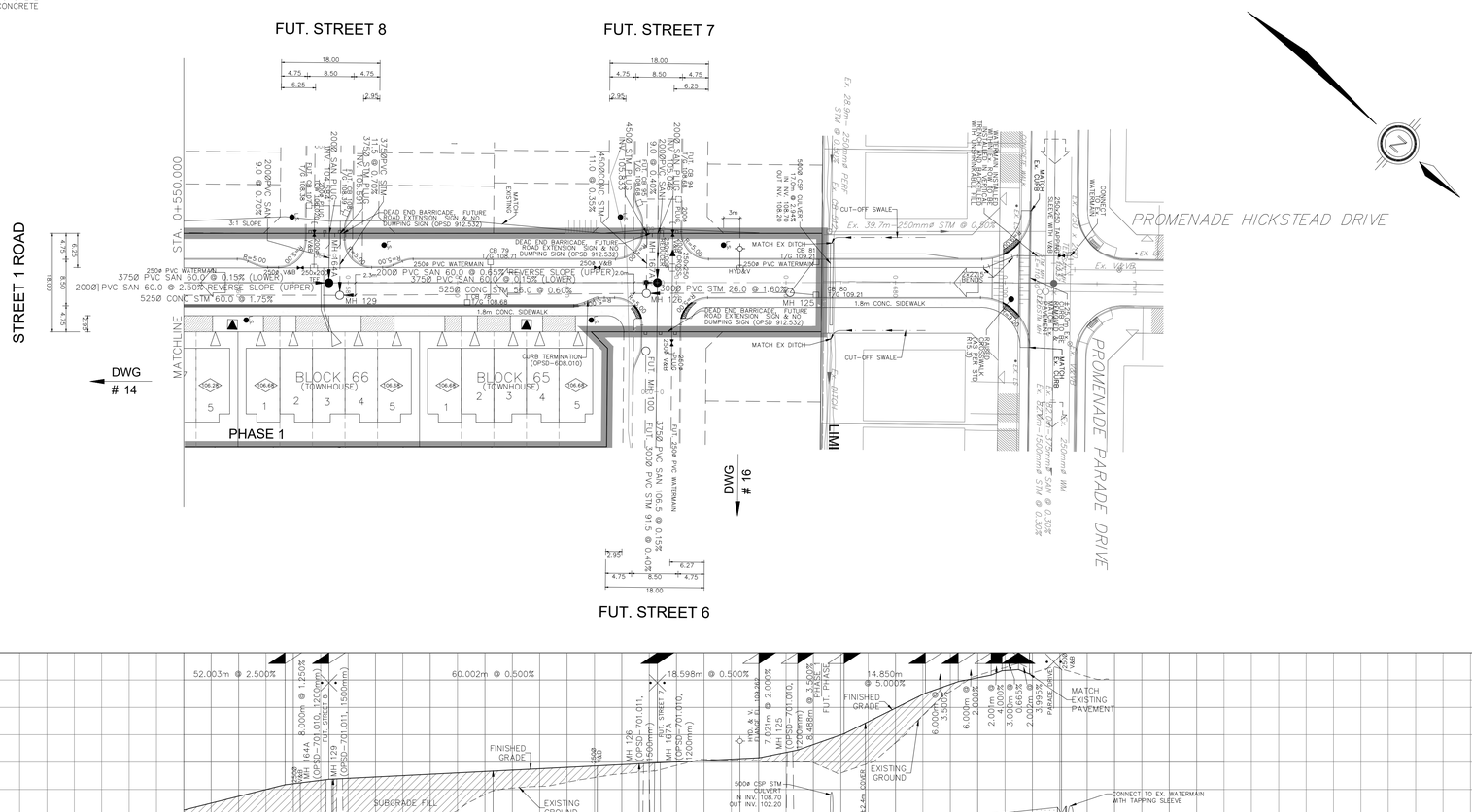
CAIVAN (STITTSVILL

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PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

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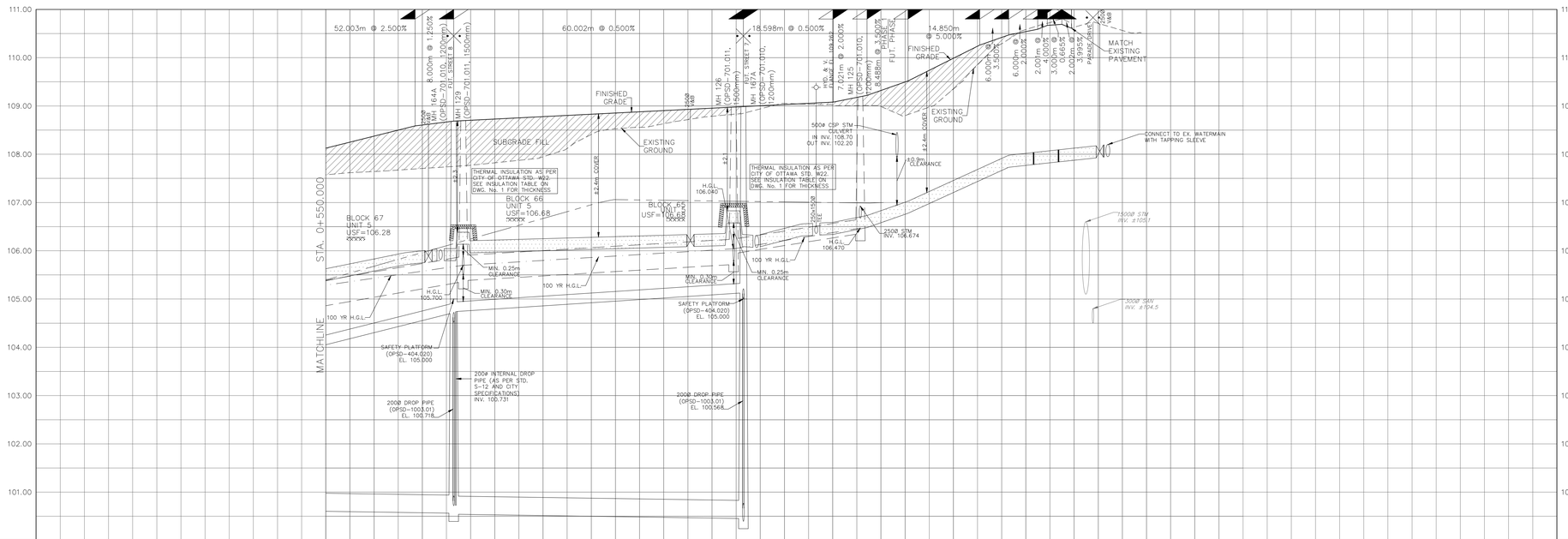
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STREET 1

STA. 0+550.000 TO STA. 0+718.903

DRAWN BY: M.S & A.S.	CHECKED BY: W.L.	SHEET NO.	
DESIGNED BY: W.L.	CHECKED BY: C.M.	15	OF 52
SCALE: H=1:500/ V=1:50	DATE: FEBRUARY 2026		

CITY PLAN No. XXXXXX
CITY FILE No. _D07-16-24-0020



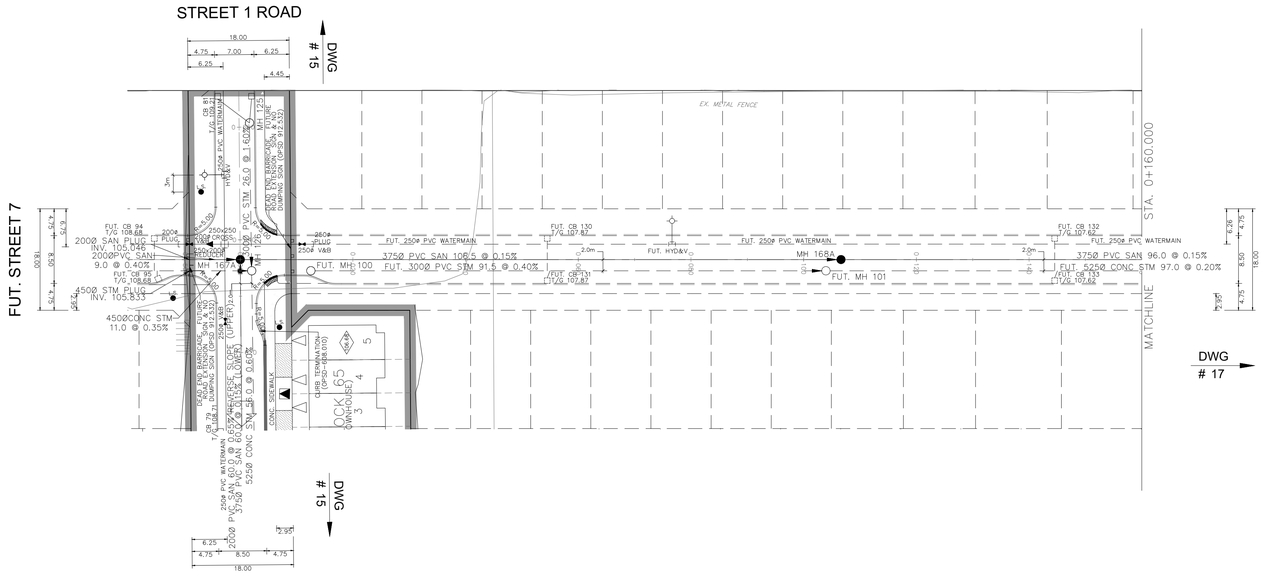
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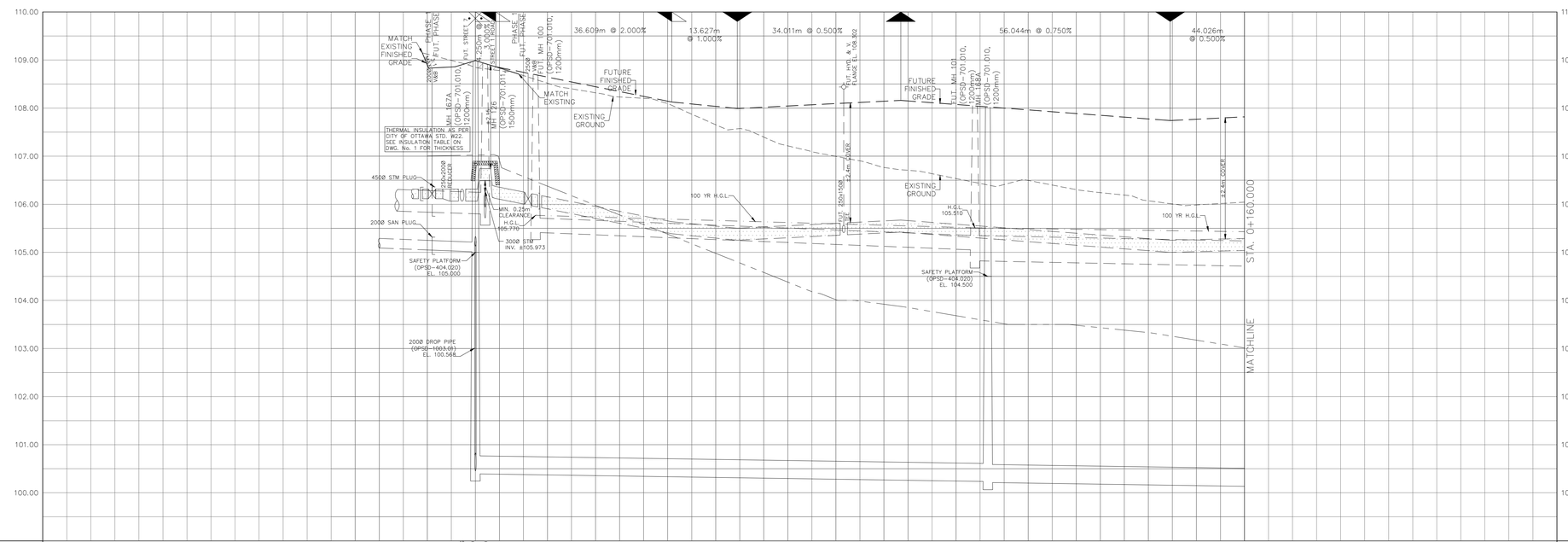
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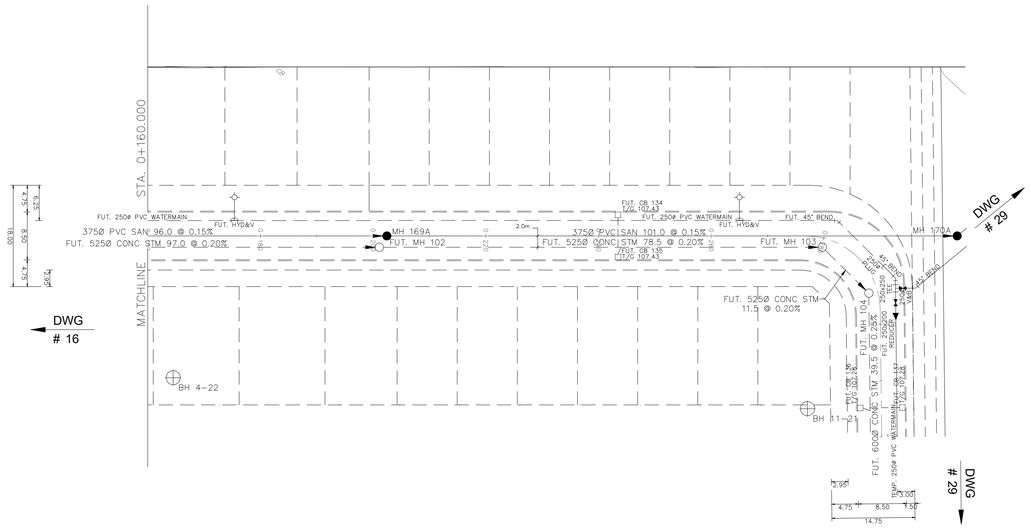
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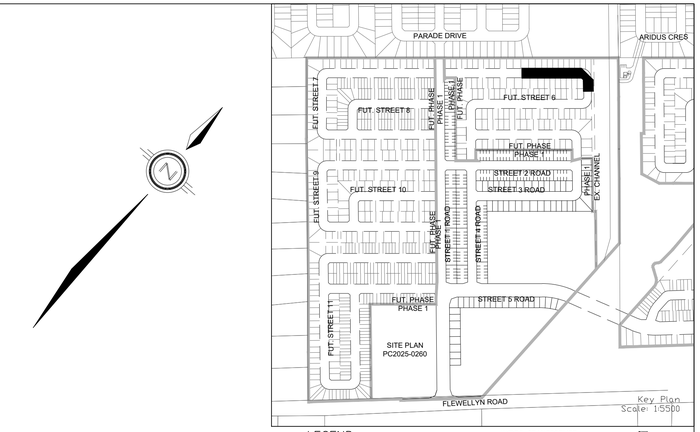
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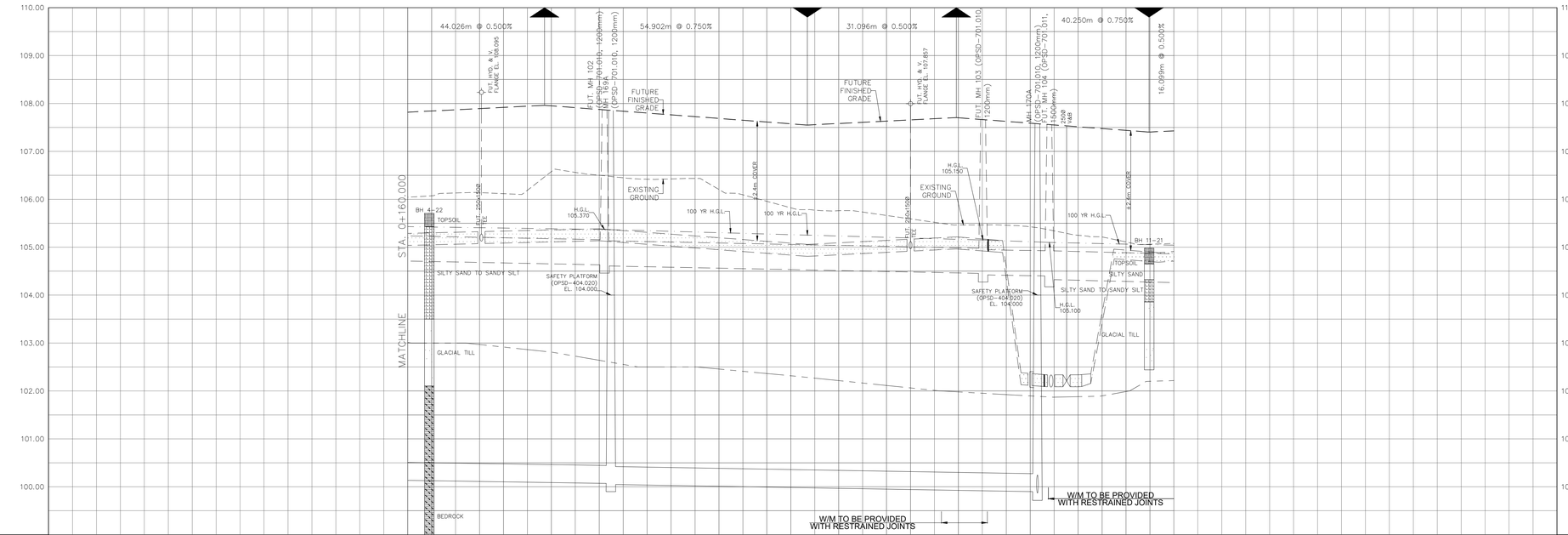
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STREET 4 ROAD



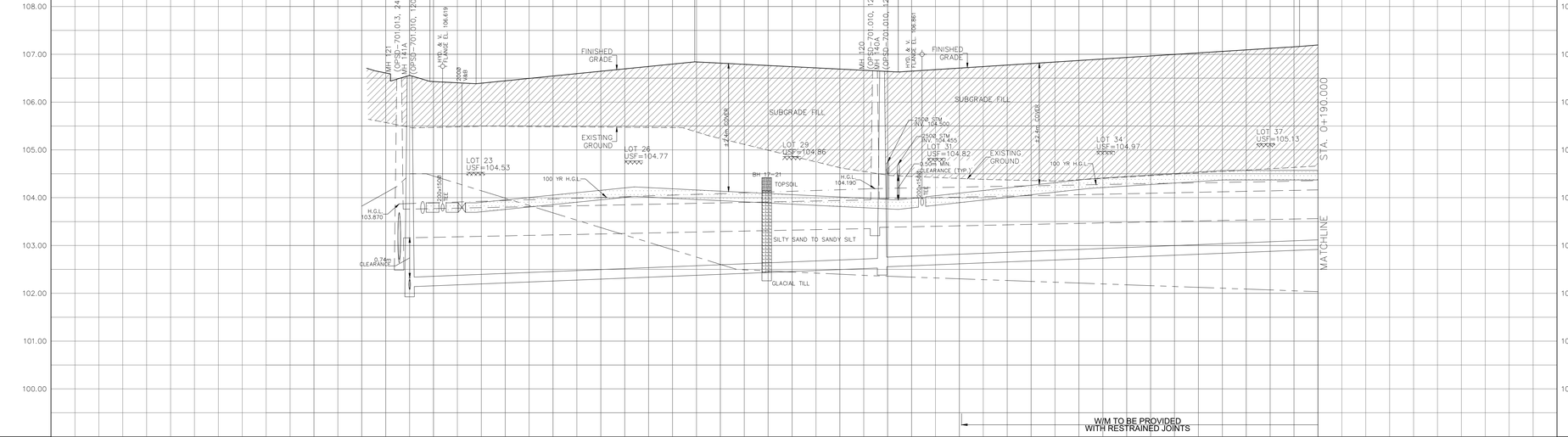


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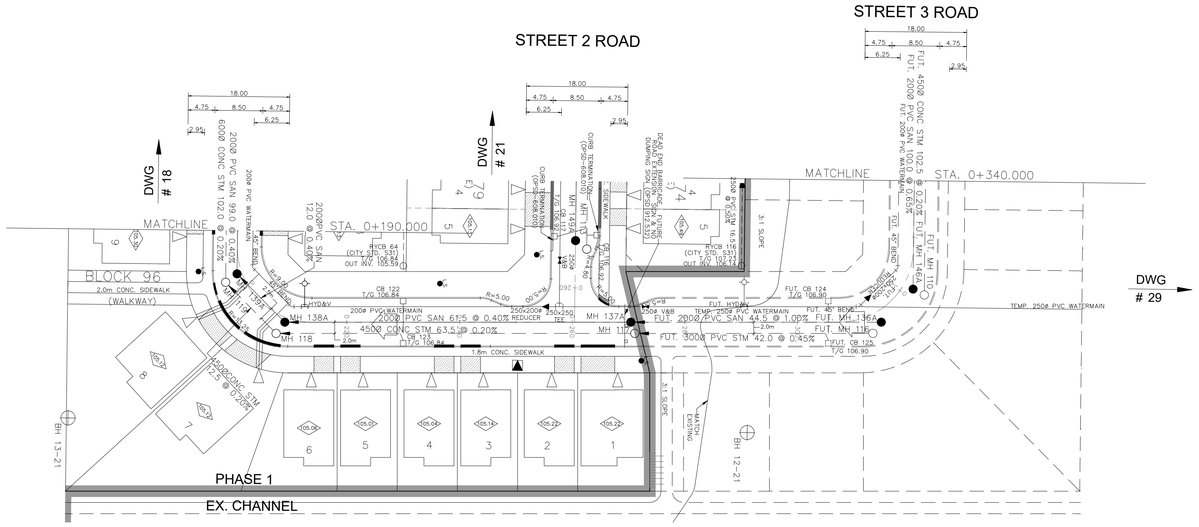
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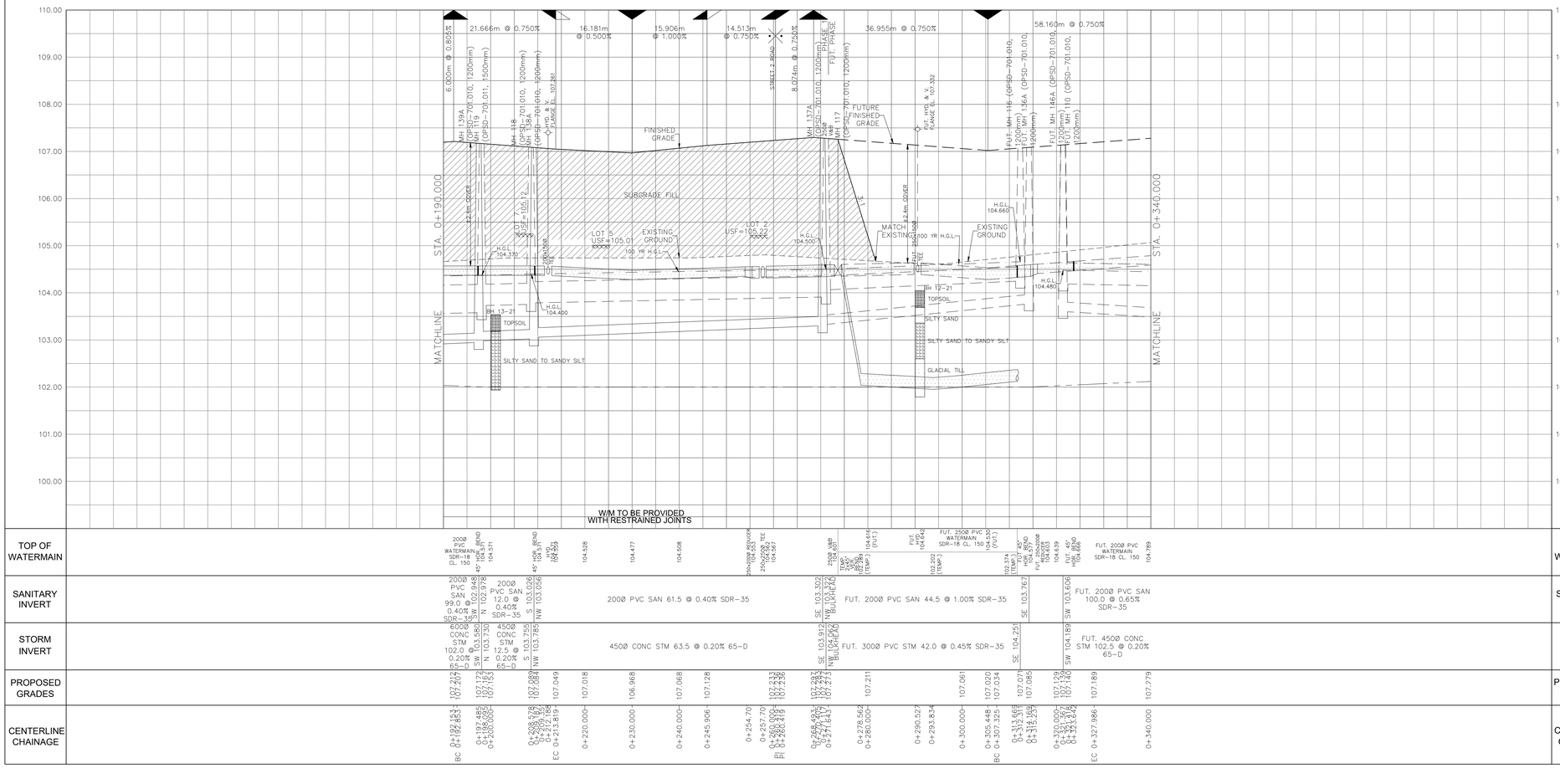




LEGEND

- CROSS
- 45° BEND
- LATERAL
- HYDRANT, VALVE & VB
- TEE
- VALVE & VC
- VALVE & VB
- 22.5° BEND
- 11.25° BEND
- REDUCER
- CAP
- SANITARY MAINTENANCE HOLE (WATERTIGHT LID PER OPSD 401.030)
- SANITARY MAINTENANCE HOLE
- CAP
- STREET CATCHBASIN & LEAD
- STREET CATCHBASIN WITH CLOSED LID & LEAD
- STORM MAINTENANCE HOLE
- CURB INLET CATCHBASIN & LEAD
- CATCHBASIN/ MAINTENANCE HOLE INTERCONNECTED CATCH BASIN & LEADS
- CAP
- SINGLE SERVICE LOCATION (ST, SAN & WM)
- SINGLE SERVICE LOCATION (ST, SAN & WM)
- TEE CATCHBASIN
- PERFORATED PIPE
- ELBOW CATCHBASIN
- DITCH AND CULVERT
- EXISTING SANITARY MAINTENANCE HOLE
- EXISTING STORM MAINTENANCE HOLE
- HYDRO TRANSFORMER
- STREET LIGHT STANDARD
- CONCRETE SIDEWALK
- CURB & DEPRESSED CURB
- ASPHALT SIDEWALK
- CHAINLINK FENCE (1.5m UNLESS OTHERWISE NOTED)
- NOISE BARRIER
- WOODEN POST AND RAIL FENCE
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- POST AND RAIL FENCE
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- RETAINING WALL (SEE NOTES ON DWG. 3 AND STRUCTURAL DWG'S FOR DETAIL)
- SPEED HUMP PER CITY STD. R19
- BEDROCK CONTOUR
- EX. TELEPHONE CONDUIT
- EX. SECONDARY POWER

AS PER GEOTECHNICAL REPORT



NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED
PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

LICENSED PROFESSIONAL ENGINEER W. LIU 100167932 26-02-25 PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)

PHASE 1

DSEL
120 Iber Road, Unit 103
Stittsville, ON K2S 1E9
Tel. (613) 836-0856
Fax. (613) 836-7183
www.DSEL.ca

© DSEL

STREET 3

STA. 0+190.000 TO STA. 0+340.000

DRAWN BY: M.S & A.S.	CHECKED BY: W.L.	SHEET NO.
DESIGNED BY: W.L.	CHECKED BY: C.M.	19 OF 52
SCALE: H=1:500/ V=1:50	DATE: FEBRUARY 2026	

CITY PLAN No. XXXXXX

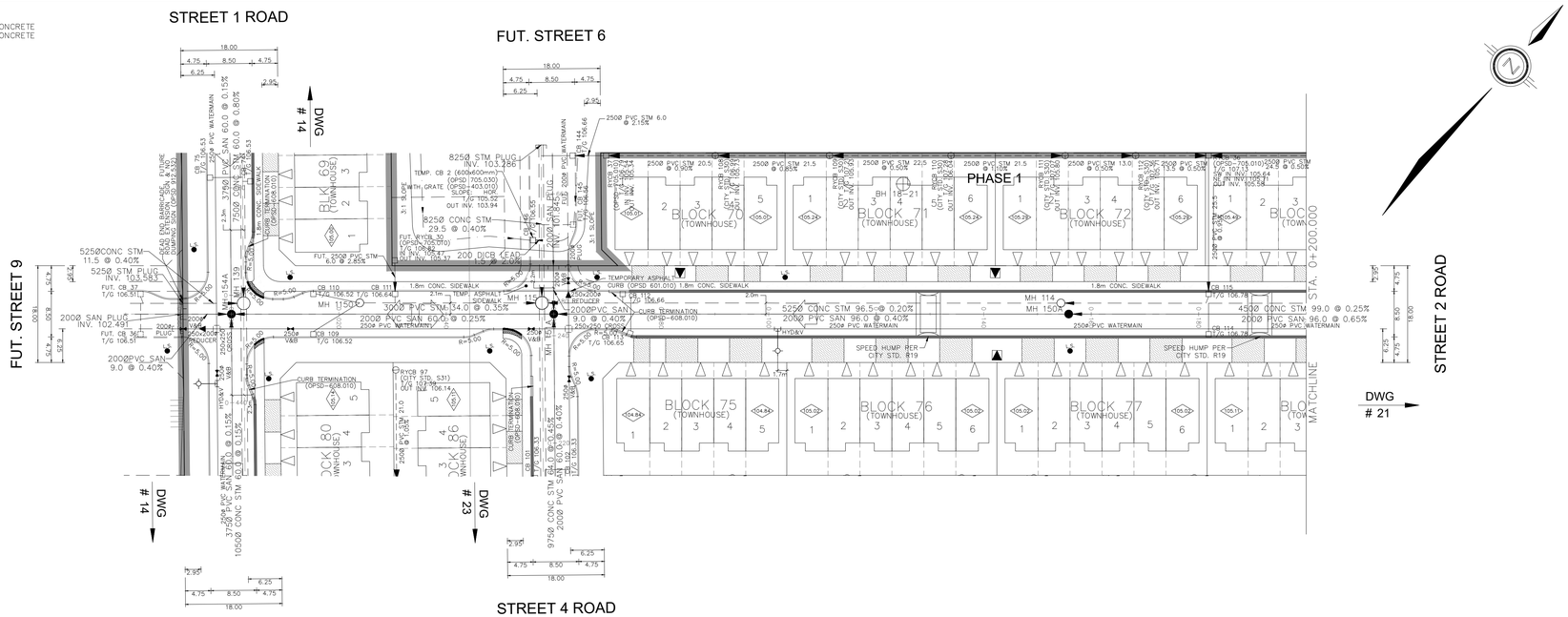
CITY FILE No. _D07-16-24-0020

PAVEMENT DESIGN

40mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50mm HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm OPSS GRANULAR A CRUSHED STONE
450mm OPSS GRANULAR B TYPE II

NOTES:

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PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

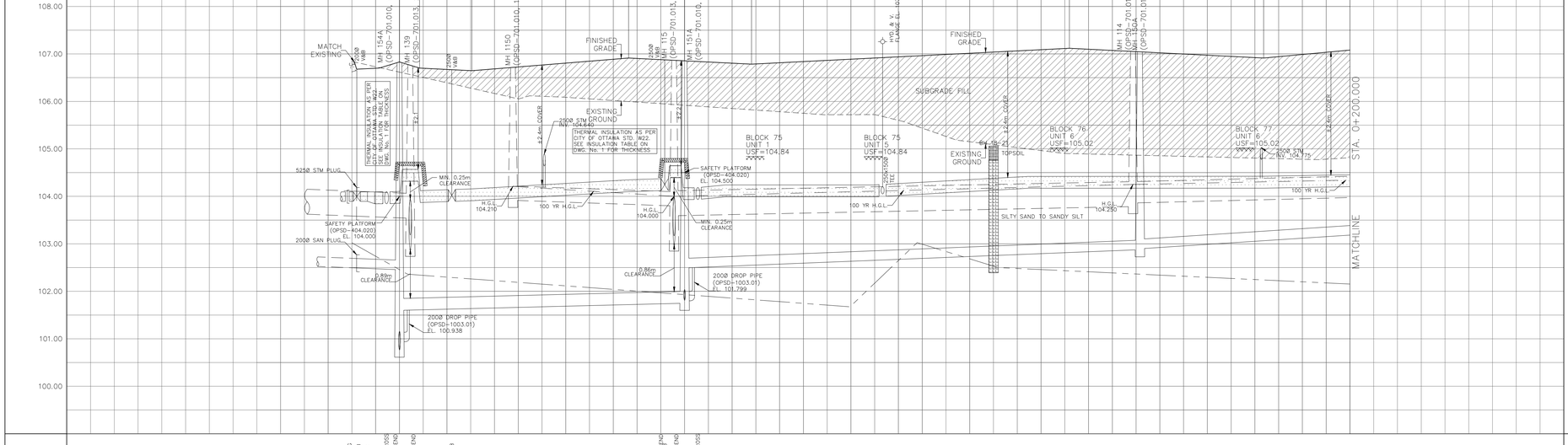
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LEGAL INFORMATION

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No.	BY	DATE	DESCRIPTION
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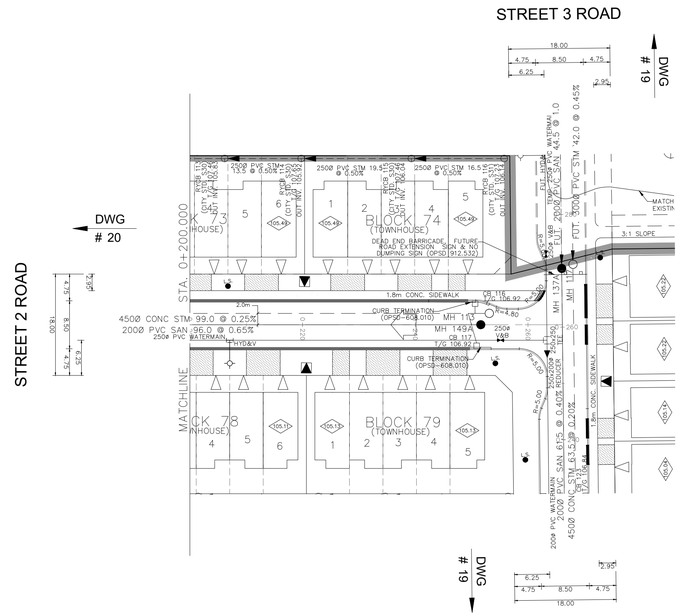
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TEE
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PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

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CITY OF OTTAWA

PROJECT No. 21-1247

LICENSED PROFESSIONAL ENGINEER
W. LIU
100167932
26-02-25
PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)
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Tel. (613) 836-0856
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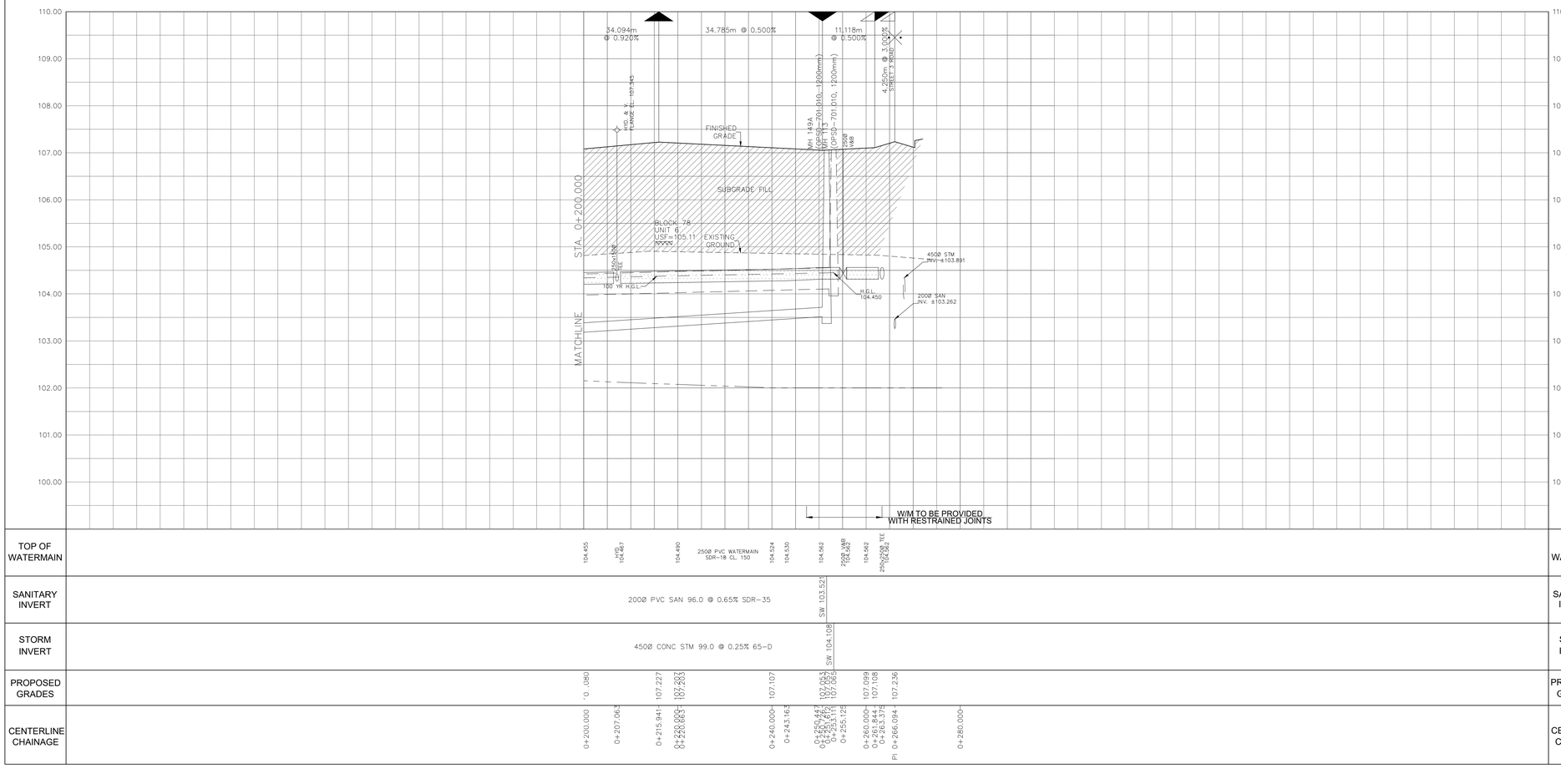
© DSEL

STREET 2

STA. 0+200.000 TO STA. 0+276.094

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DESIGNED BY: W.L.	CHECKED BY: C.M.	21	OF 52
SCALE: H=1:500/ V=1:50	DATE: FEBRUARY 2026		

CITY PLAN No. XXXXXX
CITY FILE No. _D07-16-24-0020

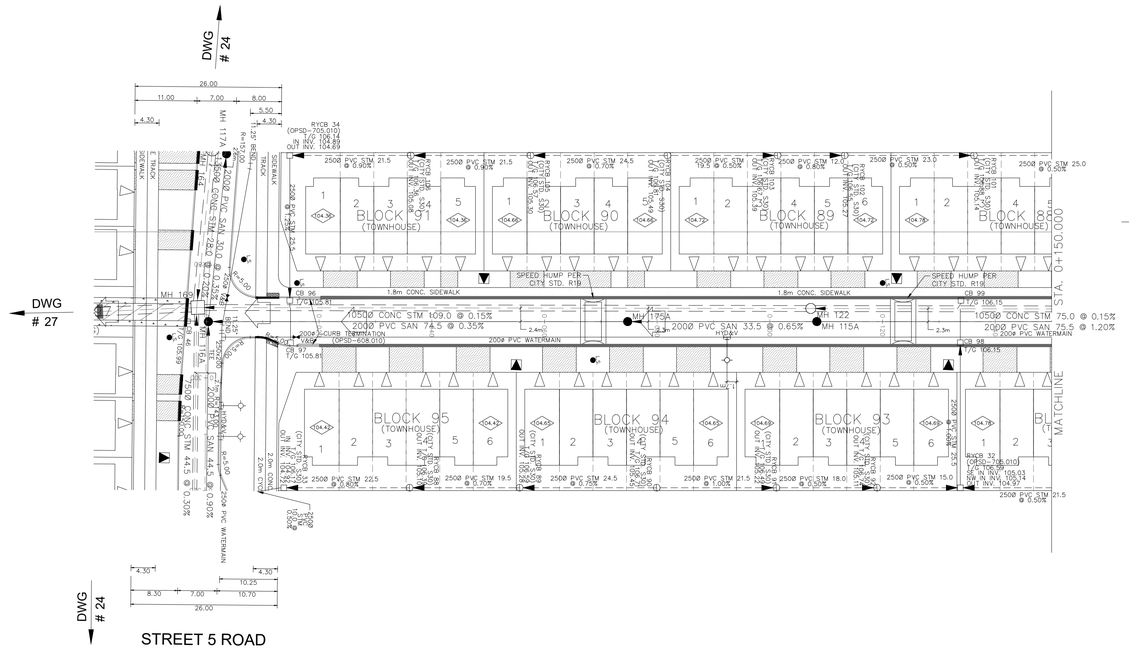


PAVEMENT DESIGN

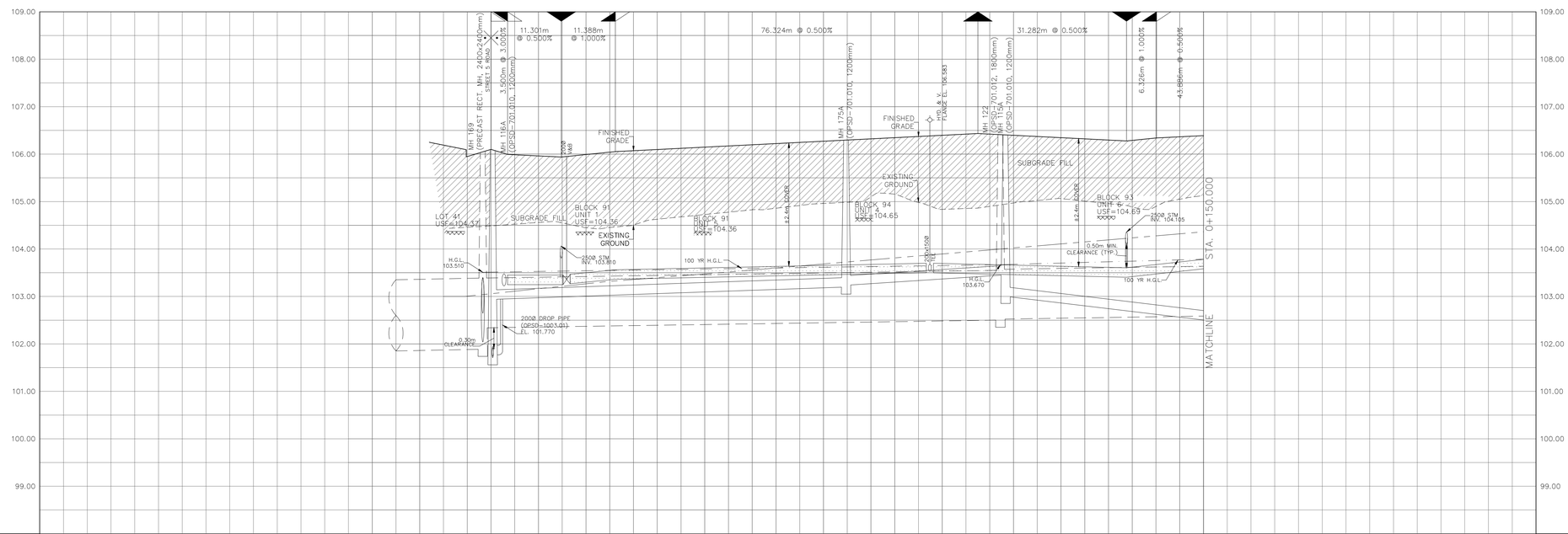
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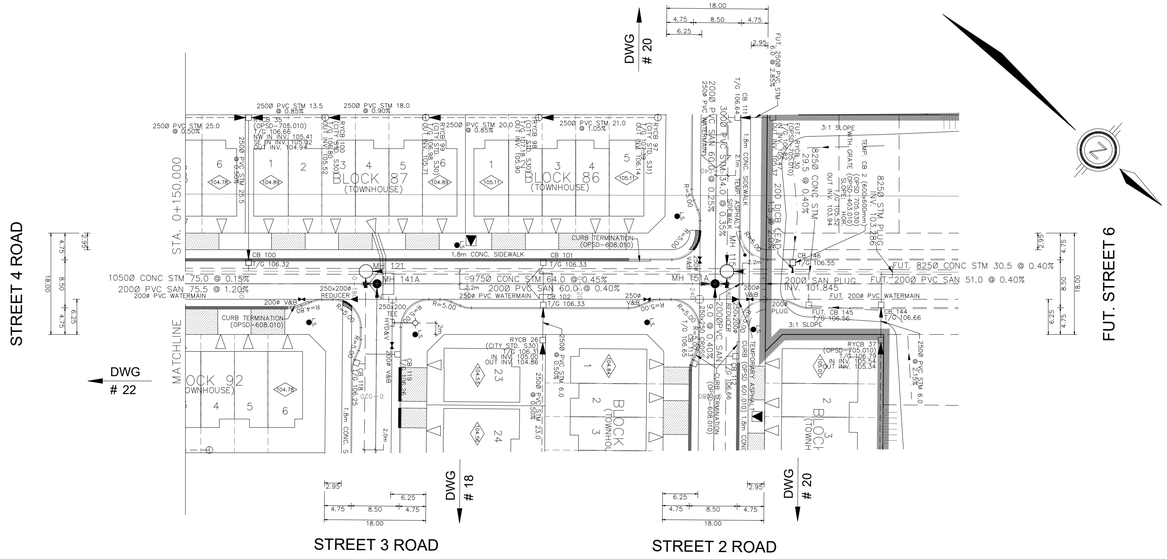
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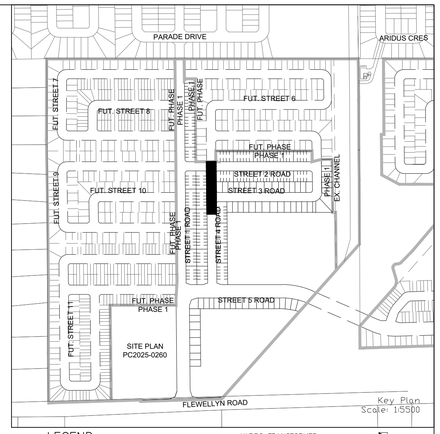
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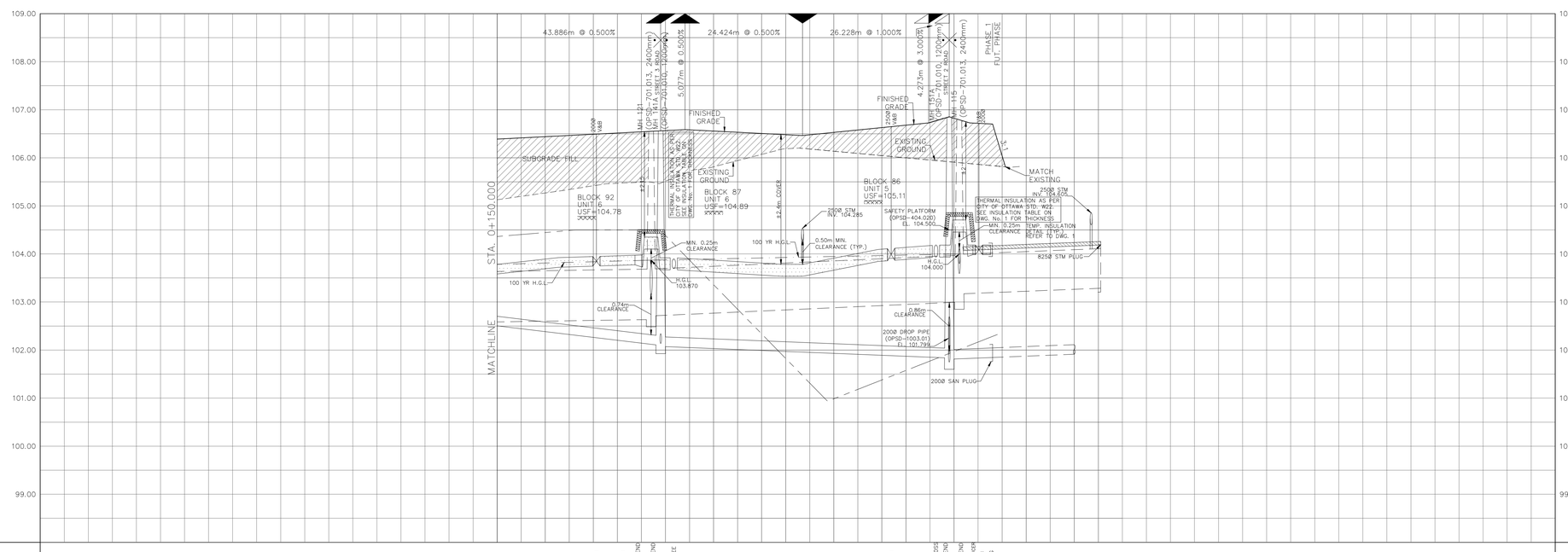
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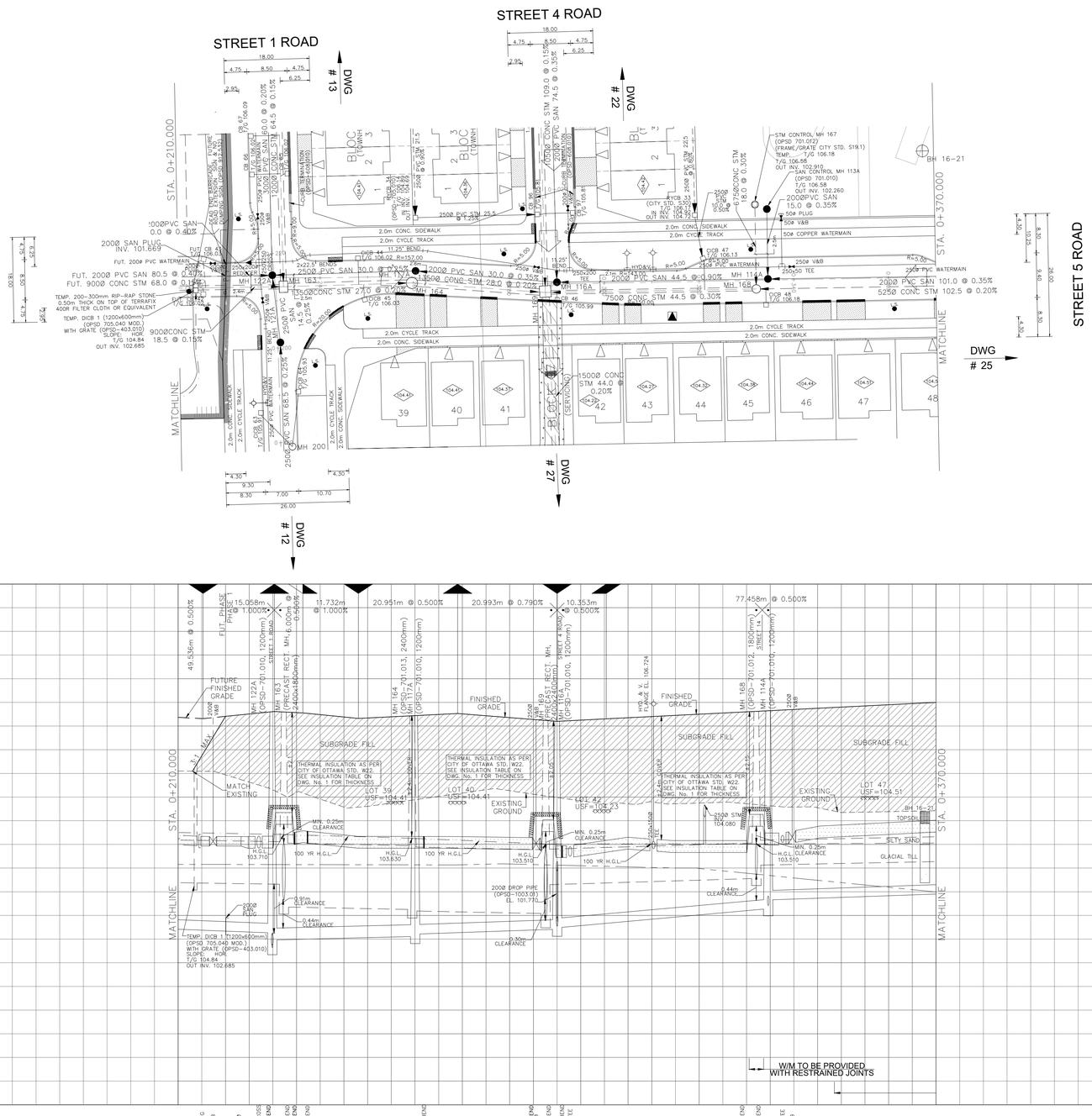
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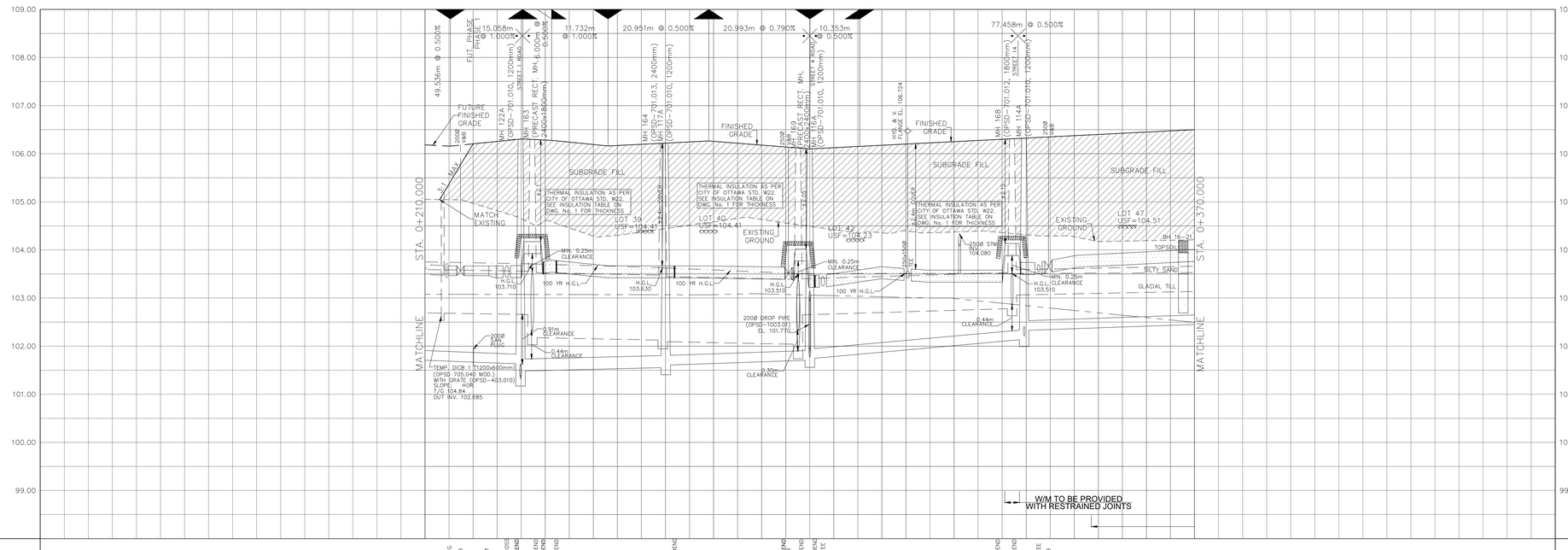
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SPEED HUMP PER CITY STD. R19
BEDROCK CONTOUR
EX. TELEPHONE CONDUIT
EX. SECONDARY POWER

AS PER GEOTECHNICAL REPORT

NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION

TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION

M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21-1247

LICENSED PROFESSIONAL ENGINEER W. LIU 100167932 26-02-25 PROVINCE OF ONTARIO

CAIVAN (STITTSVILLE) INC.

STITTSVILLE SOUTH URBAN EXPANSION AREA (W-4)

PHASE 1

DSEL
120 Iber Road, Unit 103
Stittsville, ON K2S 1E9
Tel. (613) 836-0856
Fax. (613) 836-7183
www.DSEL.ca

© DSEL

STREET 5

STA. 0+210.000 TO STA. 0+370.000

DRAWN BY: M.S & A.S.	CHECKED BY: W.L.	SHEET NO.	
DESIGNED BY: W.L.	CHECKED BY: C.M.	24	OF 52
SCALE: H=1:500/ V=1:50	DATE: FEBRUARY 2026		

CITY PLAN No. XXXXXX

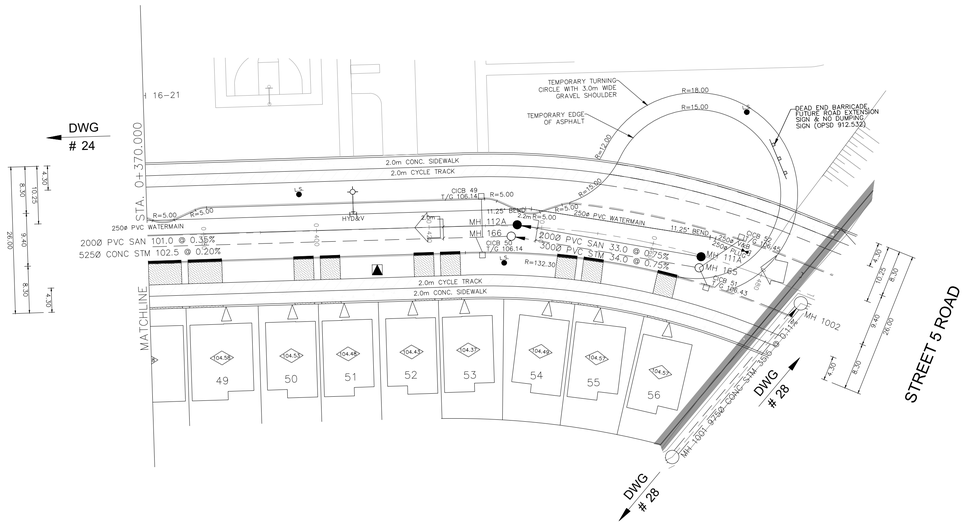
CITY FILE No. _D07-16-24-0020

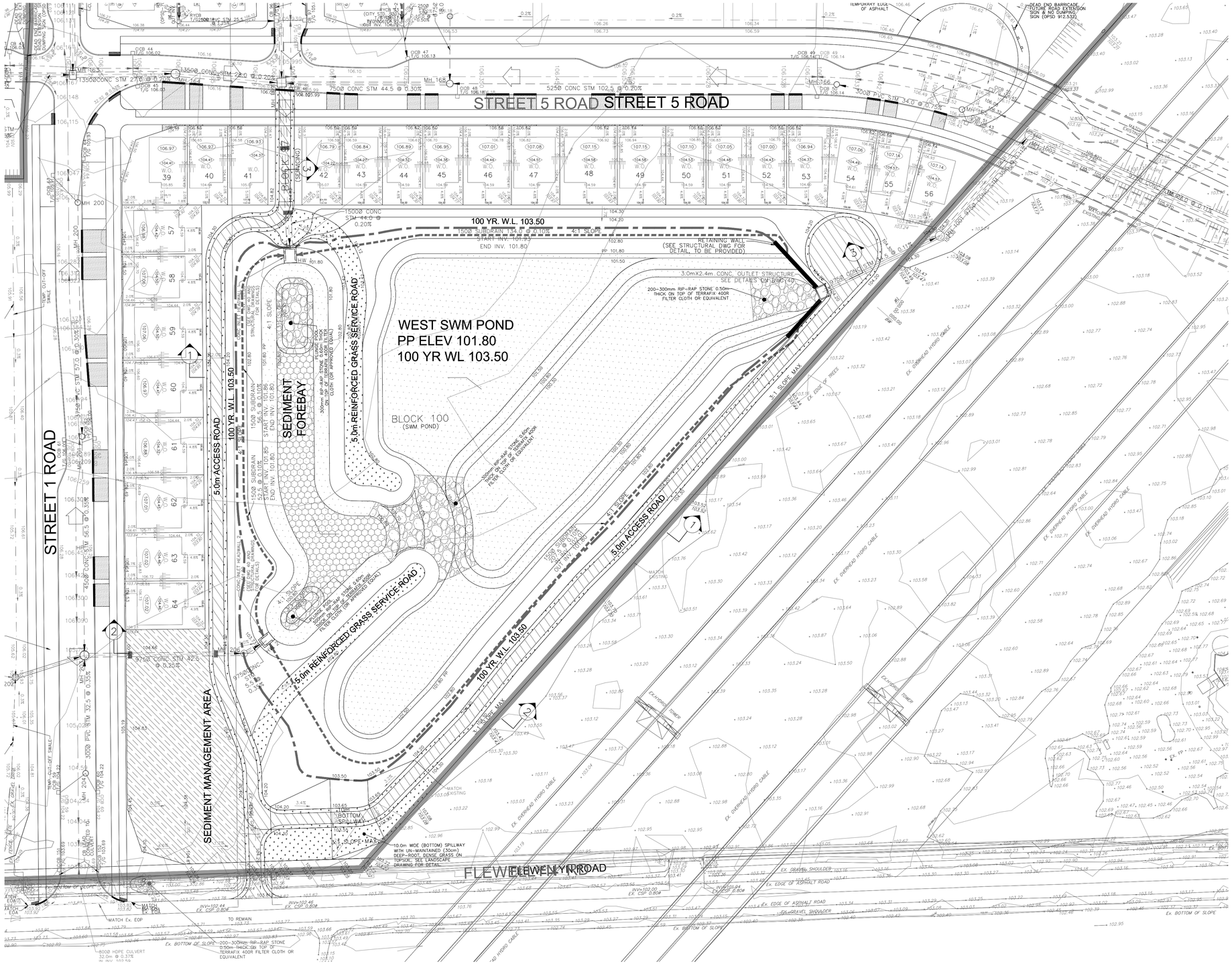
PAVEMENT DESIGN

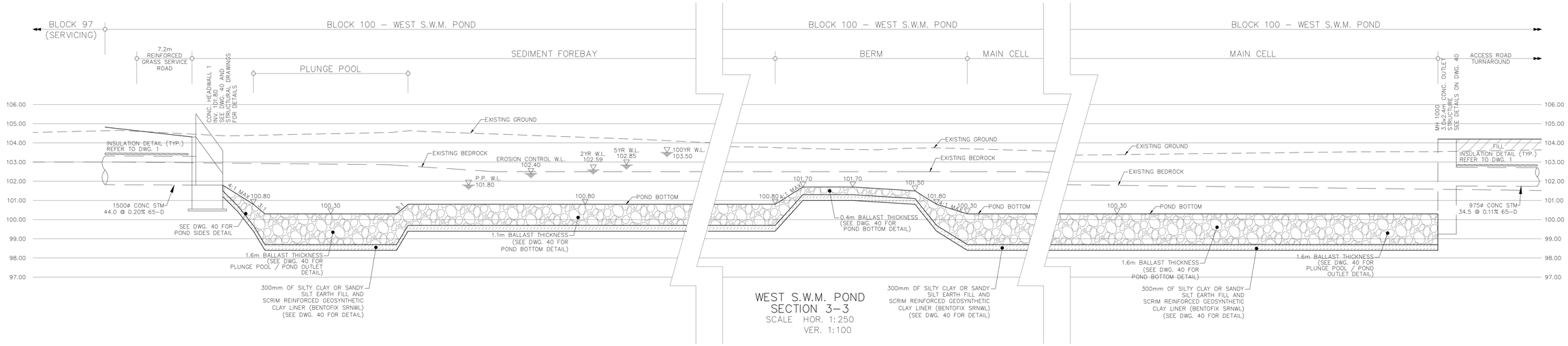
40mm HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
100mm HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm OPSS GRANULAR A CRUSHED STONE
600mm OPSS GRANULAR B TYPE II

NOTES:

1. ANY DISTURBED AREA DURING CONSTRUCTION TO BE RESTORED TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION
2. CONTRACTOR TO VERIFY THE PRECISE LOCATIONS AND INVERT ELEVATIONS OF Ex. UNDERGROUND SERVICES AND Ex. UTILITIES PRIOR TO STARTING CONSTRUCTION
3. ALL EXISTING TREES, SHRUBS ETC. WITHIN LOTS, BLOCKS AND ROADS TO BE REMOVED, UNLESS OTHERWISE NOTED
4. PERMISSION REQUIRED FOR WORK ON ADJACENT LANDS
5. FOR WATERMAIN STUBS, 2.4m MIN. COVER TO BE PROVIDED
6. ANY DISTURBED MATERIAL ENCOUNTERED BELOW THE SUBGRADE LEVEL WITHIN A BUILDING FOOTPRINT TO BE SUB-EXCAVATED AND BACKFILLED WITH COMPACTED ENGINEERED FILL AS PER GEOTECHNICAL ENGINEERS RECOMMENDATION
7. FOR CATCHBASIN AND ICD DATA, REFER TO DWG. No. 3 FOR DETAILS

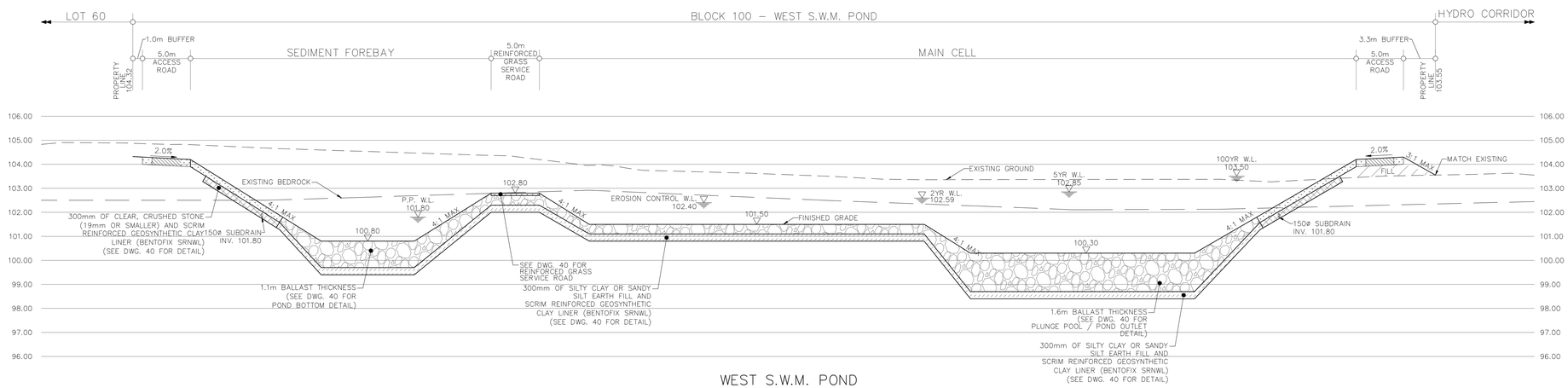



STREET 5 ROAD STREET 5 ROAD
WEST SWM POND
PP ELEV 101.80
100 YR WL 103.50
BLOCK 100
(SWM POND)
SEDIMENT FOREBAY
5.0m REINFORCED GRASS SERVICE ROAD
5.0m ACCESS ROAD
100 YR. W.L. 103.50
RETAINING WALL
(SEE STRUCTURAL DWG FOR DETAIL, TO BE PROVIDED)
3.0mX2.4m CONC. OUTLET STRUCTURE
SEE DETAILS ON DWG 40
200-300mm RIP-RAP STONE 0.50m THICK ON TOP OF TERRAFIX 400R FILTER CLOTH OR EQUIVALENT
4:1 SLOPE
3:1 SLOPE MAX
BLOCK 47
(SPADINA)
STREET 1 ROAD
SEDIMENT MANAGEMENT AREA
1.5m REINFORCED GRASS SERVICE ROAD
100 YR. W.L. 103.50
10.0m WIDE (BOTTOM) SPILLWAY WITH UN-MAINTAINED (30cm) DEEP-ROOT, DENSE GRASS ON TOPSOIL. SEE LANDSCAPE DRAWING FOR DETAIL
FLEWELLYN ROAD
EX. GRAVEL SHOULDER
EX. EDGE OF ASPHALT ROAD
EX. GRAVEL SHOULDER
EX. BOTTOM OF SLOPE
EX. OVERHEAD HYDRO CABLE
EX. HYDRO TOWER
MATCH Ex. EOP
TO REMAIN
8000 HDPE CULVERT 32.0m @ 0.37%
200-300mm RIP-RAP STONE 0.50m THICK ON TOP OF TERRAFIX 400R FILTER CLOTH OR EQUIVALENT
1500 SUBDRAIN 52.5 @ 0.10%
1500 SUBDRAIN 56.5 @ 0.10%
1500 SUBDRAIN 32.5 @ 0.35%
7500 CONC STM 42.0 @ 0.25%
1350Ø CONC STM 270.0 @ 0.20%
7500 CONC STM 44.5 @ 0.30%
5250 CONC STM 102.5 @ 0.20%
3000 PVC STM 34.0 @ 0.71%
1350Ø CONC STM 57.0 @ 0.10%
1500 CONC STM 44.0 @ 0.20%
1500 SUBDRAIN 154.0 @ 0.10%
START INV. 101.95
END INV. 101.80
PP 101.80
HW 101.80
TEMP. CUT-OFF SWALE
EX. GRAVEL SHOULDER
EX. EDGE OF ASPHALT ROAD
EX. GRAVEL SHOULDER
EX. BOTTOM OF SLOPE
MATCH EXISTING
MATCH Ex. EOP
INV=102.44 EX. CSP 0.80Ø
INV=102.46 EX. CSP 0.80Ø
INV=101.94 EX. CSP 0.80Ø
INV=102.00 EX. CSP 0.80Ø
INV=101.85 EX. CSP 0.80Ø
INV=101.80 EX. CSP 0.80Ø
INV=101.75 EX. CSP 0.80Ø
INV=101.70 EX. CSP 0.80Ø
INV=101.65 EX. CSP 0.80Ø
INV=101.60 EX. CSP 0.80Ø
INV=101.55 EX. CSP 0.80Ø
INV=101.50 EX. CSP 0.80Ø
INV=101.45 EX. CSP 0.80Ø
INV=101.40 EX. CSP 0.80Ø

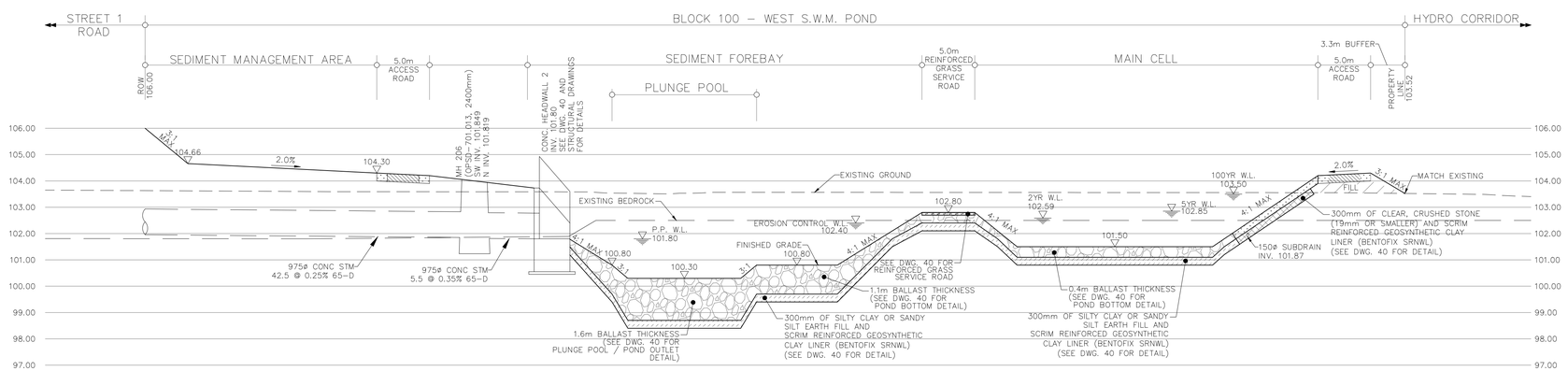


WEST S.W.M. POND
SECTION 3–3
SCALE HOR. 1:250
VER. 1:100

REFER TO DWG. 38 FOR CROSS-SECTION LOCATIONS.



WEST S.W.M. POND
SECTION 1–1
SCALE HOR. 1:250
VER. 1:100



WEST S.W.M. POND
SECTION 2–2
SCALE HOR. 1:250
VER. 1:100

NOT FOR CONSTRUCTION

TOPOGRAPHIC INFORMATION
TOPOGRAPHIC INFORMATION PROVIDED BY J.D. BARNES LIMITED
PROJECT No. 23-10-060-01. SURVEYS RECEIVED ON NOVEMBER 4, 2025.

ELEVATION NOTE
ELEVATIONS SHOWN ON THIS PLAN ARE GEODETIC RELATED TO CGVD28:78 VERTICAL DATUM

LEGAL INFORMATION
M-PLAN PROVIDED BY BY J.D. BARNES LIMITED, PROJECT No. 23-10-060-00 (Phase 1), RECEIVED ON OCTOBER 3, 2025.

No.	BY	DATE	DESCRIPTION
1	W.L.	26-02-25	1st SUBMISSION

CITY OF OTTAWA

PROJECT No. 21–1247

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Fax. (613) 836-7183
www.DSEL.ca

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SWM POND SECTIONS

DRAWN BY:	M.S & A.S.	CHECKED BY:	W.L.	SHEET NO.
DESIGNED BY:	W.L.	CHECKED BY:	C.M.	39 OF 52
SCALE:	AS SHOWN	DATE:	FEBRUARY 2026	

CITY PLAN No. XXXXXX
CITY FILE No. D07-16-24-0020

APPENDIX 4

WATER WELL RECORDS

The Ontario Water Resources Commission Act

WATER WELL RECORD

3164e

Water management in Ontario

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

11 | 1510833 | MUNICIP. 15003 | CON. CON 09

COUNTY OR DISTRICT: Carl | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Goulburn | CON., BLOCK, TRACT, SURVEY, ETC.: 9 | LOT: 023

ADDRESS OF WELL LOCATION: [redacted] Woodroffe Ave Ottawa | DATE COMPLETED: DAY 09 MO 07 YR 70

UTM: 09 730 | RC: 4 | ELEVATION: 358 | RC: 4 | BASIN CODE: 25

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
brown	sand	gravel	packed	0	12
grey	limestone		soft	12	75

31 | 09136091 11 | 00752 15

32

41 WATER RECORD

WATER FOUND AT – FEET	KIND OF WATER
0073	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
5	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	0019
05			19	75
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE			0075
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN FEET	

61 PLUGGING & SEALING RECORD

DEPTH SET AT – FEET FROM	DEPTH SET AT – FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)

71 PUMPING TEST

PUMPING TEST METHOD: 1 ☐ PUMP 2 ☒ BAILER | PUMPING RATE: 0010 GPM. | DURATION OF PUMPING: 01 HOURS 00 MINS.

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
010 FEET	025 FEET		015 FEET	020 FEET	025 FEET	025 FEET

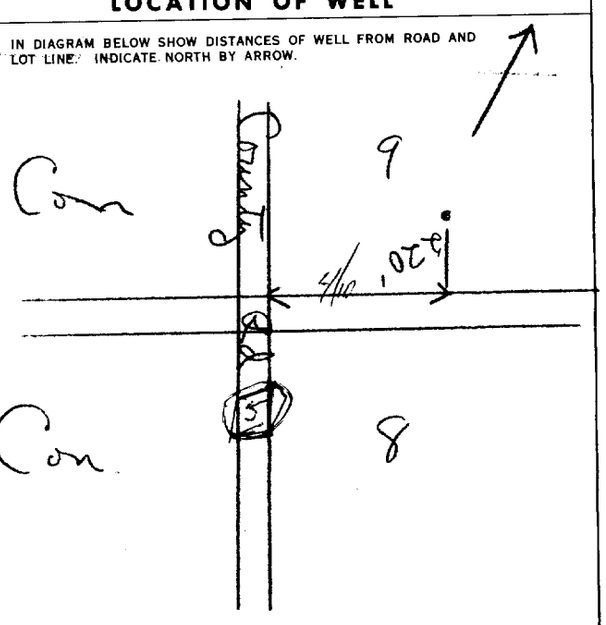
IF FLOWING, GIVE RATE: GPM. | PUMP INTAKE SET AT: FEET | WATER AT END OF TEST: ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP | RECOMMENDED PUMP SETTING: 060 FEET | RECOMMENDED PUMPING RATE: 0005 GPM.

50-53 0007 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.



DRILLERS REMARKS:

FINAL STATUS OF WELL (54): 1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED

WATER USE (55-56) 01: 1 ☒ DOMESTIC; 2 ☐ STOCK; 3 ☐ IRRIGATION; 4 ☐ INDUSTRIAL; ☐ OTHER; 5 ☐ COMMERCIAL; 6 ☐ MUNICIPAL; 7 ☐ PUBLIC SUPPLY; 8 ☐ COOLING OR AIR CONDITIONING; 9 ☐ NOT USED

METHOD OF DRILLING (57): 1 ☒ CABLE TOOL; 2 ☐ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☐ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: Capital Water Supply Ltd | LICENCE NUMBER: 1558

ADDRESS: 14 Ashford Dr Ottawa 6

NAME OF DRILLER OR BORER: E Maurice | LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: Walter Kavanagh | SUBMISSION DATE: DAY ____ MO. ____ YR. ____

OWRC COPY

OFFICE USE ONLY

DATA SOURCE 58: 1 | CONTRACTOR 59-62: 1558 | DATE RECEIVED 63-68: 280970

DATE OF INSPECTION | INSPECTOR: R/K

REMARKS:

Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

Print only in spaces provided.
Mark correct box with a checkmark, where applicable.

11 (1 2) **1532642**

Municipality (10–14) 15003 Con. (15–22) CON (23 24) 08

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
[redacted]	Goulbourn	8	25
	Address: Stittsville, Ont	Date completed (48-53): 8 day 02 month 02 year	

21 (1 2) UTM (10) Northing (12–17) (18–24) RC (25) Elevation (26–29) RC (30) Basin Code (31–47) ii iii iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
	Sand & Gravel			0	16
Grey	limestone			16	61

31 (10 14 15 21) 32 (32 43 54 65 75 80)

41 WATER RECORD

Water found at - feet	Kind of water
33 (10-13)	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas (14)
53 (15-18)	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas (19)
54 (20-23)	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas (24)
(25-28)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas (29)
(30-33)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas (34) (60)

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4 (10-11)	1 ☐ Steel (12) 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	188	0	22 (13-16)
8 3/4 (17-18)	1 ☐ Steel (19) 2 ☐ Galvanized 3 ☐ Concrete 4 ☑ Open hole 5 ☐ Plastic		0	20 (20-23)
6 (24-25)	1 ☐ Steel (26) 2 ☐ Galvanized 3 ☐ Concrete 4 ☑ Open hole 5 ☐ Plastic		20	61 (27-30)

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter (34-38) inches	Length (39-40) feet
Material and type	**Depth at top of screen (41-44) feet**	(30)

61 PLUGGING & SEALING RECORD

☑ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
2 (10-13)	22 (14-17)	cement grout
(18-21)	(22-25)	
(26-29)	(30-33) (80)	

71 PUMPING TEST

Pumping test method (10): 1 ☑ Pump 2 ☐ Bailer
Pumping rate (11-14): 26 GPM
Duration of pumping (15-16) Hours (17-18) Mins: 1 hour

Static level (19-21)	Water level end of pumping (22-24)	Water levels during (25): 1 ☐ Pumping 2 ☑ Recovery			
		15 minutes (26-28)	30 minutes (29-31)	45 minutes (32-34)	60 minutes (35-37)
4 feet	50 feet	4 feet	4 feet	4 feet	4 feet

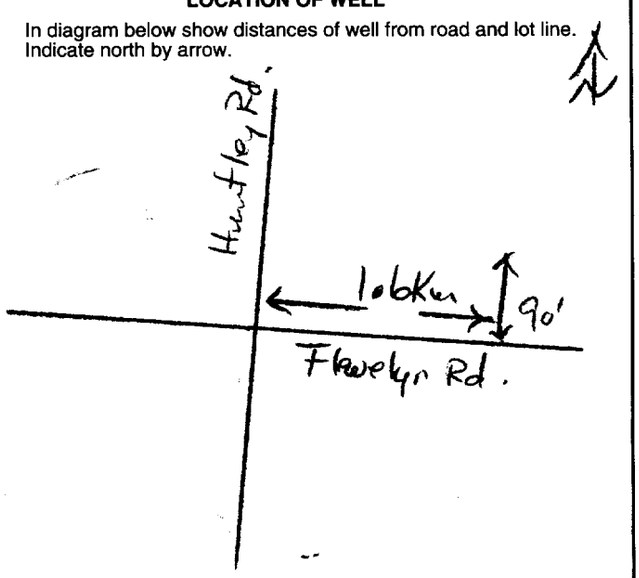
If flowing give rate (38-41)	Pump intake set at	Water at end of test (42)
GPM	feet	☐ Clear ☑ Cloudy

Recommended pump type	Recommended pump setting (43-45)	Recommended pump rate (46-49)
☐ Shallow ☑ Deep	50 feet	26 GPM

(50-53)

LOCATION OF WELL

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



237772

FINAL STATUS OF WELL (54)

1 ☑ Water supply 2 ☐ Observation well 3 ☐ Test hole 4 ☐ Recharge well 5 ☐ Abandoned, insufficient supply 6 ☐ Abandoned, poor quality 7 ☐ Abandoned (Other) 8 ☐ Dewatering 9 ☐ Unfinished 10 ☐ Replacement well

WATER USE (55-56)

1 ☑ Domestic 2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial 5 ☐ Commercial 6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioning 9 ☐ Not use 10 ☐ Other

METHOD OF CONSTRUCTION (57)

1 ☐ Cable tool 2 ☐ Rotary (conventional) 3 ☐ Rotary (reverse) 4 ☐ Rotary (air) 5 ☑ Air percussion 6 ☐ Boring 7 ☐ Diamond 8 ☐ Jetting 9 ☐ Driving 10 ☐ Digging 11 ☐ Other

Name of Well Contractor	Well Contractor's Licence No.
Air-Rock Drilling Ltd	1119
Address: RR # 2 Jasper Ont	
Name of Well Technician: Shannon Purcell	Well Technician's Licence No.: T2122
Signature of Technician/Contractor	Submission date: 15 day 02 mo 02 yr

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	1119	FEB 25 2002
Date of inspection	Inspector	
Remarks: CSS.ES2		

0506 (07/00) Front Form 9

2 - MINISTRY OF THE ENVIRONMENT COPY

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)* A119663 **A119663**

Well Record

...tion 903 Ontario Water Resources Act

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
14 Poplarwood (Lot 43)	Goulbourn	23	9

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa Carleton	Stittsville	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	429114	5010184		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Previously Drilled			0	33.52
				33.52	83.20

Annular Space

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

Method of Construction

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

Well Use

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

Construction Record - Casing

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

Construction Record - Screen

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

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
33.52	83.20	15.23

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at (m/ft): 60.95

Pumping rate (l/min / GPM): 45.5

Duration of pumping: 1 hrs + _____ min

Final water level end of pumping (m/ft): 27.32

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

Recommended pump depth (m/ft): 39.62

Recommended pump rate (l/min / GPM): 45.5

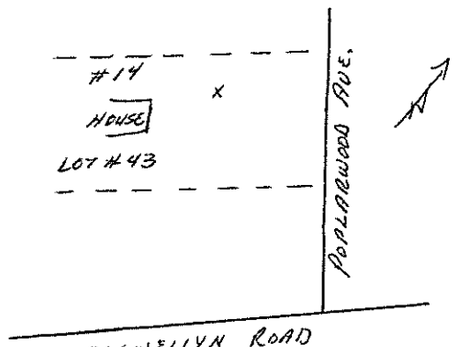
Well production (l/min / GPM):

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	9.89		
1	11.10	1	24.57
2	12.12	2	22.26
3	13.35	3	19.18
4	14.49	4	18.98
5	15.41	5	16.58
10	19.12	10	11.78
15	19.62	15	9.26
20	20.59	20	8.32
25	23.96	25	8.48
30	24.80	30	8.44
40	25.52	40	8.31
50	26.03	50	8.26
60	27.32	60	8.24

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558

Business Address (Street Number/Name)	Municipality
Box 490	Stittsville

Province	Postal Code	Business E-mail Address
Ontario	K2S 1A6	office@capitalwater.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
613 836 1766	Miller, Stephen	0097		2011 11 02

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2011 11 02	2011 11 02

Ministry Use Only

Audit No. Z139723

Received FEB 09 2012

Ontario

Ministry of the Environment and Climate Change

Measurements recorded in: ☑ Metric ☐ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A215716

Well Record

Regulation 903 Ontario Water Resources Act

5-21799 Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Davidson Co - Tenancy / c/o Tartan Lands Consultants Inc.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
237 Somerset St. W	Ottawa	ON	K2P 0J3	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
~~Shea and Fernbank~~ Flewellyn			

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

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	429941	5016554		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
BRN	top soil		soft	0	.31
BRN	sand	silt, stones	soft	.31	2.44
GRY	silt,	stones	dense	2.44	4.57
GRY	shale		layered	4.57	10.06

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed *(m³/ft³)*
0	.31	concrete/monument	
.31	5.49	bentonite	
5.49	10.06	filter sand	

Method of Construction

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

Well Use

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

Construction Record - Casing

Inside Diameter *(cm/in)*	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness *(cm/in)*	Depth (m/ft) From	Depth (m/ft) To
5.20	PVC	.340	0	7.01

Construction Record - Screen

Outside Diameter *(cm/in)*	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
6.03	PVC	10	7.01	10.06

Status of Well

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

Water Details

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

Hole Diameter

Depth (m/ft) From	To	Diameter *(cm/in)*
0	6.1	11.43
6.1	10.06	7.62

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Drilling Group	7214

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

Province	Postal Code	Business E-mail Address
ON	L3R8V2	wrecords@stratasoil.com

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
9059407919	Beath, Brian

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3616		2018/04/18

Results of Well Yield Testing

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

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

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

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

Recommended pump depth *(m/ft)*

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

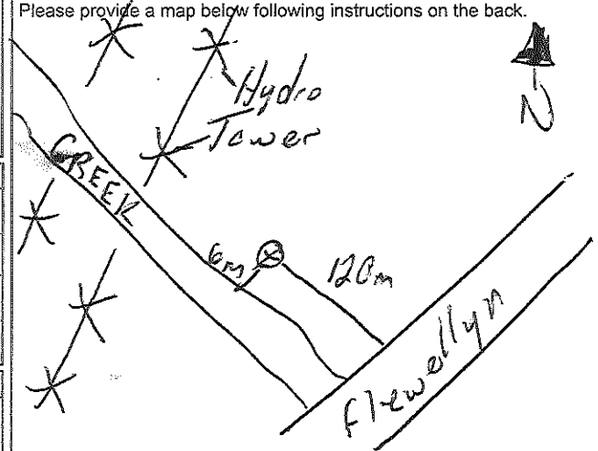
Well production *(l/min / GPM)*

Disinfected? ☐ Yes ☐ No

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

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well owner's information package delivered ☐ Yes ☐ No

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

Date Work Completed: 2018 04 03

Ministry Use Only

Audit No. Z277801

AUG 20 2018

Received

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APPENDIX 5

HOMEOWNER LETTER

April 24, 2026
File: PH5222

PATERSON GROUP

Consulting Engineers
9 Auriga Drive
Ottawa, Ontario
K2E 7T9
Tel: (613) 226-7381

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Rural Development Design
Temporary Shoring Design
Retaining Wall Design
Noise and Vibration Studies

patersongroup.ca

Attention: **Property Owner**

Subject: **NOTICE**
Baseline Water Sampling Program
Proposed Residential Development
5971, 5993, 6115 6141 & 6151 Flewellyn Road,
6070 Fernbank Road & 1170 & 1820 Shea Road

To whom it may concern,

At the request of Caivan, Paterson Group (Paterson) is conducting a Baseline Water Sampling Program (BWSP) of select neighbouring properties to the proposed residential development at 5971, 5993, 6115, 6141 and 6159 Flewellyn Road, 6070 Fernbank Road, and 1770 and 1820 Shea Road, that are not municipally serviced. The BWSP is meant to be a precautionary measure to document the existing condition of water wells in proximity to the site. Should you opt into the BWSP, a questionnaire regarding historical well and water quality information will be shared and a raw water sample from an exterior untreated tap/spigot or pressure tank will be retrieved by a Paterson representative during a scheduled appointment that is convenient to you. The BWSP is **completely voluntary/free** and generally takes approximately 15 minutes to complete the questionnaire and 15 minutes to collect the water sample. Paterson will provide each participant with a copy of their sample results. Any information obtained during this sampling program will not be released publicly by Paterson, Caivan or the City of Ottawa.

Paterson hopes that you will contact us as soon as possible to arrange an appointment or notify us that you do not wish to participate in the BWSP. Appointments will be available Monday through Friday, 8 am to 4 pm. The program will be open from **May 4 to May 29, 2026**. To schedule an appointment, sign up by scanning the QR code below, email wellsurvey@patersongroup.ca or call 613-223-7368.

Best Regards,

Paterson Group Inc.

Zavian Buchanan, E.I.T.

Hydrogeological Department

Questions?
Contact us at (613)-223-7368 or wellsurvey@patersongroup.ca
For questions related to the City's requirements for the well survey, please contact Michel Kearney at michel.kearney@ottawa.ca