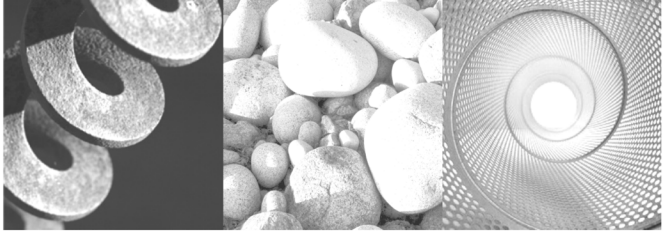

GEI Consultants

Geotechnical Investigation and Report

Proposed Residential Development

Solmar Lands, Wildfield Village, Town of Caledon, Ontario

Submitted to:
Global Properties Inc.
122 Romina Drive
Concord, Ontario L4K 4Z7

Submitted by:
GEI Consultants Canada Ltd.
647 Welham Road, Unit 14
Barrie, Ontario, L4N 0B7
800-810-3281

January 30, 2025
Project No. 2408195

Frankie Huang

Geoffrey R. White, P.Eng.
Barrie Office Branch Manager and
Senior Geotechnical Engineer

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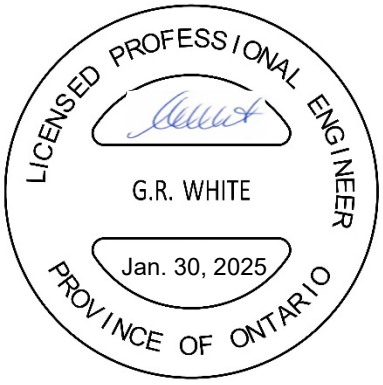
Certification

PREPARED BY:
GEI Consultants Canada Ltd.

Frankie Huang
Geotechnical E.I.T.

CHECKED BY:
GEI Consultants Canada Ltd.



Geoffrey White, P.Eng.
Barrie Office Branch Manager and
Senior Geotechnical Engineer

Russell Wiginton, P.Eng.
Senior Geotechnical Engineer

Acronyms and Abbreviations

%	Percent (per 100 units)
<	Less than …
>	Greater than …
Δ	Change in …
µm	micrometer
ANSI	Area of Natural and Scientific Interest
APEC	Areas of Potential Environmental Concern
ASTM	American Society for Testing and Materials
bgs	Below Ground Surface
BH	Borehole
BH/MW	Borehole / Monitoring Well
cm	centimeters
CVC	Credit Valley Conservation
EASR	Environmental Activity and Sector Registry
EBA	Event Based Area
ERIS	EcoLog Environmental Risk Information Services Ltd.
Elev.	Elevation
ET	Evapotranspiration/Evaporation
FOS	Factor of Safety
FSR	Functional Servicing Report
GEI	GEI Consultants Canada Ltd.
ha	hectares
hr	hours
HVA	Highly Vulnerable Aquifer
I	Infiltration
ICA	Issue Contributing Area
ID	Identification
IPZ	Intake Protection Zone
K	Hydraulic Conductivity
kg	kilogram
km	Kilometres
kPa	Kilopascal
L	Litres
LID	Low Impact Development
m	Metres
m^3	Cubic Meters
MECP	Ministry of Environment, Conservation and Parks
min	minute
mm	Millimetres
MMAH	Ministry of Municipal Affairs and Housing

MW	Monitoring Well
N values	“N” Values
OBC	Ontario Building Code
OHSA	Occupational Health and Safety Act
OPSS	Ontario Provincial Standard Specifications
OPSD	Ontario Provincial Standard Drawing
O.Reg.	Ontario Regulation
OD	Outside Diameter
P	Precipitation
PHC	Petroleum Hydrocarbon
PTTW	Permit to Take Water
PWQO	Provincial Water Quality Objective
PVC	Polyvinyl Chloride
R	Runoff
ROI/ROIs	Radius/Radii of Influence
ROW	Right of Way
s	Seconds
SLS	Serviceability Limit State
S	Storage
SCS	Site Condition Standards
SGRA	Significant Groundwater Recharge Area
SPT	Standard Penetration Test
SPmdd	Standard Proctor maximum dry density
SS	Split Spoon
SWM	Storm Water Management
ULS	Ultimate Limit State
USCS	Unified Soil Classification System
VOC	Volatile Organic Compound
WHPA	Wellhead Protection Area

It is noted that all elevations in this report are metric/geodetic and expressed in m. All measurements are also in metric and expressed in mm, m or km.

1. Introduction

GEI was retained by Global Properties Inc. (Client) to complete a subsurface investigation and geotechnical report for the proposed subdivision for the owned lands within the Wildfield Village Secondary Plan (WVSP) Area, generally bounded by Centreville Creek Road, Healey Road, and The Gore Road, in the Town of Caledon, Ontario. A site location plan is enclosed as Figure 1.

The Global Properties Inc. lands comprise five (5) parcels consisting mostly of farmland with some residential dwellings, barns, and other structures, and is approximately 170 ha in size. Four (4) of the properties are connected/adjacent to each other in the northern part of the WVSP lands. The fifth smaller property (26 ha) is slightly separated to the south of the larger group of four properties. The proposed Highway 413 corridor runs through the northern part of the WVSP area. The lands have about 15 to 20 m of relief. An aerial image of the Global Properties Inc. lands is provided in Figure 2A.

It is understood that the fifth smaller separate southern parcel (26 ha) is not part of the current submission but has been included in this report to aid with ongoing/future design and for completeness.

Draft Plan of Subdivision is progressing for the Global Properties Inc. lands. The civil engineer (David Schaeffer Engineering Ltd., DSEL) provided the preliminary drawings for grading and other features in the draft FSR report, dated January 2025.

It is understood that most of the site will consist of low-rise residential dwellings and associated roadways. Connection to municipal servicing is proposed. Three (3) SWM facilities are shown in the eastern and western sides of the site (pond adjacent to MTO lands not included). The southern part of the site (fifth smaller separate parcel) is currently within a planned urban corridor that is understood to consist of midrise residential buildings that could have two levels of underground parking/basements.

As noted above the parcels of land are part of the WVSP Area. GEI conducted some preliminary geotechnical and hydrogeological work for this larger project as part of the WVSP Phase 1 Local Subwatershed Study (LSS). The previously completed investigation on the parcels was incorporated into the fieldwork program for this specific investigation and this report. In addition, a previous geotechnical investigation and report was carried out by Others on one of the Global Properties Inc. parcels and the applicable boreholes have also been incorporated into this report.

The purpose of the supplemental geotechnical investigation was to further assess the subsurface conditions at the site, in conjunction with the previous boreholes by Others and the boreholes completed by GEI for the larger WVSP project, and based on this information, provide geotechnical engineering recommendations in support of the proposed development. This report summarizes the borehole findings, provides design geotechnical engineering recommendations regarding site earthworks and engineered fill, available bearing capacities for foundations, floor slabs, earth pressures and drainage for basements, site servicing installation, SWM pond and pavement design. Considerations for constructability such as soil excavation, compaction, on-site backfill suitability and temporary groundwater control are also provided.

It is noted that the recommendations provided in this report are to support draft plan of subdivision and must be considered preliminary in nature due to the current uncertainty of the design for the project. As the design progresses, additional geotechnical review and input may be required which might necessitate the need for additional investigation (e.g. boreholes and monitoring wells) and/or analysis.

As part of the scope of work a hydrogeological site assessment was also carried out by GEI for the project. The results of the hydrogeological site assessment are provided under separate cover.

2. Procedures and Methodology

2.1. GEI Investigations

Prior to the commencement of drilling activities, the supplemental borehole locations were staked in the field by GEI. Ground surface elevations of the boreholes and horizontal coordinates (referencing NAD 83 geodetic datum) were surveyed by GEI with a Topcon FC - 5000 GPS survey unit. Underground utilities including natural gas, electrical, communications, water, etc. were marked out by public and private utility locating companies prior to drilling. The larger WVSP Phase 1 LSS boreholes were carried out under the same fashion.

The fieldwork for the previous drilling program was carried out between May 1 and 4, 2023. Boreholes 1 to 26 were drilled on Global Properties Inc lands to 3.0 to 8.1 m depth. In addition, as part of the larger study, Boreholes 101 and 102 were drilled to 6.6 m depth on July 16, 2024. The supplemental scope was drilled from December 5 to 12, 2024 and included Boreholes 201 to 218, advanced to 5.0 to 12.6 m depth. Overall, the boreholes were drilled to Elev. 217.3 to 244.8. Borehole logs are provided in Appendix A and the borehole locations are shown on Figure 2A (aerial image) and Figure 2B (concept plan).

The boreholes were advanced on site by a drilling subcontractor retained by GEI. The boreholes were advanced using a track-mounted drill, solid and hollow stem augers, and standard soil sampling equipment. Sampling was conducted using a 51 mm outer diameter SS sampler. SPT N values were recorded for the sampled intervals as the number of blows required to drive an SS sampler 305 mm into the soil using a 63.5 kg drop hammer falling 750 mm, in accordance with ASTM D1586. In each borehole, soil sampling was conducted at 0.75 m intervals for the upper 3.0 m, and at 1.5 m intervals thereafter.

Monitoring wells were installed in almost all GEI boreholes, seventeen (17) from the larger WVSP study, with eleven (11) additional shallow nested wells at some locations (designated -S boreholes eg. 1-S, 3-S etc.), and eleven (11) in the supplemental boreholes, with one shallow nested well at one location. The wells consisted of 50 mm diameter PVC pipe with a 1.5 m long screens and protective casing. Monitoring well construction is shown on the borehole logs in Appendix A. Boreholes without wells were backfilled in accordance with O.Reg. 903.

The GEI field staff examined and classified characteristics of the soils encountered in the boreholes, including the presence of fill materials, groundwater observations during and upon completion of the drilling, recorded observations of borehole construction, and processed the recovered samples. All recovered soil samples were logged in the field, carefully packaged, and transported to GEI's laboratory for more detailed examination and classification.

In GEI's laboratory, the samples were classified as to their visual and textural characteristics. All samples were submitted for moisture content determination in accordance with ASTM D2216. A total of seventeen (17) soil samples were tested for particle size distribution (as per Ontario LS standards in reference to ASTM D6913 and D7928) and two (2) samples were tested for plasticity characteristics per ASTM D4318 (results not yet available at the time of this report). Lab results from the supplemental

boreholes are provided in Figures B1 to B3 in Appendix B. The lab results from the previous investigation were also included in Appendix B (Figures 1A and 1B).

2.2. Previous Investigations

In addition to the investigations conducted by GEI, a geotechnical report written by Others for one of the parcels was provided to GEI for review as part of the larger study. The previous investigation consisted of nine (9) boreholes drilled on August 1, 2023. The locations of these boreholes are shown in Figures 2A and 2B. Four (4) monitoring wells were also installed to measure stabilized groundwater levels. Borehole logs from the previous work are included in Appendix A. The borehole logs by Others were included within a geotechnical report that was signed and stamped by a Licensed Professional Engineer, therefore GEI is including this borehole information with the present report.

3. Subsurface Conditions

3.1. General Overview

The detailed soil profiles encountered in the boreholes are indicated in the attached borehole logs in Appendix A. The geotechnical laboratory results are included in Appendix B. The borehole locations are shown on Figure 2A (aerial image) and Figure 2B (concept plan).

It should be noted that the conditions indicated on the borehole logs are for specific locations only and can vary between and beyond the locations. It should be noted that the soil boundaries indicated on the borehole logs are inferred from non-continuous sampling and observations during drilling. The boundaries are intended to reflect approximate transition zones and should not be interpreted as exact planes of geological change.

In addition, the descriptions provided in the borehole logs are inferred from a variety of factors, including visual observations of the soil samples retrieved, laboratory testing, measurements prior to and after drilling, and the drilling process itself (speed of drilling, shaking/grinding of the augers, etc.). The passage of time also may result in changes in conditions to exist at locations where sampling was conducted.

The soil units from the GEI borehole logs are described below.

The conditions in the logs by Others are similar to the GEI boreholes and are not described below, but the logs are appended for completeness. It should be noted that for the conditions indicated on the borehole logs completed by Others, GEI accepts no responsibility for the accuracy of the logs.

3.2. Stratigraphy

3.2.1. Topsoil and Organics

A surficial topsoil layer was encountered at the ground surface of all the borehole locations, ranging in thickness from 75 to 760 mm. The topsoil found in Borehole 12-D and 12-S was found to be mixed with peat. Topsoil thickness may vary between boreholes and in other areas of the site, especially considering the agricultural land use.

3.2.2. Weathered/Disturbed Soil

Underneath the topsoil, the soil consisted of weathered/disturbed clayey silt that extended to 0.3 to 3.0 m depth (Elev. 228.4 to 247.3), typically about 0.8 to 1.5 m depth. Some sand and trace gravel were noted, along with trace to some organics in the SS samples. This soil appears to be disturbed/weathered from the farming activities over the history of the site and is no longer in it's native state. The soil was moist to wet with moisture contents of 3 to 27%. The N values in this layer ranged between 4 and 68 indicating a firm to hard consistency, typically being 4 to 8 (firm) near the surface and becoming stiff to hard with depth.

3.2.3. Upper Silt

Underneath the weathered/disturbed clayey silt in Boreholes 12D, 208 and 209 an upper silt layer was present to 1.5 to 2.3 m depth (Elev. 230.4 to 245.2). Trace clay was present in the samples and organics were noted in Borehole 12-D. The soil was moist with moisture contents of 14 to 47%. N values in the soil were 6 to 56 indicating firm/compact to very dense soil.

3.2.4. Clay and Silt Glacial Till

Below the topsoil and weathered/disturbed layer, locally the upper silt, a major glacial till deposit was found in all boreholes. For the most part the glacial till extended to the 3.0 to 12.6 m depth of the boreholes (Elev. 217.3 to 244.8), being penetrated/interrupted locally in Boreholes 20, 24, 26, 207-D, 209, 215, 216 and 218 by deeper basal layers described below. The glacial till matrix typically consisted of clay and silt, with trace to some sand and trace gravel. The till matrix varied to silt or silty sand at some locations. Cobbles and boulders should be expected due to augers grinding during borehole augering. The glacial till was moist with moisture contents ranging between 7 and 25%, and the colour was typically brown, turning grey with depth. The N values in this deposit ranged between 6 and more than 100 indicating a firm to hard consistency, typically stiff to hard (compact to very dense where cohesionless). Thirteen (13) grain size analysis tests for this cohesive deposit were submitted to the lab for analysis, and two (2) samples were submitted for the cohesionless glacial till. The results are in Appendix B, Figures B1, 1A and 1B.

3.2.5. Lower Silt

Beneath the glacial till in Boreholes 26-D, 207-D, 209, 215 and 218 and the clayey silty sand in Borehole 216, a lower silt unit was present to the 6.6 to 12.6 m depth of the boreholes (Elev. 217.3 to 224.2), locally penetrated at 10.7 m depth in Borehole 218 (Elev. 219.6). Trace to some clay and trace sand were present in the samples. One (1) sample of the material was submitted for grain size analysis and the results are provided in Figure B2 in Appendix B. The soil was moist with moisture contents of 5 to 21%. N values in the soil were 67 to more than 100 indicating very dense conditions.

3.2.6. Clayey Silty Sand

A discontinuous layer of clayey silty sand was encountered beneath the clay and silt glacial till in Borehole 216 and extended from 9.1 m to 12.2 m depth (Elev. 226.5 to 223.4). Trace gravel was observed in the samples. One (1) sample of the material was submitted for grain size analysis and the results are provided in Figure B3 in Appendix B. The soil was very moist with moisture contents ranging between 10 and 11%. The material consistency was hard with N values greater than 100.

3.2.7. Sand

A local sand layer was at the base of Borehole 24 from 6.4 to 6.6 m depth (Elev. 232.9 to 232.7). The soil layer contained trace gravel. The material was wet with a moisture content of 14%. The N value was 19 and the soil was compact.

3.2.8. *Inferred Bedrock*

Inferred bedrock was encountered below the glacial till in Borehole 24 at a depth of 7.6 m below grade (Elev. 228.3). The bedrock extended beyond the depth of the investigation and was described as highly weathered grey shale. The N values were all greater than 50 blows. Based on the recovered split spoon sample, it is inferred that the bedrock is of the Georgian Bay Formation.

3.3. Groundwater

Unstabilized groundwater level measurements and cave measurements were taken upon the completion of drilling of each borehole as shown on the borehole logs in Appendix A. These measurements were taken to provide a rough estimate of the possible excavation and temporary groundwater control constructability considerations that may arise. Most boreholes were outfitted with a monitoring well with 50 mm diameter pipe and 1.5 m long screen. Monitoring well configuration and groundwater observations are noted on the borehole logs in Appendix A and summarized in the table below.

Table 3-1. Groundwater Levels

Borehole	Depth of Cave / Elev.	Unstabilized Groundwater Level Depth / Elev.	Groundwater Table, Dec 16, 2024 Depth / Elev.
1-D	Open	4.5/ 237.8	0.5 / 241.8
1-S	Open	Dry	0.6 / 241.7
2	Open	Dry	N/A
3-D	Open	Dry	0.2 / 247.6
3-S	Open	Dry	0.2 / 247.6
4-D	Open	Dry	0.7 / 245.6
4-S	Open	Dry	0.7 / 245.6
5	Open	Dry	3.3 / 238.4
6	Open	Dry	N/A
7	Open	Dry	2.4 / 241.2
8	Open	Dry	N/A
9	Open	Dry	N/A
10	Open	Dry	N/A
11-D	Open	Dry	3.4 / 237.3
11-S	Open	Dry	0.4 / 240.3
12-D	Open	Dry	0.5 / 246.3
12-S	Open	Dry	0.5 / 246.3
13-D	Open	Dry	0.6 / 239.5
13-S	Open	Dry	0.6 / 239.5
14-D	Open	Dry	0.5 / 234.2
14-S	Open	Dry	1.5 / 233.3
15	Open	Dry	N/A
16	Open	Dry	0.9 / 241.8
17-D	Open	Dry	0.1 / 244.6
17-S	Open	Dry	0.6 / 244.1

Borehole	Depth of Cave / Elev.	Unstabilized Groundwater Level Depth / Elev.	Groundwater Table, Dec 16, 2024 Depth / Elev.
18-D	Open	Dry	0.8 / 239.6
18-S	Open	Dry	1.4 / 239.1
19	Open	Dry	0.5 / 238.8
20	5.7 / 233.6	5.4 / 233.9	N/A
21	Open	Dry	N/A
22-D	Open	Dry	0.5 / 233.1
22-S	Open	Dry	1.7 / 231.9
23	Open	Dry	2.0 / 236.7
24	Open	2.4 / 233.5	1.9 / 234.0
25	5.7 / 226.5	Dry	N/A
26-D	Open	Dry	1.3 / 226.8
26-S	Open	Dry	1.9 / 226.2
101	Open	Dry	1.7 / 238.5
102	Open	Dry	4.8 / 234.6
201	Open	Dry	5.6 / 234.1
202	Open	Dry	3.6 / 235.7
203	Open	Dry	5.9 / 240.4
204	Open	Dry	Dry
205	Open	Dry	Dry
206	Open	Dry	6.0 / 234.6
207D	Open	Dry	8.6 / 224.7
207S	Open	Dry	Dry
208	Open	Dry	8.3 / 224.4
209	Open	Dry	5.4 / 228.4
210	Open	Dry	N/A
211	Open	Dry	Dry
212	Open	Dry	5.7 / 234.1
213	Open	Dry	N/A
214	Open	Dry	Dry
215	Open	Dry	6.4 / 223.6
216	Open	Dry	3.0 / 232.6
217	Open	Dry	N/A
218	Open	Dry	3.3 / 227.0

Groundwater was not encountered during or upon completion of drilling in the boreholes for the most part. The stabilized groundwater levels ranged from 0.1 to 8.6 m (Elev. 224.76 to 247.6) on December 16, 2024. Of note, the water levels in the more recent wells are typically deeper which confirms the very slow seepage/high impermeability of the typically clayey soil at the site.

Groundwater levels are expected to show seasonal fluctuations and vary in response to prevailing climate conditions. Additional groundwater consideration are provided in GEI's hydrogeological report under separate cover.

4. Engineering Design Parameters & Analysis

The Global Properties Inc. lands comprise five (5) parcels consisting mostly of farmland with some residential dwellings, barns, and other structures, and is approximately 170 ha in size. Four (4) of the properties are connected/adjacent to each other in the northern part of the WVSP lands. The fifth smaller property (26 ha) is slightly separated to the south of the larger group of four properties. The proposed Highway 413 corridor runs through the northern part of the WVSP area. The lands have about 15 to 20 m of relief. An aerial image of the Global Properties Inc. lands is provided in Figure 2A.

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Draft Plan of Subdivision is progressing for the Global Properties Inc. lands. The civil engineer (David Schaeffer Engineering Ltd., DSEL) provided the preliminary drawings for grading and other features in the draft FSR report, dated January 2025.

It is understood that most of the site will consist of low-rise residential dwellings and associated roadways. Connection to municipal servicing is proposed. Three (3) SWM facilities are shown in the eastern and western sides of the site (pond adjacent to MTO lands not included). The southern part of the site (fifth smaller separate parcel) is currently within a planned urban corridor that is understood to consist of midrise residential buildings that could have two levels of underground parking/basements.

As noted above the parcels of land are part of the WVSP Area. GEI conducted some preliminary geotechnical and hydrogeological work for this larger project as part of the WVSP Phase 1 Local Subwatershed Study (LSS). The previously completed investigation on the parcels was incorporated into the fieldwork program for this specific investigation and this report. In addition, a previous geotechnical investigation and report was carried out by Others on one of the Global Properties Inc. parcels and the applicable boreholes have also been incorporated into this report.

It is noted that the recommendations provided in this report are to support draft plan of subdivision and must be considered preliminary in nature due to the current uncertainty of the design for the project. As the design progresses, additional geotechnical review and input may be required which might necessitate the need for additional investigation (e.g. boreholes and monitoring wells) and/or analysis.

4.1. Site Grading

Preliminary grading plans where in the FSR and show cut and fill of about 2 m, typically to 3.0 m. It is understood that the grading concept is to achieve a material balance as best as possible. Engineered fill will be required in fill areas that are required to support structures to mitigate settlement issues.

The topsoil, earth fill, and localized areas of weak or weathered/disturbed native soil directly below the fill/topsoil are unsuitable to support foundations. In this regard, in building areas, it is recommended to strip the topsoil and stockpile separately then sub-excavate the existing weathered/disturbed native soil (typically about 0.8 to 1.5 m depth, locally as deep as 2.3 and 3.0 m). The exposed competent native soil subgrade must be compacted and inspected prior to engineered fill placement up to the desired grade.

Footings would be supported by native soil and/or the engineered fill and the floor slabs would be supported by the engineered fill. Section 4.1.1 below contains detailed information on engineered fill construction.

4.1.1. Engineered Fill

GEI defines "engineered fill" as material that will support foundations, and which is placed and compacted in a specified and controlled manner under full-time supervision of geotechnical engineering staff.

Engineered fill will be placed to raise grades at the site or backfill the existing site. The full depth of topsoil or weathered/disturbed soil must be fully removed down to competent native soil. As noted above, the weathered/disturbed soil typically extended to 0.8 to 1.5 m depth (locally down as deep as 2.3 and 3.0 m) and must be removed. It is noted that areas of thicker earth fill or greater depth of sub-excavation could be encountered during construction, since the site is currently a farm field, and uncontrolled historic filling may have occurred to level the site. The exposed subgrade soil must be proof-rolled and inspected by the geotechnical engineer to ensure all unsuitable material (e.g., organics, weak or soft soil, weathered / disturbed soil, deleterious materials and existing fill) is removed from the engineered fill footprint. Any unsuitable areas must be further sub-excavated to an approved subgrade.

Once the subgrade is approved, engineered fill can be placed. Engineered fill must be placed under the full-time supervision of a geotechnical engineer as required in the Ontario Building Code. The engineered fill may consist of excavated on-site inorganic soils provided they have been moisture conditioned to a moisture content within 2% of optimum moisture content and do not contain organics, topsoil or deleterious material. It is noted that the soil is predominately clayey in nature and drying out may take some time and the schedule will need to be adjusted to accommodate this. It is recommended that imported soil consist of OPSS.MUNI 1010 Granular B or Select Subgrade Material (SSM) and first be utilized in building areas leaving the site soil for landscaped, SWM or road areas. Engineered fill must be placed in loose lifts of 200 mm or less and compacted to a targeted 100% SPmdd in building areas (minimum 98% SPmdd) and 95% SPmdd in servicing or pavement areas. The upper 1 m of engineered fill placed below pavement subgrades should be compacted to 98% SPmdd.

In wet subgrade areas, the first lift of engineered fill shall consist of 400 mm of Granular B Type II (OPSS.MUNI 1010). This will help to bridge the weaker subgrade and improve the ability to achieve the compaction specifications for subsequent engineered fill lifts.

The engineered fill must extend a minimum of 1 m out from all sides of the foundations and extend at a 1 horizontal to 1 vertical slope (1H:1V) down to the exposed subgrade. A typical detail for engineered fill pad dimensioning is included in Appendix C.

4.2. Foundation Design

4.2.1. Foundations on Native Soil

As noted earlier, grading plans were not complete at the time of this report, however it is understood that the grading concept is to achieve a material balance as best as possible and in order to achieve this, in general, the site will have cut/fill to about 2 m, locally as much as 3 m.

Low rise foundations at this site may be constructed as conventional shallow spread and strip footing foundations that bear on the undisturbed native soil, below the topsoil and disturbed/weathered zone. Footings founded on the native undisturbed soil can be designed for a geotechnical bearing resistance at SLS of 150 kPa and a factored ultimate geotechnical bearing resistance at ULS of 225 kPa. The geotechnical resistance at SLS is for 25 mm or less of total settlement.

The Urban Corridor (fourth smaller property to the south) may have mid-rise buildings with as many as two underground levels with resulting foundations anticipated about 6 m or more below existing grade. Based on Boreholes 24 to 26 and 215 to 218, for preliminary purposes, when foundations are 6 m or more below the existing grade, a geotechnical bearing resistance at SLS of 300 kPa and a factored ultimate geotechnical bearing resistance at ULS of 450 kPa can be adopted for design. Higher bearing resistances are generally available at depth and can be confirmed when grades/footing levels are established.

Final footing elevations must be reviewed by geotechnical personnel from GEI to confirm bearing capacity values. The final site configuration must also be reviewed by GEI to assess the potential for footings to be founded on different soil subgrades, and to assess the potential for differential settlement. It is recommended that all foundations be set on the same soil subgrade wherever possible, to reduce the potential for differential settlement.

4.2.2. Foundations on Engineered Fill

If the foundations are supported on an engineered fill pad, constructed as discussed in Section 4.1.1, the spread or strip footings can be designed using the same geotechnical bearing resistance at SLS and factored ultimate geotechnical resistance at ULS as the underlying native soil to a maximum of 150 kPa at SLS and 225 kPa at ULS.

It is recommended that nominal reinforcing steel for stiffening of the foundation walls made on engineered fill be provided to help mitigate minor cracking due to minor differential settlement. The reinforcing steel in the poured concrete foundation walls may consist of 2-15M bars continuous at the top of the foundation wall, and 2-15M bars continuous at the bottom of the foundation walls. Typically, these bars are placed 100 to 200 mm from the top or bottom of the foundation wall, respectively. The reinforcing steel should extend a minimum of 3 m past any transition zones between engineered fill and native soil. A typical reinforcing steel detail for foundation walls placed on engineered fill is provided within Appendix C. The recommended nominal reinforcing steel should not be considered a structural design. The need for different or additional reinforcement should be reviewed by a structural engineer to ensure the original structural design intent of the structure is maintained.

4.2.3. General Foundation Considerations

All footings exposed to ambient air temperature throughout the year must be provided with a minimum of 1.2 m of earth cover or equivalent insulation for frost protection (25 mm of polystyrene insulation is equivalent to 300 mm of soil cover). The minimum strip and spread footing widths to be used shall be dictated as per the Ontario Building Code, regardless of loading considerations. Footings stepped from one level to another must be at a slope not exceeding 7V:10H.

The foundation design parameters provided above are predicated on the assumption that the foundation subgrade surface is undisturbed, and that all deleterious, topsoil, softened, disturbed, organic, and caved material is removed. The foundation excavation must be done in such a way that groundwater is controlled to prevent any disturbance to the foundation base. Temporary groundwater control during construction is discussed in Section 5.2.

The foundation subgrade must be reviewed by the geotechnical engineer prior to concrete placement to ensure the foundation design parameters provided are applicable, and to provide remedial recommendations if necessary. If the foundation excavation will be open for a prolonged period of time, the foundation subgrade should be protected with a skim coat of lean mix concrete (applied immediately after inspection by the geotechnical engineer), to ensure that no deterioration will occur due to weather effects.

4.3. Seismic Site Classification

The 2024 Ontario Building Code came into effect on January 1, 2025, and notable amendments to the 2012 Building Code pertaining to the seismic site classification are listed below:

- As per section 4.1.8.4, Site Properties, OBC 2024, the site designation shall be determined from Table 4.1.8.4.-A using the average shear wave velocity, Vs30, calculated from in situ measurements of shear wave velocity.
- Where Vs30 calculated from in situ measurements is not available, the site designation shall be Xs, where S is the Site Class determined using the energy-corrected average standard penetration resistance, N60, or the average undrained shear strength, Su, in accordance with Table 4.1.8.4,-B, N60 and Su being calculated based on rational analysis.

There have been no shear wave velocity measurements carried out at the site and therefore, SPT ‘N’ values are used to determine the site classification. Table 4.1.8.4.-B Site Classes, S, for Site Designation X_S in OBC 2024 indicates that site class “S” should be determined from the average ground profile characteristics in the top 30 m. The native soils encountered below the site that will support foundations generally consist of very stiff to hard cohesive soils, or compact to very dense cohesionless soils, with average SPT “N” Values of greater than 15 but less than 50. Based on the known soil conditions, the Site Designation for the Site is “X_D” corresponding to Site Class D as per Table 4.1.8.4.-B. Shear wave velocity measurements can be considered to potentially improve upon the Site Designation if requested.

4.4. Earth Pressure Design Parameters

Where basements are incorporated, the underground basement walls must be designed to resist unbalanced lateral earth pressures imparted from the weight of adjacent soils. Lateral earth pressures are calculated using the following equation:

$$\boldsymbol{P = K[\gamma h + q]}$$

where, **P** = the horizontal pressure at depth, **h** (m)
K = the earth pressure coefficient (dimensionless)
h = depth below ground surface (m)
$\boldsymbol{\gamma}$ = the bulk unit weight of soil, (kN/m^3)
q = surcharge loading (kPa)

The above equation assumes that a drainage system is present which prevents the buildup of any hydrostatic pressure behind the structure subjected to the unbalanced lateral earth pressures. If this is not the case, the equation must be revised to also incorporate the submerged unit weight of the soil multiplied by the earth pressure coefficient, in addition to the water pressure itself.

The values for use in the design of structures subjected to unbalanced lateral earth pressures at this site are as follows and assumes that earthworks and grading have taken place to remove any weak poor soil in the building locations.

Table 4-1. Earth Pressure Values

Soil Type	γ - Bulk Unit Weight (kN/m^3)	ϕ - Friction Angle (degrees)	Earth Pressure Coefficient (dimensionless)		
			K_a - Active	K_o – At-Rest	K_p - Passive
Granular 'B' (OPSS.MUNI 1010)	21.0	32	0.31	0.47	3.25
Engineered Fill / Very stiff to Hard Native Soil	20.0	30	0.33	0.50	3.0

The calculation of the earth pressure coefficients is based on Rankine theory, which provides a conservative estimate as no friction between the soil and the structure is accounted for. The earth pressure coefficients provided above are applicable for flat ground surfaces beyond the structure and must be revised for sloping ground surfaces.

The earth pressure coefficients referenced within the above table are a function of the friction angle of the adjacent soil, and both the degree and direction of movement of the structure subjected to unbalanced lateral earth pressures. For structures that are restrained at the top (such as basement walls), the at-rest earth pressure coefficient will apply. For structures that allow for 0.1 to 1% of movement away from the soil (such as unrestrained retaining walls), the full active earth pressure coefficient will apply. For structures that allow for 1 to 10% of movement into the soil, the full passive earth pressure coefficient will apply. The percentage movement is based on the height of the structure.

Other types of structures such as shoring walls with multiple rows of tiebacks and soil nail walls are subject to different loading conditions and must be analyzed separately.

4.5. Floor Slabs

The native soils or engineered fill are suitable to support lightly loaded residential slabs or building basement. Topsoil, vegetation, organics, soft or weak soil, weathered/disturbed and other soil containing organics, excessive moisture, or deleterious materials are not suitable to support floor slabs.

The exposed native subgrade/top of the engineered fill must be proof-rolled and inspected by the geotechnical engineer. If any soft or weak subgrade areas are identified, or if there are areas containing excessive amounts of deleterious/organic material, they must be locally sub-excavated and backfilled with approved site earth fill or imported granular material and compacted to a minimum of 98% SPmdd within 2% optimum moisture content.

It is necessary that the floor slabs must be provided with a capillary moisture barrier and drainage layer. This is made by placing the concrete slab on a minimum 200 mm layer of 19 mm clear stone (OPSS.MUNI 1004) compacted by vibration to a dense state. The upper 50 mm of clear stone can be replaced with 19 mm crusher run limestone for a working surface. The clear stone and a cohesionless subgrade must be separated by a geotextile such as Terrafix 270R (or approved equivalent) to prevent the migration of fines into the clear stone layer which could result in loss of support for the slab. Alternatively, Granular A (OPSS.MUNI 1010) compacted to 100% SPmdd can be utilized without filter cloth.

4.6. Basement Drainage

Where basements are constructed, all basement foundation walls must be provided with damp-proofing provisions in conformance to the Ontario Building Code. Backfill along the foundation wall must consist of Granular ‘B’ Type I (OPSS.MUNI 1010) for a minimum lateral distance of 600 mm out from the foundation wall. Alternatively, if a filtered cellular drainage media is provided adjacent to the foundation wall, the backfill may consist of common earth fill.

The Town of Caledon engineering standards do not specify a minimum clearance between basement slabs and the seasonal high groundwater table. Although the Town does not have a minimum clearance requirement for footings above the high groundwater level, GEI still recommends maintaining a 0.5 m separation from the seasonal high groundwater table and the underside of basement slabs, as best as possible, to reduce long-term risk of basements flooding, based on our experience with other municipalities and general industry standards.

If basement levels are set into the prevailing groundwater table an underfloor drainage can be provided, yet it is possible that house perimeter drainage issues may occur in the future (e.g., sump pump failure, blockage of drainage pipes, etc.), which would lead to potential foundation cracking and basement flooding. Basements can potentially be set below the groundwater table provided these risks are fully acknowledged by the builder / owner.

For buildings with basements, a perimeter drainage system must be installed that will remove any water that infiltrates into the building backfill, to ensure that any water does not infiltrate into the basement.

The perimeter drains must consist of minimum 100 mm diameter perforated pipes wrapped in filter socks, sufficiently covered on all sides by 19 mm clear stone. Perimeter drains should be directed to the sump underneath the basement floor in solid pipes so as not to surcharge the underfloor drainage layer with water. It is recommended that basements be established a minimum of 0.5 m above the seasonal high groundwater level such that underfloor drainage is not required. Where the underside of basement slabs are less than 0.5 m above the seasonal groundwater level (or within the groundwater), perforated subfloor drainage pipe is also recommended at 6 m spacing for each building along the short axis of the building at this time. Further design details can be provided when grading has been established. All sump pumps should be on emergency power for redundancy in case of a power outage. A typical basement drainage detail is included in Appendix C.

For new structures that will be slab-on-grade with no basement levels, perimeter and under-slab drainage at the foundation level is not required, provided that the underside of the concrete slab is at least 200 mm above the prevailing grade of the site and the surrounding surfaces slope away from the building at a gradient of at least 2% to promote surface water run-off and to reduce groundwater infiltration adjacent to foundations. To minimize infiltration of surface water, the upper 150 mm of backfill should comprise relatively impervious/cohesive compacted soil material.

4.7. Site Servicing

The proposed development will be serviced with municipal utilities. Inverts are assumed to extend as deep as 5 to 6 m below existing grade for purposes of this report.

4.7.1. Bedding

The type of material and depth of granular bedding below the pipe will, to some extent, depend on the method of construction used by the contractor. Pipe bedding for flexible pipes should follow the requirements in OPSD 802.010 or applicable municipal standards. Pipe bedding for rigid pipes should follow the requirements in OPSD 802.030 to 802.032 or applicable municipal standards.

A subgrade consisting of the native cohesionless soils or engineered fill at the site will provide adequate support for pipes with the bedding requirements as laid out in the above referenced OPS drawings. Where disturbance of the trench base has occurred from groundwater seepage, construction traffic, etc., or if in-situ fill is present at the invert level, the material should be sub-excavated and replaced with suitably compacted granular bedding. If weak zones are encountered, additional bedding materials and differing construction practices may be required and should be determined during construction. Any zones of peat or organic soil should be sub-excavated and replaced with approved earth fill or imported granular material compacted to 95% SPmdd. Details on temporary groundwater control are provided in Section 5.2.

Regardless of whether flexible or rigid pipes are implemented, granular bedding and cover material should consist of a well graded, free draining material, such as Granular “A” (OPSS.MUNI 1010). All granular bedding must be compacted to a minimum of 95% SPmdd.

4.7.2. Backfill

Excavated native cohesionless soils may be re-used as backfill in trenches, provided the soil is moisture conditioned so that the moisture content is within 2% of optimum. Additional soil compaction details are provided in Section 5.3. The backfill should be compacted to a minimum of 95% SPmdd, and where the trenches are below future roadways, the backfill must achieve 98% SPmdd within 1 m of pavement subgrades (Town of Caledon requirements). In confined areas the layer thickness will have to be reduced to utilize smaller compaction equipment efficiently or by using granular material instead of locally sourced fill. Any backfill that is frozen, contains a high percentage of organic material (topsoil, peat, etc.) or moisture, or has otherwise unsuitable deleterious inclusion should not be used as backfill. The maximum cobble or boulder size should not exceed half of the loose lift thickness (i.e., all particles with a diameter greater than 100 mm should be removed). Where cohesive soils are utilized as backfill a sheepsfoot compactor will be required. Moisture content conditioning may also be required and scheduling adjusted to suit. Some cohesive may not dry and can be utilized in landscaped areas.

Where trenches are within the traveled portions of a roadway, backfill within the frost penetration depth of 1.2 m should consist of native, non-organic, excavated material consistent with the soils surrounding the trench. If this technique is not undertaken, then frequently problems arise with yearly differential frost heave movements between the trench backfill and the adjacent native soil. This would occur, for example, if imported granular material is used to backfill trenches which is less susceptible to frost effects compared to the native soils on site. Alternatively, if different soil is used as the backfill due to issues with achieving compaction, a frost taper of 10H:1V can be implemented to help mitigate the potential for differential settlement and frost heave.

4.8. Pavement Design

The residential development will feature a network of roads comprising main access roads and lower volume residential roads.

4.8.1. Subgrade Preparation

Considering the grading proposed, comprising cut and fill of the predominately clayey soil at the site, it is assumed that the pavement subgrade will likely consist of the clay and silt glacial till. Based on this the pavement subgrade will comprise material with typically moderate to high frost susceptibility.

The pavement subgrade must be inspected and approved by the geotechnical engineer at the time of construction. The exposed pavement subgrade should be compacted to a minimum of 95% SPmdd. If any soft or weak subgrade areas are identified, or if there are areas containing excessive amounts of moisture or deleterious/organic material, they must be locally sub-excavated and backfilled with approved clean earth fill or imported granular material and compacted to a minimum of 95% SPmdd.

The long-term performance of the pavement structure is highly dependent upon the subgrade support conditions. Stringent construction control procedures must be maintained to ensure that uniform subgrade moisture and density conditions are achieved as much as possible when fill is placed, and the subgrade is not disturbed or weakened after it is exposed.

4.8.2. Drainage

Control of surface water is an important factor in achieving a good pavement life. The need for adequate subgrade drainage cannot be over-emphasized. The subgrade must be free of depressions and sloped (at a minimum grade of 2 percent) to provide effective drainage toward subgrade drains. Grading adjacent to pavement areas should be designed to ensure that water is not allowed to pond adjacent to the outside edges of the pavement.

Continuous pavement subdrains should be provided along the edges of the pavement and drained into respective catch basins to facilitate drainage of the subgrade and the granular materials. The subdrain invert should be maintained at least 0.3 m below subgrade level. To minimize the problems of differential movement between the pavement and catch basins/manhole due to frost action, the backfill around the structures should consist of free-draining OPSS Granular B. Typical pavement drainage details are provided in Appendix C.

4.8.3. Pavement Structure

The traffic volumes for the roads were not known at this time and can be established at later date to confirm the designs.

There are two (2) different types of pavements that are likely required and need to be designed for:

- Light duty: Includes driveways and parking lots and lower volume residential roads with lighter traffic that will not see frequent heavy traffic loads such as buses, delivery, or fire trucks, etc., and will mostly service small vehicles such as cars or pickup trucks.
- Heavy Duty: Includes areas and main roads with higher traffic volumes and are designated for busses and fire truck routes, or will see frequent heavy traffic loads from trucks

The industry pavement design methods are based on a design life of 15 to 20 years for typical weather conditions depending on actual traffic volumes. The following pavement thickness design is provided on the above noted considerations and will need confirmation once the traffic volumes are established, as noted above.

Table 4-2. Pavement Design

Pavement Layer	Compaction Requirement	Min. Component Thickness (mm)	
		Light Duty	Heavy Duty
Surface Course Asphaltic Concrete: HL3 (OPSS 1150) with PG 58-28 Asphalt Cement (OPSS.MUNI 1101)	92% MRD (OPSS.MUNI 310)	40 mm	40 mm
Binder Course Asphaltic Concrete: HL8 (OPSS 1150) or HDBC with PG 58-28 Asphalt Cement (OPSS.MUNI 1101)		60 mm	90 mm
Base Course: Granular A (OPSS.MUNI 1010)	100% SPmdd (OPSS. MUNI 501)	150 mm	150 mm
Subbase Course: Granular B Type I (OPSS.MUNI 1010)		350 mm	500 mm

The pavement structures should be reviewed by GEI once detailed design information is available for the site.

The granular materials should be placed in lifts 200 mm thick or less and be compacted to a minimum of 100% SPmdd for both granular base and subbase. The granular and asphalt pavement materials and their placement should conform to OPSS.MUNI 310, 501, 1010 and 1150.

If the pavement construction occurs in wet, winter, or inclement weather, it may be necessary to provide additional subgrade support for heavy construction traffic by increasing the thickness of the granular subbase, base or both subject to review by GEI. Further, traffic areas for construction equipment may experience unstable subgrade conditions. These areas may be stabilized utilizing additional thickness of granular materials or geogrid.

It should be noted that in addition to adherence of the above pavement design recommendations, a close control on the pavement construction process will also be required in order to obtain the desired pavement life. Therefore, it is recommended that regular inspection and testing should be conducted during the pavement construction to confirm material quality, thickness, and to ensure adequate compaction.

Frost tapers of 10H:1V should be implemented between areas of differing pavement thickness and tie-in areas to existing pavement.

Smooth transitions are required in all areas where the new pavement meets the existing asphalt surface. Asphalt joints shall follow OPSS.MUNI 310. Longitudinal asphalt joints should be milled into the existing asphalt a minimum 0.5 m for each lift. Transverse joint shall be milled into the existing asphalt a minimum 0.5 m for each lift. Successive joints should be staggered.

4.9. Stormwater Management Pond

The current site plan shows Three (3) SWM facilities are shown in the eastern and western sides of the site (pond adjacent to MTO lands not included).

The general concept plans are shown in the Draft FSR. The SWM facilities are typically along the perimeter of the site, where excavation to as much as 5 to 6 m depth will be required to achieve the pond bottoms. Some locate area will require berms. The predominate clay and silt till soil at the site is expected in most pond areas as native or as engineered fill. Groundwater is not expected to be a concern during construction due to the nature of the clayey soil.

4.9.1. General Construction Considerations

General excavation and temporary groundwater control construction considerations are provided with Section 5.0 of this report and generally would apply to the construction of the SWM ponds.

The steepest recommended pond slope inclination is 4H:1V and should follow the design guidelines of the local municipality.

It is recommended that any piping or trenching in the area of the pond should be provided with seepage cut-off collars (clay plugs, concrete plugs, or other barriers) to protect against water seepage through the pipe bedding and backfill.

Pond berms above grade will have to be constructed as engineered fill compacted to minimum 98% SPmdd, constructed as described earlier in the report. The material for the berm may vary depending on liner requirements and any “dam” requirements.

4.9.2. Pond Slope Surface Treatment

The final slope surface and all bare or exposed areas (where applicable) should be provided with suitable vegetation cover or erosion protection. The sloped surface should be provided with a layer of topsoil (minimum 100 mm thick) and should be hydro-seeded with a grass mixture and mulch. If seeded, during the first 2 to 3 years, the surface cover of topsoil and seeding may require periodic maintenance until the vegetation becomes well established. It is recommended that erosion netting/erosion control blankets be staked on the slope surface for erosion protection (including the inside slope above the water level).

Periodic fluctuations in the pond water level will make inside slopes susceptible to minor sheet and rill erosion over extended periods of exposure if these slopes remain bare and without vegetation, even with 4H:1V side slopes proposed. Occasional maintenance and repair of the inside bare pond slopes (and removal of accumulated sediment in the base) will be required. The inside slopes of the pond could be covered with an erosion control product to reduce the amount of maintenance. The covering may consist of a vegetated geo-web system, inclusion of erosion control blankets/turf reinforcement mats, rip-rap or local field stones.

4.9.3. Liner Considerations

Depending on the type of SWM pond that is planned, a liner may be require if a permanent pool is proposed. The liner should be placed along the entire pond bottom and extend a minimum of 1.0 m above the permanent pool elevation. Depending on the elevation of the groundwater table relative to the pond, the liner may also need to extend sufficiently above the seasonal high groundwater table to prevent groundwater seepage into the pond. The liner may consist of a natural soil material (such as clay), a synthetic membrane liner (such as a High-Density Polyethylene, Geo-synthetic Clay Liner, or PVC), a concrete liner, or a combination thereof. Details can be provided when the design has progressed.

The site soil may be suitable as a liner material subject to further laboratory testing prior to and during construction.

A layer of rip-rap 0.5 m thick is usually recommended above the liner to “warn” future SWM pond clearing contractors of the bottom of the forebay or main cells / top of the liner to prevent damage.

The liner system must be designed to withstand uplift pressure due to hydrostatic head at the base of the liner for the worse-case condition when the pond is emptied for cleaning and maintenance activities. Uplift pressure can be assessed and reviewed when design details are established.

5. Constructability Considerations

5.1. Excavations

At this time, excavations for the project site are anticipated to be about 5.0 to 6.0 m below existing grade to account for house foundations, services and SWM pond and grading, locally deeper for underground garage/levels in the midrise areas. Below the surficial topsoil, excavations will encounter the weathered/disturbed soil over the major glacial till deposit. Harder digging and cobble and boulders will be encountered in the glacial till deposit.

Excavations must be carried out in accordance with the Occupational Health and Safety Act, Ontario Regulation 213/91 (as amended), Construction Projects, Part III - Excavations, Section 222 through 242. Where workers must enter a trench or excavation the soil must be suitably sloped and/or braced in accordance with the OHSA. These regulations designate four (4) broad classifications of soils to stipulate appropriate measures for excavation safety. If more than one soil type is encountered in an excavation, the most conservative soil type must be followed for sloping the sidewalls of the excavation. Excavations for the site should be completed considering a Type 3 soil geometry, 1H:1V from the base of the excavation, assuming the groundwater is controlled as noted in the sext section.

Excavation sidewalls will need to be continuously reviewed for evidence of instability and groundwater seepage, particularly following periods of heavy rain or thawing. When required, remedial action must be taken to ensure the continued stability of excavation slopes and the safety of the workers.

Minimum support system requirements for steeper excavations are stipulated in Sections 235 through 238 and 241 of the OHSA and include provisions for timbering, shoring and moveable trench boxes. To reduce the potential for instability of the trench excavations, materials excavated from the service trenches and/or other fill materials, or heavy equipment should not be placed near the crest of the trench excavations.

It is important to note that soils encountered in the construction excavations may vary significantly across the site. Our soil classifications are based solely on the materials encountered in the boreholes advanced on site. The contractor should verify that similar conditions exist throughout the proposed area of excavation. If different subsurface conditions are encountered at the time of construction, we recommend that GEI be contacted immediately to evaluate the conditions encountered.

5.2. Temporary Construction Groundwater Control

As noted above, excavations for the project site are anticipated to be about 5.0 to 6.0 m below existing grade to account for house foundations, services and SWM pond and grading, locally deeper for underground garage/levels in the potential midrise areas.

Groundwater was not encountered during or upon completion of drilling in the boreholes for the most part. The stabilized groundwater levels ranged from 0.1 to 8.6 m depth (Elev. 224.76 to 247.6) on December 16, 2024. Of note, the water levels in the more recent wells are typically deeper which confirms the very slow seepage/low permeability of the typically clayey soil at the site.

For excavation depths described above, conventional sump pumping is typically sufficient to manage groundwater seepage in most excavations. Deeper excavations that intersect groundwater in more permeable materials like wet sand, gravel seams, or loose sand, will require multiple pumps, or pumps within sumps created with a corrugated steel pipe filled with gravel.

The exact scenario where certain groundwater control techniques will work are directly correlated to how coarse/fine the native soils are in an excavation, and both the lateral and vertical extent of the wet cohesionless deposits. If the groundwater table is not controlled during construction, the base of the excavations will be unstable, leading to difficulties in excavating and placement of pipes, footings or engineered fill, and providing safety for the workers.

It is recommended to carry out the work during the dry time of the year when the groundwater table is lowest, to mitigate groundwater control measures. Also reducing the size of the excavation that is open at any one time will aid in reducing groundwater control requirements.

GEI's hydrogeological study under a separate cover provides further details regarding water taking analysis, regulatory and permitting requirements, impact assessments, monitoring plans, etc. for the site and must be referenced for groundwater control considerations.

5.3. Compaction Specifications

SPmdd is the specification to indicate the degree to which soil or aggregate is compacted. To achieve the specified SPmdd as indicated in this report, all soils or aggregates must be placed in lift thicknesses no greater than 200 mm. If this is not the case, only the upper portion of the lift will be adequately compacted, and the lower portion of the lift has a high probability of not meeting compaction specifications. In addition, industry standard equipment used to determine the degree of compaction consists of nuclear densometers. These devices have an inherent limitation in that they cannot test beyond 300 mm in depth, and so the degree of compaction beyond this depth cannot be quantitatively determined.

Along with lift thickness, ensuring that the soil or aggregate is within 2% of its optimum moisture content ensures that the specified compaction can be reached. If the soil or aggregate is too dry/wet, it is either very difficult or impossible to reach the specified compaction. This is especially true for when higher compaction specifications such as 98% and 100% SPMDD are required.

Moisture can be increased by adding water and mixing the soil prior to re-use, blending the soil with wetter material, or by importing soil to the site that is at optimum and can be readily compacted.

Moisture can be reduced by tilling or spreading out the soil to dry or blending it with drier material. In-situ moisture contents can change based on the season and local groundwater levels and can also change for stockpiled material due to precipitation. Zones of the fine-grained soil with very high moisture contents may find moisture conditioning to be difficult to accomplish in short period and will require adjustments to scheduling to accommodate.

In addition to the above compaction specifications, in any areas where compacted fill will be placed over the exposed native soil subgrade, any loose, soft, wet, organic or unstable areas should be sub-excavated, and backfilled with clean earth fill or Granular 'B' (OPSS.MUNI 1010) compacted to a minimum of

95% SPmdd. This recommendation applies to site servicing and pavement subgrades. Backfill within 1 m of pavement subgrade elevations must be compacted to 98% SPmdd. Where structures/buildings require upfilling beneath the structure the fill should be compacted to 100% SPmdd.

5.4. Quality Verification Services

On-site quality verification services are an integral part of the geotechnical design function, and for foundations, engineered fill and retaining walls, are required under the Ontario Building Code. Quality verification services are used to confirm that construction is being conducted in general conformance with the requirements as outlined in the drawings, reports and specifications prepared for the proposed development.

GEI can provide all the on-site quality verification services outlined below:

- Full-time monitoring, testing and inspection of engineered fill placement is required by the geotechnical engineer per the OBC.
- Installation of retaining structures over 1.0 m high and related backfilling operations must be field reviewed on a continuous basis by the geotechnical engineer as required in the OBC.
- The subgrade for shallow foundations must be field reviewed by the geotechnical engineer per the OBC.
- Full-time monitoring of the subgrade support capabilities, material quality, lift thickness, moisture content, degree of compaction, etc. shall also be conducted by GEI for the following areas to ensure the recommendations within this report are followed and they perform adequately in the long-term;
    - Slabs-on-grade;
    - Pavement structure (granular layers); and
    - Bedding/backfilling of site servicing.
- Testing of the concrete (compressive strength, slump, air content, etc.) and testing of the asphalt (asphalt content and gradation) are recommended to ensure that the quality of the materials being brought to site meet the requirements of the project.

5.5. Site Work

The soils found at this site will become weakened when subjected to traffic, particularly when wet. If there is site work conducted during periods of wet weather, then it can be expected that the subgrade will be disturbed unless an adequate granular working surface is provided to protect the integrity of the subgrade soils from construction traffic. Subgrade preparation works may not be adequately accomplished during wet weather and the project must be scheduled accordingly. The disturbance caused by the traffic can result in the removal of disturbed soil and use of granular fill material for site restoration or underfloor fill that is not intrinsic to the project requirements.

The most severe loading conditions on the subgrade may occur during construction. Consequently, special provisions such as end dumping and forward spreading of earth and aggregate fills, restricted construction lanes, and half-loads during paving and other work may be required, especially if construction is conducted during unfavourable weather.

If construction proceeds during freezing weather conditions, adequate temporary frost protection for the founding subgrade and concrete must be provided. The soil at this site is susceptible to frost damage. Consideration must be given to frost effects, such as heave or softening, on exposed soil surfaces in the context of this project development.

6. Limitations and Closure

6.1. Limitations

The recommendations and comments provided are necessarily on-going as new information of underground conditions becomes available. More specific information with respect to the conditions between samples, or the lateral and vertical extent of materials may become apparent during excavation operations. The interpretation of the borehole information must, therefore, be validated during excavation operations. Consequently, conditions not observed during this investigation may become apparent. Should this occur, GEI should be contacted to assess the situation and additional testing and reporting may be required.

GEI should be retained for a general review of the final design drawings and specifications to verify that this report has been properly interpreted and implemented. If not accorded the privilege of making this review, GEI will assume no responsibility for interpretation of the recommendations in the report.

The comments given in this report are intended only for the guidance of the design engineers. The number of boreholes required to determine the localized underground conditions between boreholes affecting construction costs, techniques, sequencing, equipment, scheduling, etc. could be greater than has been carried out for design purposes. Contractors bidding on or undertaking the works should, in this light, decide on their own investigations, as well as their own interpretations of the factual borehole results, so that they may draw their own conclusions as to how the subsurface conditions may affect them.

This report was authorized by, and prepared by GEI for, the account of Global Properties Inc. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. GEI accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.

6.2. Closure

It is recognized that municipal/regional governing bodies, in their capacity as the planning and building authority under Provincial statues, will make use of and rely upon this report, cognizant of the limitations thereof, both as are expressed and implied.

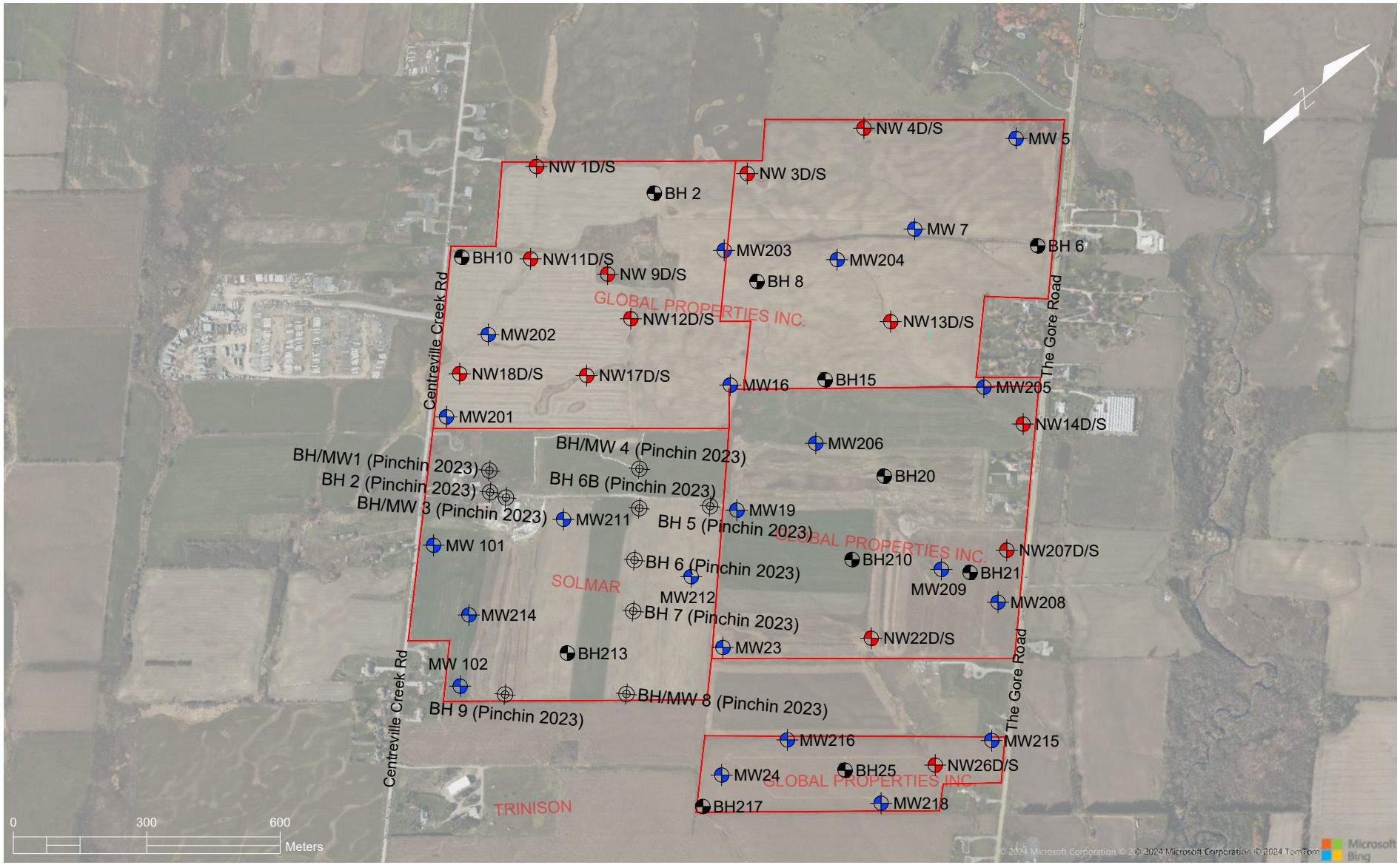
We trust this report is complete within our terms of reference, and the information presented is sufficient for your present purposes. If you have any questions, or when we may be of further assistance, please do not hesitate to contact our office.

Figures

Site Location Plan

Borehole Location Plans

Geotechnical and Hydrogeological Investigation Solmar Lands, Wildfield Village Town of Caledon, Ontario		GEI Consultants	Site Location Plan
Global Properties Inc. Concord, Ontario		Project 2408195	January 2025 Fig. 1



LEGEND

- Site Boundaries
- GEI Borehole (5m)
- GEI Borehole w Monitoring Well (6m)
- GEI Nested Well (6m & 2/3m)
- Borehole/Monitoring Well by Others

Geotechnical and Hydrogeological Investigation
Solmar Lands, Wildfield Village
Town of Caledon, Ontario

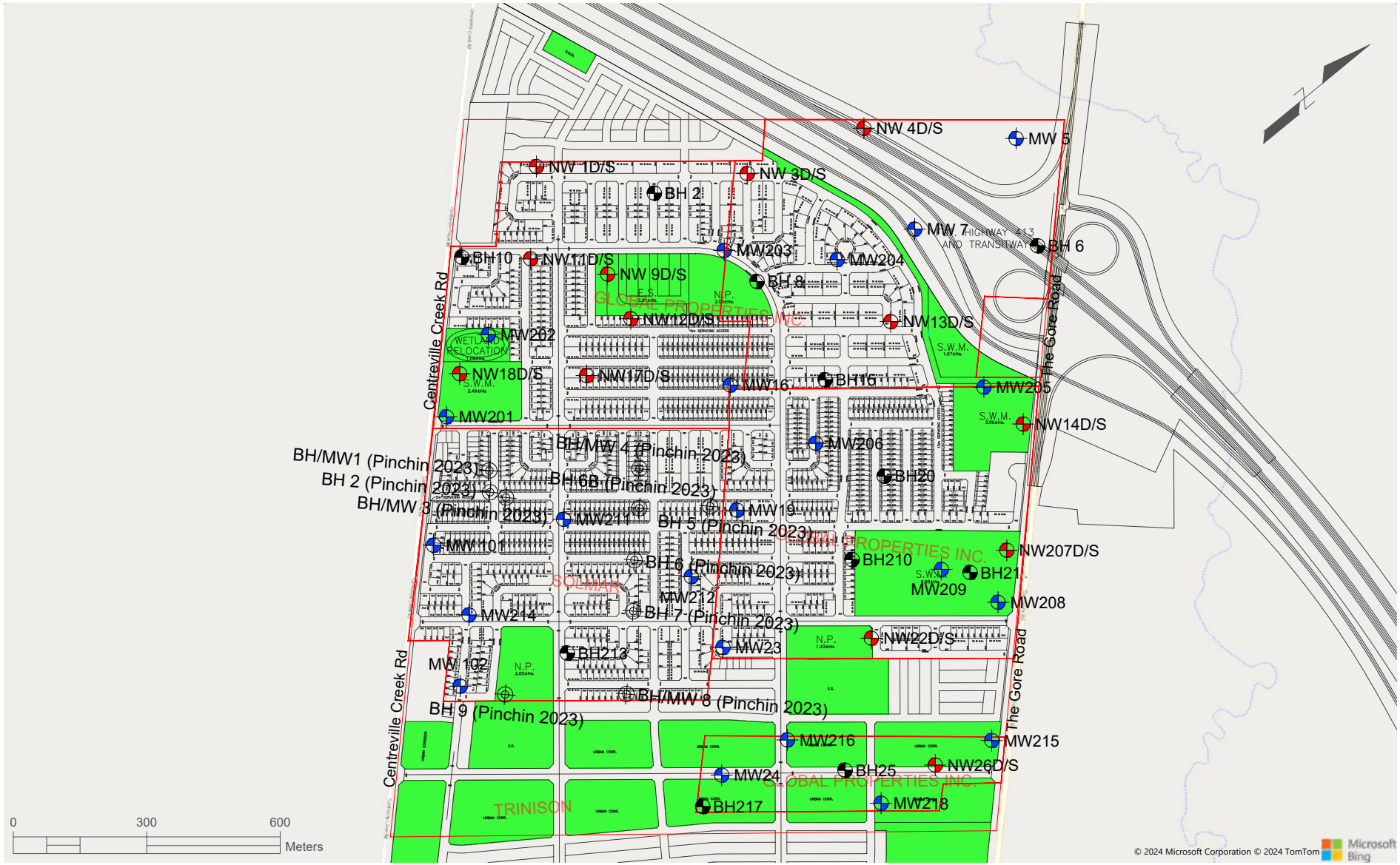
Global Properties Inc.
Concord, Ontario

GEI Consultants

Project 2408195

Borehole Location Plan
(Aerial)

January 2025 Fig. 2A



LEGEND

- Site Boundaries
- GEI Borehole (5m)
- GEI Borehole w Monitoring Well (6m)
- GEI Nested Well (6m & 2/3m)
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Geotechnical and Hydrogeological Investigation
Solmar Lands, Wildfield Village
Town of Caledon, Ontario

Global Properties Inc.
Concord, Ontario

GEI Consultants

Borehole Location Plan
(Plan)

Project 2408195 | January 2025 | Fig. 2B

Appendix A Borehole Logs

Appendix A1 – GEI Borehole Logs

RECORD OF BOREHOLE No. 1-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853404** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **599878.7** Date Completed: **May 4/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
	Geodetic 0.0 242.3						
	TOPSOIL: 610 mm 0.6 241.7	AS	1			0	
	WEATHERED/DISTURBED Some organics, firm, brown to dark brown, moist 1.5 240.8	SS	2	100	7	1.5	241.5
	CLAY AND SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff, grey, moist to wet	SS	3	100	17	3	240
		SS	4	45	24		
	- - - Stiff - - -	SS	5	100	9	4.5	238.5
	- - - Firm - - - 5.0 237.3	SS	6	100	6		
	Borehole Terminated at 5.0 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40
7, 17, 24, 9, 6

LAB TESTING
△ Combustible Organic Vapour (ppm)
▲ Combustible Organic Vapour (%LEL)
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40
21, 24, 25, 27, 30, 29

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)

GR	SA	SI	CL
0	12	46	42

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Groundwater depth encountered on completion of drilling: 4.5 m. Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.46 m. Groundwater Elevation: 241.9 m

RECORD OF BOREHOLE No. 1-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853404** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **599879.3** Date Completed: **May 4/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 242.3													
	TOPSOIL: 610 mm 0.6 241.7					0	241.5							
	WEATHERED/DISTURBED Some organics, firm, brown to dark brown, moist moist 1.5 240.8					1.5	240							
	CLAY AND SILT GLACIAL TILL: Some sand, inferred cobbles and boulders, very stiff, grey, moist to wet 3.0 239.3					3								
	Borehole Terminated at 3.0 m													

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Groundwater depth encountered on completion of drilling:
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.57 m.
Groundwater Elevation: 241.7 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale: **1 :75**
Page: **1 of 1**

RECORD OF BOREHOLE No. 2

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853574** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600090.9** Date Completed: **May 4/23**

Geodetic														
0.0	249.1													
0.1	249.0	TOPSOIL: 130 mm												
		WEATHERED/DISTURBED Trace organics, brown, moist	AS	1			0	249						
0.8	248.4													
		CLAY AND SILT GLACIAL TILL: Some sand trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	22	1.5	247.5						
			SS	3	100	22								
			SS	4	100	30								
		- - - Stiff - - -	SS	5	100	14	3	246						
		- - - Very stiff - - -	SS	6	100	21	4.5	244.5						
		- - - Stiff - - -	SS	7	100	11	6	243						
6.6	242.6													
		Borehole Terminated at 6.6 m												

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing — SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits — PL; LL; Water Content (%); 10 20 30 40.

COMMENTS & GRAIN SIZE DISTRIBUTION (%) — GR SA SI CL

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

RECORD OF BOREHOLE No. 3-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853765** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600186.9** Date Completed: **May 3/23**

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LITHOLOGY PROFILE		SOIL SAMPLING					FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m) / ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 / 247.8												
	0.2 / 247.7 TOPSOIL: 150 mm					0 / 247.5							
	WEATHERED/DISTURBED Stiff, brown, moist 0.6 / 247.2	SS	1	50	8		8	25					
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	17		17	20					
		SS	3	100	21	1.5 / 246	21	20		0	3	41	56
		SS	4	100	22		22	20					
	- - - Grey/brown/orange - - -	SS	5	100	20	3 / 244.5	20	20					
	- - - Stiff, grey, moist to wet - - - 5.0 / 242.8	SS	6	65	12	4.5 / 243	12	18					
	Borehole Terminated at 5.0 m												

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.21 m.
Groundwater Elevation: 247.6 m

RECORD OF BOREHOLE No. 3-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4863764** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600186.9** Date Completed: **May 3/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 247.9													
	0.2 247.7 TOPSOIL: 150 mm					0	247.5							
	WEATHERED/DISTURBED Stiff, brown, moist 0.6 247.3													
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist					1.5	246							
	3.0 244.8					3								
	Borehole Terminated at 3.0 m													

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.23 m.
Groundwater Elevation: 247.6 m

RECORD OF BOREHOLE No. 4-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4854033** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600270.7** Date Completed: **May 3/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
	Geodetic 0.0 246.3							Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40					
	0.2 246.2 TOPSOIL: 150 mm					0	246							
	WEATHERED/DISTURBED Firm, mottled brown, moist	SS	1	100	6			6	14					
	0.8 245.5 CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	23			23	18					
		SS	3	100	27	1.5	244.5	27	18					
		SS	4	100	21			21	21					
		SS	5	100	19	3	243	19	21					
	4.6 241.7 SILTY SAND GLACIAL TILL: Some clay, some gravel, inferred cobbles and boulders, compact, brown, moist	SS	6	100	20	4.5	241.5	20	19		12	41	34	13
	5.0 241.3 Borehole Terminated at 5.0 m													

Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.68 m.
Groundwater Elevation: 245.6 m

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RECORD OF BOREHOLE No. 4-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4854033** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600270** Date Completed: **May 3/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 246.4													
	0.2 246.2 TOPSOIL: 150 mm					0	246							
	WEATHERED/DISTURBED Firm, mottled brown, moist													
	0.8 245.6 CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist					1.5	244.5							
	3.0 243.3 Borehole Terminated at 3.0 m					3								

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.69 m.
Groundwater Elevation: 245.7 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

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RECORD OF BOREHOLE No. 5

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4854286** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600502.1** Date Completed: **May 3/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
Geodetic 0.0	241.7										
0.2	241.6 TOPSOIL: 150 mm										
	WEATHERED/DISTURBED Trace organics, firm, brown, moist	SS	1	100	7	0	241.5	7	19		
0.8	240.9										
	CLAY AND SILT GLACIAL TILL: Some sand trace gravel, inferred cobbles and boulders, very stiff to hard, brown, moist	SS	2	100	20			20	16		
		SS	3	100	33	1.5	240	33	16		
		SS	4	100	36			36	16		
		SS	5	100	28	3	238.5	28	15		
	- - - Grey - - -	SS	6	100	19	4.5	237	19	15		
6.1	235.6										
	SILTY SAND GLACIAL TILL: Trace gravel, inferred cobbles and boulders, hard, brown, wet	SS	7	100	78	6	235.5	78	19		
	- - - Grey - - -	SS	8	100	46	7.5	234	46	10		
8.1	233.6										
	Borehole Terminated at 8.1 m										

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 3.33 m.
Groundwater Elevation: 238.4 m

RECORD OF BOREHOLE No. 6

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4854174** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600721.2** Date Completed: **May 3/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
	Geodetic 0.0 240.2													
	TOPSOIL: 305 mm 0.3 239.9					0	240							
	WEATHERED/DISTURBED Trace organics, firm, brown, moist 0.8 239.4	SS	1	100	5			5	17					
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff to hard, brown with grey, moist	SS	2	100	21			21	16					
		SS	3	100	26	1.5	238.5	26	16					
		SS	4	100	31			31	17					
	- - - Grey/brown - - -	SS	5	100	29	3	237	29	19					
	- - - Grey - - -	SS	6	100	21	4.5	235.5	21	17					
	6.6 233.6	SS	7	100	27	6	234	27	17		2	14	43	41
	Borehole Terminated at 6.6 m													

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

RECORD OF BOREHOLE No. 7

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853981** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **600519.4** Date Completed: **May 2/23**

Geodetic	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
0.0 / 243.6	TOPSOIL: 75 mm					0	243
	WEATHERED/DISTURBED Firm, mottled brown, moist	SS	1	100	6		
0.8 / 242.9	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	26	1.5	241.5
	- - - Brown/grey - - -	SS	3	100	24		
		SS	4	100	22	3	240
	- - - Grey - - -	SS	5	100	17		
	- - - Stiff - - -	SS	6	100	11	4.5	238.5
6.6 / 237.1		SS	7	100	13	6	
	Borehole Terminated at 6.6 m						

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing — SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits — PL; LL. Water Content (%); 10 20 30 40.

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%) — GR | SA | SI | CL

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 2.42 m.
Groundwater Elevation: 241.2 m

RECORD OF BOREHOLE No. 8

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853630** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600390.2** Date Completed: **May 3/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
	Geodetic 0.0 244.5						
	TOPSOIL: 305 mm 0.3 244.2	SS	1	100	7	0	244.5
	WEATHERED/DISTURBED Firm, mottled brown, moist 0.8 243.8						
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	22		
	- - - Brown/grey - - -	SS	3	100	19	1.5	243
		SS	4	100	26		
	- - - Grey - - -	SS	5	65	16	3	241.5
	- - - Stiff - - -	SS	6	100	9	4.5	240
	6.6 238.0	SS	7	100	13	6	238.5
	Borehole Terminated at 6.6 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour (ppm)
▲ Combustible Organic Vapour (%LEL)
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

RECORD OF BOREHOLE No. 9

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853378** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600167.6** Date Completed: **May 4/23**

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LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING		LAB TESTING			COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT		Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits: PL, LL; Water Content (%)		Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 246.4															
	0.2 246.2 TOPSOIL: 150 mm					0	246									
	WEATHER/DISTURBED Brown, moist	AS	1							21						
	0.8 245.6 CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	23			23		19						
		SS	3	30	24	1.5	244.5	24		19						
		SS	4	100	23			23		19						
		SS	5	100	21	3	243	21		20						
		SS	6	100	17	4.5	241.5	17		22						
	- - - Stiff - - -	SS	7	100	13	6	240	13		21						
	6.6 239.8 Borehole Terminated at 6.6 m															

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

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RECORD OF BOREHOLE No. 10

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853146** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **599933.4** Date Completed: **May 4/23**

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LITHOLOGY PROFILE		SOIL SAMPLING					FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m) / ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 / 244.9												
	0.2 / 244.7 TOPSOIL: 150 mm					0 / 244.5							
	WEATHERED/DISTURBED Mottled brown, moist	AS	1					23					
	0.8 / 244.1 CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	23		23	21					
		SS	3	100	24	1.5 / 243	24	22					
		SS	4	100	23		23	22					
		SS	5	100	21	3 / 241.5	21	23					
		SS	6	100	17	4.5 / 240	17	25					
	- - - Stiff, grey - - -	SS	7	100	13	6 / 238.5	13						
	6.6 / 238.3 Borehole Terminated at 6.6 m												

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

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RECORD OF BOREHOLE No. 11-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853264** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600032.8** Date Completed: **May 4/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%)
	Geodetic 0.0 240.8							Shear Strength Testing (kPa): Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded) 40 80 120 160. Penetration Testing: SPT, DCPT 10 20 30 40	Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm) 100 200 300 400. Atterberg Limits: PL, LL. Water Content (%) 10 20 30 40		GR SA SI CL
	TOPSOIL: 610 mm 0.6 240.2	AS	1			0	240		34		
	WEATHERED/DISTURBED Stiff, darkbrown to brown, moist	SS	2	100	12			12	25		
	1.5 239.2					1.5	238.5				
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	3	100	19			19	19		0 8 43 49
		SS	4	100	28			28	18		
		SS	5	100	19	3	237	19	21		
	- - - Brown to grey - - -	SS	6	100	22	4.5	235.5	22	22		
	- - - Stiff, grey - - - 6.6 234.2	SS	7	100	12	6		12	20		
	Borehole Terminated at 6.6 m										

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 3.44 m.
Groundwater Elevation: 237.3 m

RECORD OF BOREHOLE No. 11-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853265** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600032.8** Date Completed: **May 4/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING		LAB TESTING			COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40		Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40		Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 240.7															
	TOPSOIL: 610 mm					0										
	0.6 240.1						240									
	WEATHERED/DISTURBED Stiff, dark brown to brown, moist															
	1.5 239.2					1.5										
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist						238.5									
	3.0 237.7					3										
	Borehole Terminated at 3.0 m															

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.43 m.
Groundwater Elevation: 240.3 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

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RECORD OF BOREHOLE No. 12-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853356** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600278.6** Date Completed: **May 4/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%)
	Geodetic 0.0 / 246.8							Shear Strength Testing (kPa): × Other Test; + Pocket Penetrometer; ▲ Field Vane (Intact); △ Field Vane (Remolded); 40 80 120 160. Penetration Testing: ○ SPT ● DCPT; 10 20 30 40	△ Combustible Organic Vapour (ppm); ▲ Combustible Organic Vapour (%LEL); ◇ Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits: PL — LL; ○ Water Content (%); 10 20 30 40		GR SA SI CL
	TOPSOIL/PEAT: 760 mm 0.8 / 246.0	AS	1			0	246		42		
	SILT AND ORGANICS: Roots, trace clay, firm, black/grey, moist 1.5 / 245.2	SS	2	100	6	1.5	244.5	6	47		
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, stiff to very stiff, brown, moist	SS	3	100	9			9	21		
		SS	4	100	13	3	243	13	21		
	- - - Grey - - -	SS	5	100	15			15	22		
	5.0 / 241.7	SS	6	100	9	4.5		9	23		
	Borehole Terminated at 5.0 m										

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.53 m.
Groundwater Elevation: 246.2 m

RECORD OF BOREHOLE No. 12-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853356** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600278.4** Date Completed: **May 4/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 246.8													
	TOPSOIL/PEAT: 760 mm 0.8 246.1					0	246							
	SILT AND ORGANICS: Roots, trace clay, firm, black/grey, moist 1.5 245.3					1.5	244.5							
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, stiff to very stiff, brown, moist 3.0 243.8					3								
	Borehole Terminated at 3.0 m													

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.53 m.
Groundwater Elevation: 246.3 m

RECORD OF BOREHOLE No. 13-D

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Project Number:	2100463				
Project Client:	Wildfield Village Landowners Group Inc.				
Project Name:	Wildfield Village	Drilling Method:	Solid Stem Augers	Drilling Machine:	Track Mount
Project Location:	Town of Caledon, ON	Logged By:	FH	Northing:	4853809
				Date Started:	May 2/23
Drilling Location:	See Borehole Location Plan	Reviewed By:	RW	Easting:	600648.2
				Date Completed:	May 2/23
Local Benchmark:	Geodetic				

LITHOLOGY PROFILE | **SOIL SAMPLING** | **FIELD TESTING** | **LAB TESTING** | Instrumentation Installation | **COMMENTS & GRAIN SIZE DISTRIBUTION (%)**

FIELD TESTING – Shear Strength Testing (kPa): × Other Test; + Pocket Penetrometer; ▲ Field Vane (Intact); △ Field Vane (Remolded) — scale 40, 80, 120, 160. Penetration Testing: ○ SPT ● DCPT — scale 10, 20, 30, 40.

LAB TESTING – △ Combustible Organic Vapour (ppm); ▲ Combustible Organic Vapour (%LEL); ◇ Total Organic Vapour (ppm) — scale 100, 200, 300, 400. Atterberg Limits: PL ├──┤ LL. ○ Water Content (%) — scale 10, 20, 30, 40.

GRAIN SIZE: GR | SA | SI | CL

Depth / Elev. (Geodetic)	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Water Content (%)
0.0 / 240.1						
0.2 / 239.9	TOPSOIL: 205 mm					
	WEATHERED/DISTURBED Firm, mottled brown, moist	SS	1	100	5	21
0.8 / 239.4	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	23	18
	- - - Grey/brown to brown - - -	SS	3	100	26	17
		SS	4	100	27	17
		SS	5	100	28	17
5.0 / 235.1		SS	6	100	30	
	Borehole Terminated at 5.0 m					

DEPTH (m): 0, 1.5, 3, 4.5 — ELEVATION (m): 240, 238.5, 237, 235.5

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Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: Open

Groundwater depth observed on: Jul 11/23 at depth of: 0.66 m.

Groundwater Elevation: 239.5 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale: **1 :75**

RECORD OF BOREHOLE No. 13-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853809** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **600647.6** Date Completed: **May 2/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
	Geodetic 0.0 240.1					0	240
	0.2 TOPSOIL: 205 mm 239.9						
	WEATHERED/DISTURBED Firm, mottled brown, moist 0.8 239.4					1.5	238.5
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist						
	- - - Grey/brown to brown - - -						
	3.0 237.1					3	
	Borehole Terminated at 3.0 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour (ppm)
▲ Combustible Organic Vapour (%LEL)
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.62 m.
Groundwater Elevation: 239.5 m

RECORD OF BOREHOLE No. 14-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853898** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **601014** Date Completed: **May 2/23**

Geodetic	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%)
0.0 / 234.7						0		Shear Strength Testing (kPa): Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded) 40 80 120 160	Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm) 100 200 300 400		
0.2 / 234.6	TOPSOIL: 180 mm										
	WEATHERED/DISTURBED Soft, mottled brown, moist	SS	1	100	4			4	23		
0.8 / 234.0	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	18	1.5	234	18	15		
	- - - Hard - - -	SS	3	100	33		232.5	33	16		
		SS	4	100	42	3		42	16		
	- - - Some gravel - - -	SS	5	100	37		231	37	16		
4.7 / 230.0		SS	6	100	100+	4.5		100+	13		Spoon bouncing
	Borehole Terminated at 4.7 m										

Penetration Testing: SPT ○ DCPT ● 10 20 30 40

Atterberg Limits: PL ——— LL; Water Content (%) ○ 10 20 30 40

GR SA SI CL

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.52 m.
Groundwater Elevation: 234.2 m

RECORD OF BOREHOLE No. 14-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853899** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **601014.4** Date Completed: **May 2/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING		LAB TESTING			COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40		Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40		Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 234.8															
	0.2 234.6 TOPSOIL: 180 mm					0										
	WEATHERED/DISTURBED Soft, mottled brown, moist stiff, grey/ 0.8 234.0 brown/white, moist						234									
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist - - - Hard - - -					1.5	232.5									
	3.0 231.7					3										
	Borehole Terminated at 3.0 m - - - Some gravel - - -															

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 1.49 m.
Groundwater Elevation: 233.3 m

RECORD OF BOREHOLE No. 15

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4853612** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600658.4** Date Completed: **May 3/23**

LITHOLOGY PROFILE		SOIL SAMPLING					FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m) / ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits: PL, LL; Water Content (%)	Instrumentation Installation		GR	SA	SI	CL
	Geodetic 0.0 241.9													
	0.3 241.6 TOPSOIL: 305 mm	SS	1	100	6	0 / 241.5	6	21						
	0.8 241.1 WEATHERED/DISTURBED Firm, mottled brown, moist	SS	2	100	26		26	19						
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	3	100	23	1.5 / 240	23	18						
	- - - Light grey - - -	SS	4	100	23		23	20						
		SS	5	100	20	3 / 238.5	20	21						
	- - - Firm, grey - - -	SS	6	5	6	4.5 / 237	6	20						
	6.6 235.3	SS	7	100	7	6 / 235.5	7	18						
	Borehole Terminated at 6.6 m													

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

RECORD OF BOREHOLE No. 16

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Project Number:	**2100463**				
Project Client:	**Wildfield Village Landowners Group Inc.**				
Project Name:	**Wildfield Village**	Drilling Method:	**Solid Stem Augers**	Drilling Machine:	**Track Mount**
Project Location:	**Town of Caledon, ON**	Logged By:	**FH**	Northing: **4853438**	Date Started: **May 3/23**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**RW**	Easting: **600534.7**	Date Completed: **May 3/23**
Local Benchmark:	**Geodetic**				

LITHOLOGY PROFILE | **SOIL SAMPLING** | **FIELD TESTING** | **LAB TESTING** | **COMMENTS & GRAIN SIZE DISTRIBUTION (%)**

Field Testing – Shear Strength Testing (kPa): × Other Test; + Pocket Penetrometer; ▲ Field Vane (Intact); △ Field Vane (Remolded); scale 40, 80, 120, 160. Penetration Testing: ○ SPT; ● DCPT; scale 10, 20, 30, 40.

Lab Testing: △ Combustible Organic Vapour (ppm); ▲ Combustible Organic Vapour (%LEL); ◇ Total Organic Vapour (ppm); scale 100, 200, 300, 400. Atterberg Limits: PL —— LL. ○ Water Content (%); scale 10, 20, 30, 40.

Grain size: GR | SA | SI | CL

Depth / Elev. (m)	Description (Geodetic, 0.0 / 242.7)	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Water Content (%)
0.0 / 242.7 – 0.3 / 242.4	TOPSOIL: 305 mm					
0.3 / 242.4 – 0.8 / 242.0	WEATHERED/DISTURBED Firm, brown, moist	SS	1	50	7	22
0.8 / 242.0	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	22	18
		SS	3	100	26	20
	- - - Brown to grey - - -	SS	4	100	26	20
		SS	5	100	22	22
	- - - Stiff, grey - - -	SS	6	100	10	22
6.6 / 236.2		SS	7	35	10	21

Depth scale (m): 0, 1.5, 3, 4.5, 6. Elevation scale (m): 241.5, 240, 238.5, 237.

Borehole Terminated at 6.6 m

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Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: Open

Groundwater depth observed on: Jul 11/23 at depth of: 0.94 m.

Groundwater Elevation: 241.8 m

Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale: **1 :75**

RECORD OF BOREHOLE No. 17-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853199** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600316.6** Date Completed: **May 3/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits PL–LL; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
Geodetic 0.0 / 244.7														
0.2 / 244.5	TOPSOIL: 205 mm					0	244.5							
	WEATHERED/DISTURBED Trace organics, firm, mottled brown, moist	SS	1	100	7			7	18					
0.8 / 243.9									19					
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	17			17						
		SS	3	100	21	1.5	243	21	22					
		SS	4	85	23			23	22					
		SS	5	100	21	3	241.5	21	19		1	8	42	49
	- - - Stiff - - -	SS	6	100	9	4.5	240	9	20					
5.0 / 239.6	Borehole Terminated at 5.0 m													

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.06 m.
Groundwater Elevation: 244.6 m

RECORD OF BOREHOLE No. 17-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853198** Date Started: **May 3/23**
Reviewed By: **RW** Easting: **600316.4** Date Completed: **May 3/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 244.6													
	0.2 244.5 TOPSOIL: 205 mm					0	244.5							
	WEATHERED/DISTURBED Trace organics, firm, mottled brown, moist													
	0.8 243.9 CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist					1.5	243							
	3.0 241.6 Borehole Terminated at 3.0 m					3								

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.57 m.
Groundwater Elevation: 244.1 m

RECORD OF BOREHOLE No. 18-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4852979** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600135.1** Date Completed: **May 4/23**

Geodetic	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Depth (m)	Elevation (m)
0.0 / 240.5						0	240
0.1 / 240.4	TOPSOIL: 100 mm						
	WEATHERED/DISTURBED Brown, moist	AS	1				
0.8 / 239.7	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	18	1.5	238.5
		SS	3	100	19		
		SS	4	100	18	3	237
3.0 / 237.4	SANDY SILT GLACIAL TILL: Trace clay, trace gravel, inferred cobbles and boulders, compact, brown, moist	SS	5	100	16		
4.6 / 235.9	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	6	100	17	4.5	235.5
	- - - Grey - - -	SS	7	100	20	6	234
6.6 / 233.9	Borehole Terminated at 6.6 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour (ppm)
▲ Combustible Organic Vapour (%LEL)
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)

GR	SA	SI	CL
0	4	39	57

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.81 m.
Groundwater Elevation: 239.6 m

RECORD OF BOREHOLE No. 18-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4852978** Date Started: **May 4/23**
Reviewed By: **RW** Easting: **600135.1** Date Completed: **May 4/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 240.5													
	0.1 240.4 TOPSOIL: 100 mm					0	240							
	WEATHERED/DISTURBED Brown, moist													
	0.8 239.7 CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist					1.5	238.5							
	3.0 237.4 Borehole Terminated at 3.0 m					3								

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 1.4 m.
Groundwater Elevation: 239.1 m

RECORD OF BOREHOLE No. 19

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853274** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **600763.7** Date Completed: **May 2/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing SPT/DCPT)	LAB TESTING (Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); Atterberg Limits; Water Content (%))	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
Geodetic 0.0	239.3													
0.2	TOPSOIL: 205 mm 239.1													
	WEATHERED/DISTURBED Firm, brown, moist	SS	1	100	7	0		7	16					
0.8	238.5						238.5							
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, mottled brown, moist	SS	2	100	21			21	20					
		SS	3	100	27	1.5		27	19					
	- - - Brown - - -	SS	4	100	20		237	20	23					
	- - - Grey - - -	SS	5	100	18	3		18	22					
							235.5							
	- - - Stiff - - -	SS	6	100	11	4.5		11	22		3	9	38	50
							234							
	- - - Very stiff - - -	SS	7	100	16	6		16	16					
6.6	232.7													
	Borehole Terminated at 6.6 m													

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.5 m.
Groundwater Elevation: 238.8 m

RECORD OF BOREHOLE No. 20

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853581** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **600910.8** Date Completed: **May 2/23**

Geodetic	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING (Shear Strength Testing (kPa); Penetration Testing: SPT ○, DCPT ●)	LAB TESTING (Combustible Organic Vapour (ppm) △; Combustible Organic Vapour (%LEL) ▲; Total Organic Vapour (ppm) ◇; Atterberg Limits PL–LL; Water Content (%) ○)	Instrumentation Installation	COMMENTS & GRAIN SIZE DISTRIBUTION (%) GR	SA	SI	CL
0.0 / 239.3	TOPSOIL: 150 mm					0								
0.1 / 239.1	WEATHERED/DISTURBED Firm, brown, moist	SS	1	100	6			6	3					
0.8 / 238.5	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	24	1.5	238.5	24	18					
		SS	3	100	22		237	22	18		3	10	39	48
		SS	4	100	18	3		18	18					
		SS	5	100	15		235.5	15	22					
	- - - Stiff - - -	SS	6	100	10	4.5	234	10	18					
6.4 / 232.9	- - - Very stiff - - -	SS	7	100	19	6		19	14					
6.6 / 232.7	SAND: Trace gravel, compact, brown, wet													
	Borehole Terminated at 6.6 m													

Groundwater depth encountered on completion of drilling: 5.4 m. Cave depth after auger removal: 5.7 m.
Groundwater depth observed on: Groundwater Elevation:

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RECORD OF BOREHOLE No. 21

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853596** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **601200.5** Date Completed: **May 2/23**

Geodetic	Depth (m)	Elevation (m)	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value
	0.0	233.3					
	0.3	233.0	TOPSOIL: 305 mm				
	0.8	232.5	WEATHERED/DISTURBED Trace organics, soft, brown, moist	SS	1	100	4
			CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	20
				SS	3	100	28
			- - - Hard - - -	SS	4	100	33
				SS	5	100	34
			- - - Very stiff, grey - - -	SS	6	100	22
	6.4	226.8		SS	7	100	30
			SILT GLACIAL TILL: Some clay, trace gravel, trace sand, inferred cobbles and boulders, dense, grey, moist				
			Borehole Terminated at 6.6 m				

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing — SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits — PL; LL; Water Content (%); 10 20 30 40.

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%) — GR | SA | SI | CL

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Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

RECORD OF BOREHOLE No. 22-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853330** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **601177.5** Date Completed: **May 2/23**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)	Field Testing (SPT / DCPT)	Lab Testing (Water Content %)
0.0	Geodetic 233.5							
0.2	TOPSOIL: 205 mm 233.4							
	WEATHERED/DISTURBED Soft, mottled brown, moist	SS	1	100	4	233.5	4	9
0.8	232.8							
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	19	232.5	19	19
		SS	3	100	24	231	24	17
	- - - Brown/grey - - -	SS	4	100	23		23	19
		SS	5	100	23	229.5	23	18
	- - - Grey - - -	SS	6	100	17		17	19
5.0	228.5							
	Borehole Terminated at 5.0 m							

Depth (m): 0, 1.5, 3, 4.5

Shear Strength Testing (kPa): Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160
Penetration Testing: SPT DCPT; 10 20 30 40
Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400
Atterberg Limits: PL LL
Water Content (%): 10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR SA SI CL

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 0.46 m.
Groundwater Elevation: 233.1 m

RECORD OF BOREHOLE No. 22-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853330** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **601177** Date Completed: **May 2/23**

Depth (m)	Description	Elevation (m)	Sample Type	Sample Number	Recovery (%)	SPT "N" Value
Geodetic 0.0		233.6				
0.2	TOPSOIL: 205 mm	233.4				
	WEATHERED/DISTURBED Soft, mottled brown, moist		SS	1	100	4
0.8		232.8				
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist		SS	2	100	19
			SS	3	100	24
	- - - Brown/grey - - -		SS	4	100	23
3.0		230.6				
	Borehole Terminated at 3.0 m					

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing: SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits: PL; LL. Water Content (%); 10 20 30 40.

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR SA SI CL

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 1.67 m.
Groundwater Elevation: 231.9 m

RECORD OF BOREHOLE No. 23

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853057** Date Started: **May 2/23**
Reviewed By: **RW** Easting: **600985.6** Date Completed: **May 2/23**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
Geodetic 0.0 / 238.6							
0.2 / 238.4	TOPSOIL: 255 mm						
	WEATHERED/DISTURBED Firm, mottled brown, moist	SS	1	100	5	0	238.5
0.8 / 237.9	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	19		
	- - - Brown/grey - - -	SS	3	100	24	1.5	237
		SS	4	100	19		
	- - - Moist to wet - - -	SS	5	100	22	3	235.5
	- - - Stiff, grey - - -	SS	6	100	9	4.5	234
6.6 / 232.1		SS	7	0	11	6	232.5
	Borehole Terminated at 6.6 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour (ppm)
▲ Combustible Organic Vapour (%LEL)
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)

GR	SA	SI	CL
0	2	40	58

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 1.96 m.
Groundwater Elevation: 236.7 m

RECORD OF BOREHOLE No. 24

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853876** Date Started: **May 123**
Reviewed By: **RW** Easting: **601208.1** Date Completed: **May 1/23**

Geodetic	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
0.0 / 235.9						0	235.5
0.2 / 235.7	TOPSOIL: 205 mm						
	WEATHERED/DISTURBED Soft, mottled brown, moist	SS	1	100	4		
0.8 / 235.1	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	23	1.5	234
		SS	3	100	25		
		SS	4	100	25	3	232.5
		SS	5	100	21		
		SS	6	100	17	4.5	231
6.1 / 229.8	SILT AND SAND GLACIAL TILL: Trace clay, trace gravel, cobbles and boulders, very dense, grey, moist	SS	7	100	50+	6	229.5
7.6 / 228.3	INFERRED BEDROCK: Shale, highly weathered, grey	SS	8	0	50+	7.5	
	Borehole Terminated at 7.7 m						

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing: SPT, DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour (ppm); Combustible Organic Vapour (%LEL); Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits: PL, LL. Water Content (%); 10 20 30 40.

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR SA SI CL

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Groundwater depth encountered on completion of drilling: 2.4 m. Cave depth after auger removal: Open

Groundwater depth observed on: Jul 11/23 at depth of: 1.91 m. Groundwater Elevation: 234.0 m

Scale: **1 :75**
Page: **1 of 1**

RECORD OF BOREHOLE No. 25

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Project Number:	**2100463**				
Project Client:	**Wildfield Village Landowners Group Inc.**				
Project Name:	**Wildfield Village**	Drilling Method:	**Solid Stem Augers**	Drilling Machine:	**Track Mount**
Project Location:	**Town of Caledon, ON**	Logged By:	**FH**	Northing:	**4853099**
Drilling Location:	**See Borehole Location Plan**	Reviewed By:	**RW**	Easting:	**601372.7**
Local Benchmark:	**Geodetic**				

Date Started: **May 1/23**

Date Completed: **May 1/23**

LITHOLOGY PROFILE | **SOIL SAMPLING** | **FIELD TESTING** | **LAB TESTING** | **COMMENTS & GRAIN SIZE DISTRIBUTION (%)**

Field Testing legend: Shear Strength Testing (kPa): × Other Test; + Pocket Penetrometer; ▲ Field Vane (Intact); △ Field Vane (Remolded); scale 40, 80, 120, 160. Penetration Testing: ○ SPT; ● DCPT; scale 10, 20, 30, 40.

Lab Testing legend: △ Combustible Organic Vapour (ppm); ▲ Combustible Organic Vapour (%LEL); ◇ Total Organic Vapour (ppm); scale 100, 200, 300, 400. Atterberg Limits: PL —— LL; ○ Water Content (%); scale 10, 20, 30, 40.

Depth / Elev. (m)	Description (Geodetic)	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Water Content (%)	GR	SA	SI	CL
0.0 / 232.2										
0.2 / 232.0	TOPSOIL: 205 mm									
	WEATHERED/DISTURBED Firm, mottled brown, moist	SS	1	100	7	17				
0.8 / 231.5	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, brown, moist	SS	2	100	21	17				
		SS	3	100	30	17				
	- - - Hard, grey/brown - - -	SS	4	100	35	16				
		SS	5	100	39	17				
	- - - Grey - - -	SS	6	100	50+	13				
5.0 / 227.3	SAND AND SILT GLACIAL TILL: Trace clay, trace gravel, very dense, grey, moist	SS	7	100	50+	10				
	Borehole Terminated at 6.2 m									

Depth scale (m): 0, 1.5, 3, 4.5, 6. Elevation scale (m): 231, 229.5, 228, 226.5.

Groundwater depth encountered on completion of drilling: Dry

Cave depth after auger removal: 5.7 m.

Groundwater depth observed on:

Groundwater Elevation:

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Scale: **1 :75**

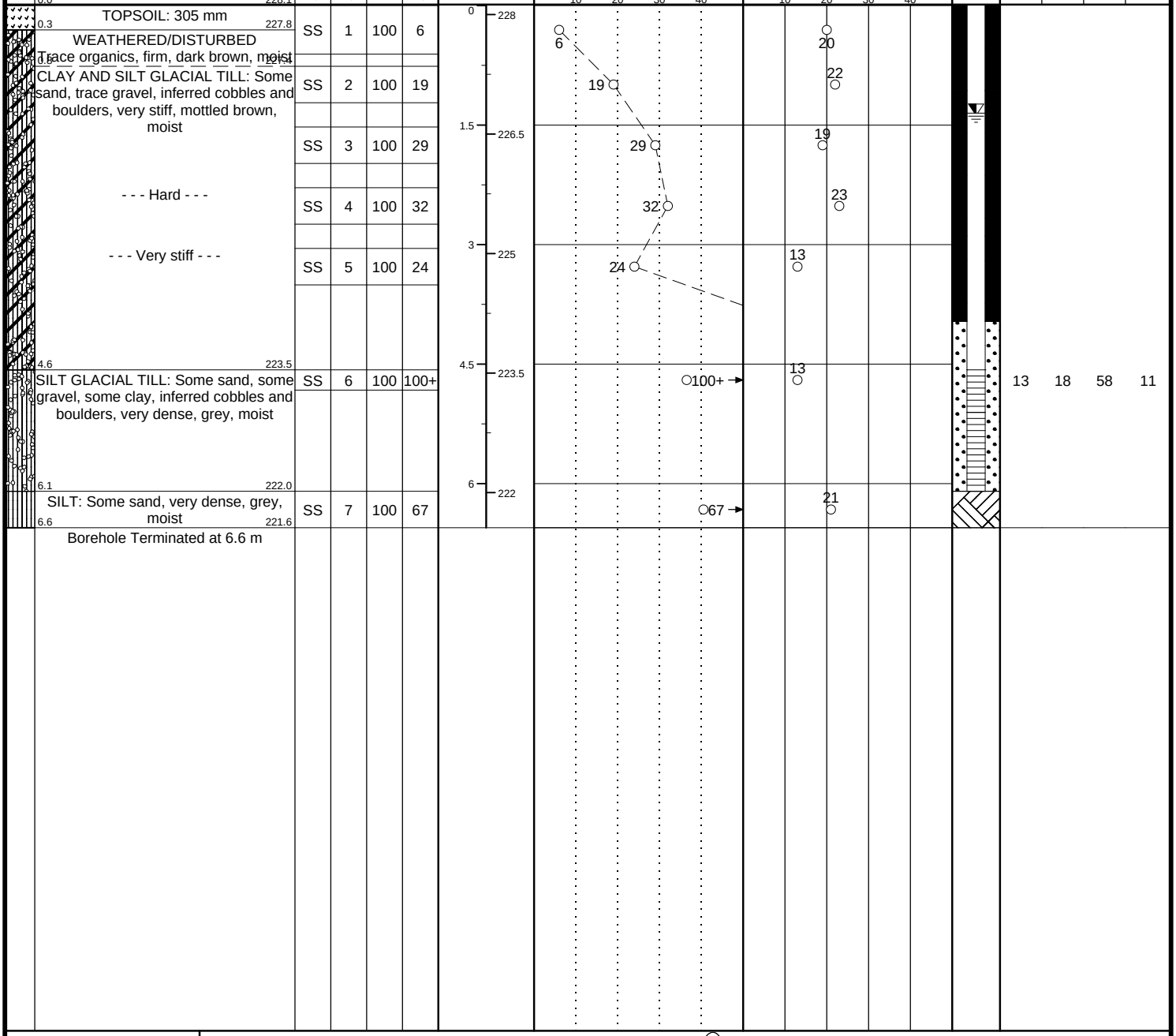
RECORD OF BOREHOLE No. 26-D

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853265** Date Started: **May 1/23**
Reviewed By: **RW** Easting: **601490.2** Date Completed: **May 1/23**

Geodetic	Depth (m)	Elevation (m)
	0.0	228.1
TOPSOIL: 305 mm	0.3	227.8
WEATHERED/DISTURBED Trace organics, firm, dark brown, moist	0.6	227.5
CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, mottled brown, moist		
- - - Hard - - -		
- - - Very stiff - - -	4.6	223.5
SILT GLACIAL TILL: Some sand, some gravel, some clay, inferred cobbles and boulders, very dense, grey, moist	6.1	222.0
SILT: Some sand, very dense, grey, moist	6.6	221.6
Borehole Terminated at 6.6 m		

Sample Type	Sample Number	Recovery (%)	SPT "N" Value
SS	1	100	6
SS	2	100	19
SS	3	100	29
SS	4	100	32
SS	5	100	24
SS	6	100	100+
SS	7	100	67



COMMENTS & GRAIN SIZE DISTRIBUTION (%)

GR	SA	SI	CL
13	18	58	11

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 1.35 m.
Groundwater Elevation: 226.8 m

RECORD OF BOREHOLE No. 26-S

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **FH** Northing: **4853264** Date Started: **May 1/23**
Reviewed By: **RW** Easting: **601489.9** Date Completed: **May 1/23**

LITHOLOGY PROFILE		SOIL SAMPLING						FIELD TESTING		LAB TESTING			COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); 40 80 120 160; Penetration Testing: SPT, DCPT; 10 20 30 40		Combustible Organic Vapour (ppm), Combustible Organic Vapour (%LEL), Total Organic Vapour (ppm); 100 200 300 400; Atterberg Limits: PL, LL; Water Content (%); 10 20 30 40		Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 228.1															
	TOPSOIL: 305 mm 0.3 227.8					0	228									
	WEATHERED/DISTURBED Trace organics, firm, dark brown, moist 0.6 227.5															
	CLAY AND SILT GLACIAL TILL: Some sand, trace gravel, inferred cobbles and boulders, very stiff, mottled brown, moist					1.5	226.5									
	- - - Hard - - -															
	3.0 225.1					3										
	Borehole Terminated at 3.0 m															

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Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Jul 11/23 at depth of: 1.9 m.
Groundwater Elevation: 226.2 m

RECORD OF BOREHOLE No. 101

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4852692** Date Started: **Jul 16/24**
Reviewed By: **RW/AB** Easting: **600400** Date Completed: **Jul 16/24**

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LITHOLOGY PROFILE		SOIL SAMPLING					FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m) / ELEVATION (m)	Shear Strength Testing (kPa); Penetration Testing (SPT ○, DCPT ●)	Combustible Organic Vapour - Hex; Combustible Organic Vapour - IBL; Total Organic Vapour (ppm); Atterberg Limits (PL, LL); Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	Geodetic 0.0 240.2												
	0.2 TOPSOIL: 205 mm 239.9					0 240							
	WEATHERED/DISTURBED: Firm, brown, moist 0.8 239.4	SS	1	75	5		5	21					
	CLAY AND SILT GLACIAL TILL: Trace sand, inferred cobbles and boulders, stiff to very stiff, brown, moist	SS	2	100	13		13	22					
		SS	3	89	23	1.5 238.5	23	20					
		SS	4	100	23		23	22					
	- - - Brown to grey - - -	SS	5	100	20	3 237	20	21		1	6	41	52
		SS	6	100	12	4.5 235.5	12	19					
	6.6 233.6	SS	7		15	6 234	15	16					
	Borehole Terminated at 6.6 m												

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Aug 23/24 at depth of: 1.7 m.
Cave depth after auger removal: Open
Groundwater Elevation: 238.5 m

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Scale: **1 :75**

RECORD OF BOREHOLE No. 102

Project Number: **2100463**
Project Client: **Wildfield Village Landowners Group Inc.**
Project Name: **Wildfield Village**
Project Location: **Town of Caledon, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark: **Geodetic**

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **BH** Northing: **4852541** Date Started: **Jul 16/24**
Reviewed By: **RW/AB** Easting: **600685** Date Completed: **Jul 16/24**

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Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)	FIELD TESTING: Penetration Testing (SPT ○ / DCPT ●)	LAB TESTING: Water Content (%)	Instrumentation Installation
	Geodetic 0.0 239.4									
	0.2 TOPSOIL: 180 mm 239.2									
	WEATHERED/DISTURBED: Stiff, brown, moist 0.8 238.6	SS	1		9	0	239.4	9	17	
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, stiff to very stiff, brown, moist	SS	2	100	15		238.5	15	19	
		SS	3	100	19	1.5		19	19	
	- - - Brown to grey - - -	SS	4	100	22		237	22	22	
		SS	5	100	20	3		20	16	
		SS	6	100	11	4.5	235.5	11	23	
		SS	7	100	13	6	234	13	21	
	6.6 232.8 Borehole Terminated at 6.6 m									

FIELD TESTING: Shear Strength Testing (kPa) — × Other Test; + Pocket Penetrometer; ▲ Field Vane (Intact); △ Field Vane (Remolded); 40 80 120 160

LAB TESTING: △ Combustible Organic Vapour - Hex; ▲ Combustible Organic Vapour - IBL; ◇ Total Organic Vapour (ppm) 100 200 300 400; Atterberg Limits PL — LL

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR | SA | SI | CL

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Aug 23/24 at depth of: 4.8 m.
Cave depth after auger removal: Open
Groundwater Elevation: 234.6 m

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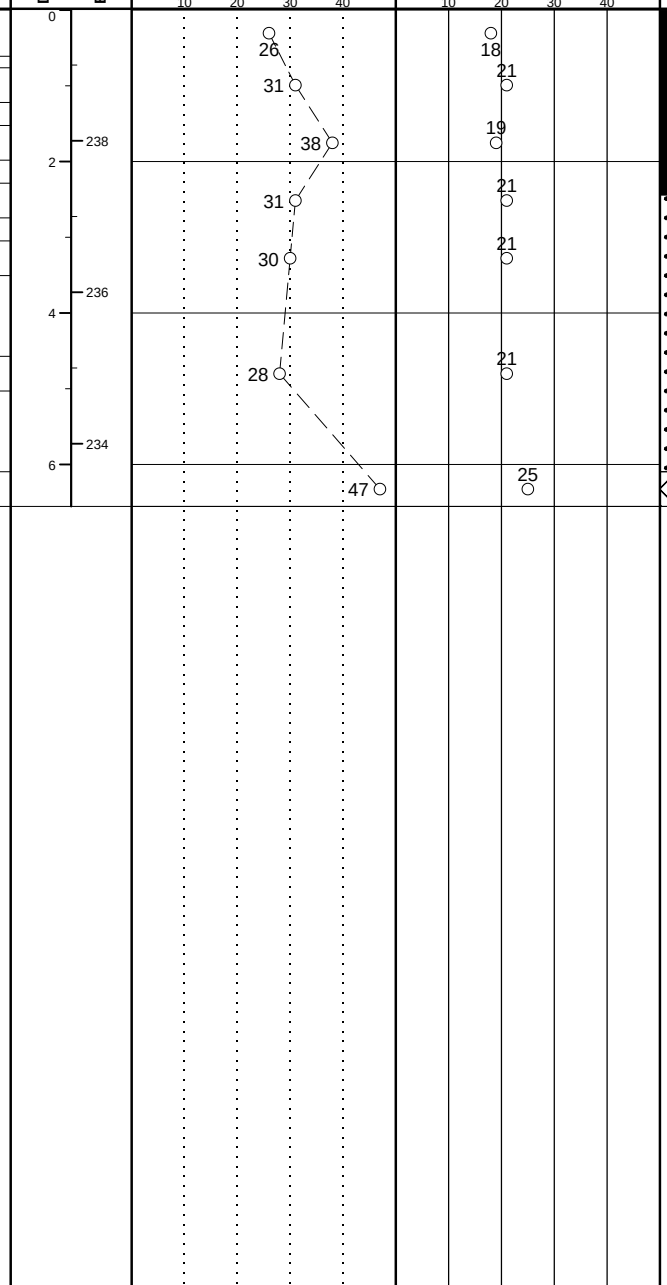
Scale: **1 :75**

RECORD OF BOREHOLE No. 201

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4852895** Date Started: **Dec 06/24**
Reviewed By: **GW** Easting: **600193** Date Completed: **Dec 06/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value
0.0	TOPSOIL: 100 mm	SS	1	80	26
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff to hard, brown to dark brown, moist	SS	2	50	31
		SS	3	100	38
	- - - Light brown - - -	SS	4	100	31
3.0					
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff to hard, light brown, moist	SS	5	100	30
		SS	6	100	28
6.6		SS	7	90	47
	Borehole Terminated at 6.6 m				



Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)

GR | SA | SI | CL

Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Dec 16/24 at depth of: 5.6 m.
Groundwater Elevation: 234.1 m

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Scale **1 :100**

RECORD OF BOREHOLE No. 202

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853084** Date Started: **Dec 06/24**
Reviewed By: **GW** Easting: **600107** Date Completed: **Dec 06/24**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
0.0 / 239.3	TOPSOIL: 75 mm					0	
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff, brown to dark brown, moist	SS	1	80	17		
		SS	2	100	20		
1.5 / 237.8	CLAY AND SILT GLACIAL TILL: Cobbles and boulders, some sand, hard to very stiff, brown and grey to brown, wet to moist	SS	3	100	32	2	238
		SS	4	40	22		
		SS	5	100	28	4	236
		SS	6	100	28		234
	- - - Grey - - -					6	
6.6 / 232.8		SS	7	100	18		
	Borehole Terminated at 6.6 m						

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing — SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour - Hex; Combustible Organic Vapour - IBL; Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits — PL; LL. Water Content (%); 10 20 30 40.

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%) — GR | SA | SI | CL

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 3.6 m.
Cave depth after auger removal: Open
Groundwater Elevation: 235.7 m

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Scale **1 :100**

RECORD OF BOREHOLE No. 203

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853616** Date Started: **Dec 06/24**
Reviewed By: **GW** Easting: **600289** Date Completed: **Dec 06/24**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
0.0 / 246.3	TOPSOIL: 100 mm					0	246
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff, brown to dark brown, moist	SS	1	35	15		
1.5 / 244.8		SS	2	40	20	2	244
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard to very stiff, light brown, moist	SS	3	90	30		
		SS	4	90	34		
		SS	5	100	28	4	242
		SS	6	100	15		
	- - - Wet - -					6	240
6.6 / 239.8		SS	7	100	15		
	Borehole Terminated at 6.6 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour - Hex
▲ Combustible Organic Vapour - IBL
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Dec 16/24 at depth of: 5.9 m.
Groundwater Elevation: 240.4 m

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Scale **1 :100**

RECORD OF BOREHOLE No. 204

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853802** Date Started: **Dec 06/24**
Reviewed By: **GW** Easting: **600464** Date Completed: **Dec 06/24**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
0.0 / 243.0	TOPSOIL: 760 mm	SS	1	20	11	0	
0.8 / 242.2	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff to hard, brown to dark brown, moist	SS	2	30	23	2	242
		SS	3	65	33		
2.3 / 240.7	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff, light brown, moist	SS	4	100	39	4	240
		SS	5	90	25		
		SS	6	90	14	6	238
6.6 / 236.4		SS	7	90	27		
	Borehole Terminated at 6.6 m						

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing — SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour - Hex; Combustible Organic Vapour - IBL; Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits — PL; LL. Water Content (%); 10 20 30 40.

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR | SA | SI | CL

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: Dry
Cave depth after auger removal: Open
Groundwater Elevation:

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Scale **1 :100**

RECORD OF BOREHOLE No. 205

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853881** Date Started: **Dec 09/24**
Reviewed By: **GW** Easting: **600894** Date Completed: **Dec 09/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)
0.0 / 0.2	TOPSOIL: 150 mm					239.0 / 238.8
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff, brown to dark brown, moist	SS	1	100	9	
1.5		SS	2	80	21	237.4
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	100	37	
		SS	4	100	47	
		SS	5	100	73	
		SS	6	100	40	
6.6	- - - Very stiff - - -	SS	7	1	24	232.4
	Borehole Terminated at 6.6 m					

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: Dry
Cave depth after auger removal: Open
Groundwater Elevation:

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Scale **1 :100**
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RECORD OF BOREHOLE No. 206

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853507** Date Started: **Dec 09/24**
Reviewed By: **GW** Easting: **600757** Date Completed: **Dec 09/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)
0.0						240.6
	TOPSOIL: 100 mm WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, hard, brown to dark brown, moist	SS	1	80	37	
		SS	2	65	52	
1.5						239.1
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard to very stiff, light brown, moist	SS	3	90	46	
		SS	4	100	32	
		SS	5	100	29	
	- - - Grey - - -	SS	6	1	13	
6.6		SS	7	100	25	234.1
	Borehole Terminated at 6.6 m					

Shear Strength Testing (kPa): × Other Test; + Pocket Penetrometer; ▲ Field Vane (Intact); △ Field Vane (Remolded)
Penetration Testing: ○ SPT ● DCPT

Lab Testing: △ Combustible Organic Vapour - Hex; ▲ Combustible Organic Vapour - IBL; ◇ Total Organic Vapour (ppm); Atterberg Limits (PL, LL); ○ Water Content (%)

GR	SA	SI	CL
1	7	39	53

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 6.0 m.
Cave depth after auger removal: Open
Groundwater Elevation: 234.6 m

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Scale **1 :100**
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RECORD OF BOREHOLE No. 207D

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853692** Date Started: **Dec 10/24**
Reviewed By: **GW** Easting: **601213** Date Completed: **Dec 10/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)	GR	SA	SI	CL
0.0 / 233.3										
0.2 / 233.1	TOPSOIL: 150 mm	SS	1	60	17					
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, hard, brown to dark brown, moist	SS	2	100	41					
1.5 / 231.8										
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist - - - Wet to moist - - -	SS	3	100	45					
		SS	4	100	34					
		SS	5	100	38					
		SS	6	100	60					
6.1 / 227.2										
	SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	7	100	41					
7.6 / 225.7										
	SILT: Some clay, trace sand, very dense, grey, moist	SS	8	35	100+					
9.6 / 223.7		SS	9	30	100+		0	0	84	16
	Borehole Terminated at 9.6 m									

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 8.6 m.
Cave depth after auger removal: Open
Groundwater Elevation: 224.7 m

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Scale **1 :100**
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RECORD OF BOREHOLE No. 207S

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853691** Date Started: **Dec 10/24**
Reviewed By: **GW** Easting: **61214** Date Completed: **Dec 10/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value
0.0 / 233.4					
0.2 / 233.2	TOPSOIL: 150 mm	SS	1	60	17
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, hard, brown to dark brown, moist	SS	2	100	41
1.5 / 231.8	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	100	45
	- - - Wet to moist - - -	SS	4	100	34
		SS	5	100	38
5.0 / 228.3		SS	6	100	60
	Borehole Terminated at 5.0 m				

DEPTH (m): 0, 2, 4
ELEVATION (m): 232, 230

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40
17 41 45 34 38 60

LAB TESTING
△ Combustible Organic Vapour - Hex
▲ Combustible Organic Vapour - IBL
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40
14 16 16 17 18 16

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

Groundwater depth encountered on completion of drilling: Dry
Cave depth after auger removal: Open
Groundwater depth observed on: Dec 16/24 at depth of: Dry
Groundwater Elevation:

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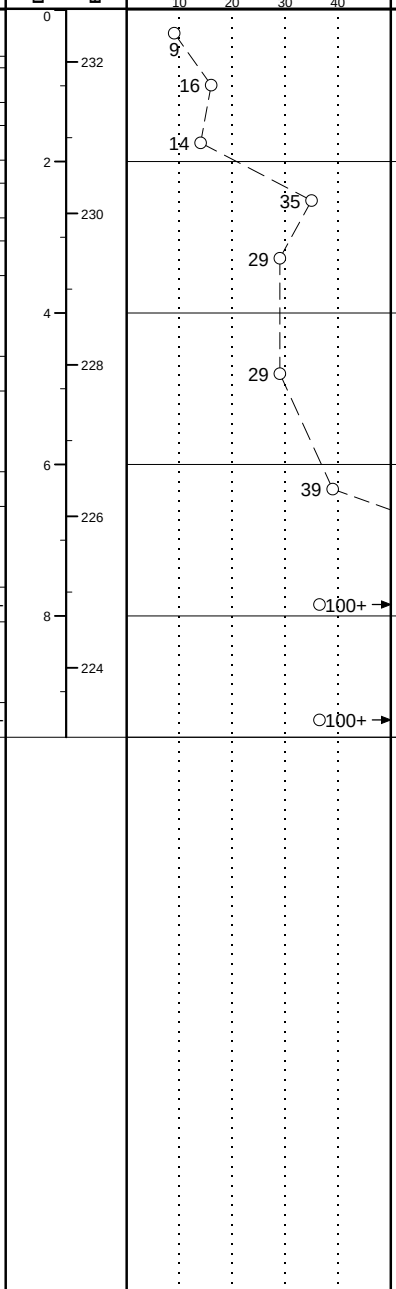
Scale **1 :100**

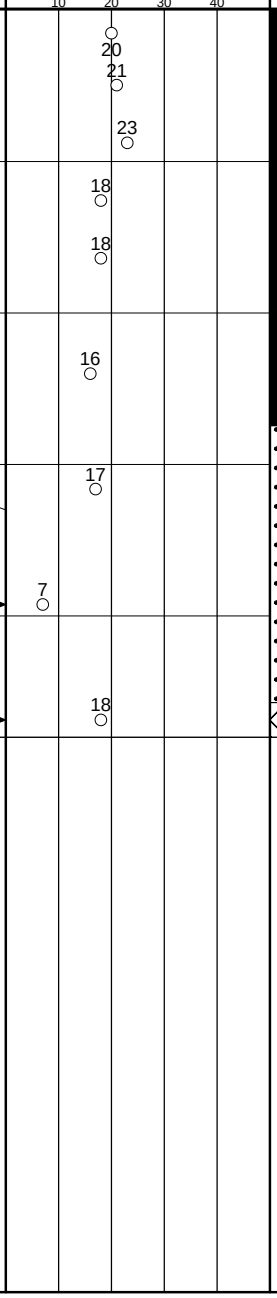
RECORD OF BOREHOLE No. 208

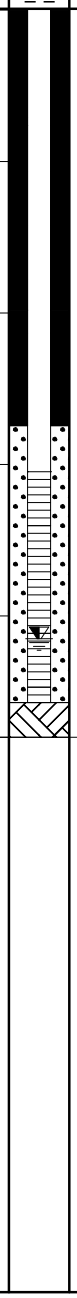
Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853604** Date Started: **Dec 10/24**
Reviewed By: **GW** Easting: **601292** Date Completed: **Dec 10/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)
0.0 / 232.7						
0.2 / 232.5	TOPSOIL: 150 mm					
0.8 / 231.9	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff, brown to dark brown, moist	SS	1	100	9	
		SS	2	80	16	
2.3 / 230.4	SILT: Trace clay, trace sand, compact, grey, dry to moist	SS	3	100	14	
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	4	100	35	
		SS	5	100	29	
		SS	6	35	29	
		SS	7	100	39	
		SS	8	55	100+	
9.6 / 223.1		SS	9	45	100+	
	Borehole Terminated at 9.6 m					







GR	SA	SI	CL
1	14	43	42

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 8.3 m.
Cave depth after auger removal: Open
Groundwater Elevation: 224.4 m

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Scale **1 :100**
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RECORD OF BOREHOLE No. 209

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853550** Date Started: **Dec 10/24**
Reviewed By: **GW** Easting: **601155** Date Completed: **Dec 10/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)
0.0 / 233.8						
0.2 / 233.6	TOPSOIL: 150 mm	SS	1	75	17	
0.8 / 233.0	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff, brown to dark brown, moist	SS	2	85	56	
1.5 / 232.3	SILT: Trace clay, trace sand, very dense, grey, dry to moist	SS	3	90	48	232
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	4	90	49	
		SS	5	100	58	
		SS	6	35	41	230
	- - - Grey - - -	SS	7	100	35	228
7.6 / 226.2	SILT: Trace to some clay, trace sand, very dense, grey, moist	SS	8	45	100+	226
9.6 / 224.2		SS	9	55	100+	
	Borehole Terminated at 9.6 m					

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing: SPT, DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour - Hex; Combustible Organic Vapour - IBL; Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits: PL, LL. Water Content (%); 10 20 30 40.

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR | SA | SI | CL

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 5.4 m.
Cave depth after auger removal: Open
Groundwater Elevation: 228.4 m

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Scale **1 :100**

RECORD OF BOREHOLE No. 210

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853407** Date Started: **Dec 09/24**
Reviewed By: **GW** Easting: **601012** Date Completed: **Dec 09/24**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
	0.0 237.2						
	TOPSOIL: 75 mm WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff to hard, brown to dark brown, moist	SS	1	50	24	0	
	1.5 235.7	SS	2	55	68		236
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	80	40	2	
		SS	4	80	46		234
		SS	5	80	37	4	
		SS	6	30	36		232
	6.6 230.6	SS	7	65	31	6	
	Borehole Terminated at 6.6 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour - Hex
▲ Combustible Organic Vapour - IBL
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

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RECORD OF BOREHOLE No. 211

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4852957** Date Started: **Dec 05/24**
Reviewed By: **GW** Easting: **600537** Date Completed: **Dec 05/24**

Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m)	ELEVATION (m)
0.0 / 242.8	TOPSOIL: 100 mm	SS	1	100	27	0	242
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff to hard, brown to dark brown, moist	SS	2	100	40		
1.5 / 241.3	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	60	45	2	240
	- - - Brown to grey - - -	SS	4	100	36		
		SS	5	100	41	4	238
	- - - Stiff - - -	SS	6	100	18		
6.6 / 236.3		SS	7	100	18	6	
	Borehole Terminated at 6.6 m						

FIELD TESTING
Shear Strength Testing (kPa)
× Other Test
+ Pocket Penetrometer
▲ Field Vane (Intact)
△ Field Vane (Remolded)
40 80 120 160
Penetration Testing
○ SPT ● DCPT
10 20 30 40

LAB TESTING
△ Combustible Organic Vapour - Hex
▲ Combustible Organic Vapour - IBL
◇ Total Organic Vapour (ppm)
100 200 300 400
Atterberg Limits
PL LL
○ Water Content (%)
10 20 30 40

Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)
GR SA SI CL

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: Dry
Cave depth after auger removal: Open
Groundwater Elevation:

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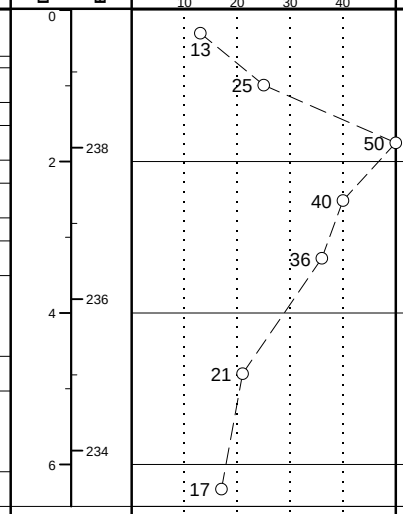
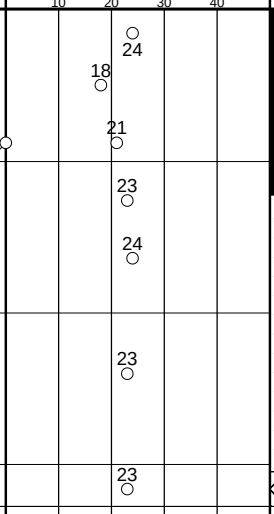
RECORD OF BOREHOLE No. 212

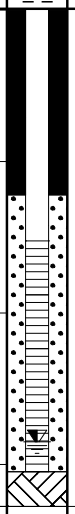
Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853101** Date Started: **Dec 05/24**
Reviewed By: **GW** Easting: **600817** Date Completed: **Dec 05/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value
0.0 / 239.8					
0.2 / 239.7	TOPSOIL: 150 mm				
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, stiff to very stiff, brown to dark brown, moist	SS	1	100	13
		SS	2	100	25
1.5 / 238.3	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard to very stiff, light brown, moist	SS	3	100	50
		SS	4	100	40
		SS	5	100	36
		SS	6	100	21
6.6 / 233.3		SS	7	10	17
	Borehole Terminated at 6.6 m				







Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 5.7 m.
Cave depth after auger removal: Open
Groundwater Elevation: 234.1 m

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RECORD OF BOREHOLE No. 213

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4852776** Date Started: **Dec 05/24**
Reviewed By: **GW** Easting: **600777** Date Completed: **Dec 05/24**

Depth (m)	Elevation (m)	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value
0.0 / 0.2	238.9 / 238.8	TOPSOIL: 150 mm				
		WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff to hard, brown to dark brown, moist	SS	1	75	21
			SS	2	90	46
1.5	237.4	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard to very stiff, light brown, moist	SS	3	100	40
			SS	4	100	45
			SS	5	100	30
			SS	6	1	27
		- - - Moist to wet - - -	SS	7	100	24
6.6	232.4	Borehole Terminated at 6.6 m				

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); 40 80 120 160. Penetration Testing — SPT; DCPT; 10 20 30 40.

LAB TESTING: Combustible Organic Vapour - Hex; Combustible Organic Vapour - IBL; Total Organic Vapour (ppm); 100 200 300 400. Atterberg Limits — PL; LL; Water Content (%); 10 20 30 40.

COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
GR	SA	SI	CL
2	14	35	49

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

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RECORD OF BOREHOLE No. 214

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4852656** Date Started: **Dec 05/24**
Reviewed By: **GW** Easting: **600572** Date Completed: **Dec 05/24**

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LITHOLOGY PROFILE		SOIL SAMPLING					FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)				
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m) / ELEVATION (m)	Shear Strength Testing (kPa): Other Test, Pocket Penetrometer, Field Vane (Intact), Field Vane (Remolded); Penetration Testing: SPT, DCPT	Combustible Organic Vapour - Hex, Combustible Organic Vapour - IBL, Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
	0.0 239.8 0.2 239.6 TOPSOIL: 165 mm													
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, very stiff to hard, brown to dark brown, moist	SS	1	80	20									
	1.5 238.2	SS	2	50	38									
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	100	37	0 / 238								
		SS	4	100	37	2								
		SS	5	100	31	4 / 236								
	- - - Stiff, light brown to grey - - -	SS	6	90	13	6 / 234								
	6.6 233.2	SS	7	100	13									
	Borehole Terminated at 6.6 m													

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: Dry
Cave depth after auger removal: Open
Groundwater Elevation:

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RECORD OF BOREHOLE No. 215

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Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853398** Date Started: **Dec 12/24**
Reviewed By: **GW** Easting: **601526** Date Completed: **Dec 12/24**

Depth (m)	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	Elevation (m)
0.0	TOPSOIL: 125 mm					230.0
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, stiff to hard, brown to dark brown, moist	SS	1	25	13	
		SS	2	55	33	
1.5						228.4
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	100	46	
		SS	4	100	54	
		SS	5	100	37	
		SS	6	1	30	
	- - - Grey - - -	SS	7	45	100+	
	- - - Sand seams, wet - - -	SS	8	65	100+	
9.1						220.8
	SILT: Trace to some clay, trace sand, very dense, grey, moist	SS	9	20	100+	
		SS	10	20	100+	
12.6		SS	11	1	100+	217.3
	Borehole Terminated at 12.6 m					

FIELD TESTING: Shear Strength Testing (kPa) — Other Test; Pocket Penetrometer; Field Vane (Intact); Field Vane (Remolded); Penetration Testing: SPT, DCPT

LAB TESTING: Combustible Organic Vapour - Hex; Combustible Organic Vapour - IBL; Total Organic Vapour (ppm); Atterberg Limits (PL, LL); Water Content (%)

Instrumentation Installation: First Water Strike SS8

COMMENTS & GRAIN SIZE DISTRIBUTION (%): GR, SA, SI, CL

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 6.4 m.
Cave depth after auger removal: Open
Groundwater Elevation: 223.6 m

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Scale **1 :100**

RECORD OF BOREHOLE No. 216

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853041** Date Started: **Dec 11/24**
Reviewed By: **GW** Easting: **601239** Date Completed: **Dec 11/24**

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LITHOLOGY PROFILE		SOIL SAMPLING					FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m) / ELEVATION (m)	Shear Strength Testing (kPa); Penetration Testing (SPT / DCPT)	Combustible Organic Vapour - Hex; Combustible Organic Vapour - IBL; Total Organic Vapour (ppm); Atterberg Limits; Water Content (%)	Instrumentation Installation		GR	SA	SI	CL
0.0 / 235.6	0.2 / 235.4 TOPSOIL: 205 mm					0 / 234								
	0.8 / 234.8 WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, stiff, brown to dark brown, moist	SS	1	80	14		14	20, 17						
		SS	2	90	46		46	12						
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	100	34	2 / 232	34	19						
		SS	4	100	41		41	19						
		SS	5	100	36	4 / 230	36	13						
		SS	6	100	39		39	9						
		SS	7	45	100+	6 / 228	100+	8						
		SS	8	20	100+		100+	10		First Water Strike SS9	3	33	38	26
9.1 / 226.5	CLAYEY SILTY SAND: Trace gravel, hard, grey, very moist	SS	9	20	100+	8 / 226	100+	11						
		SS	10	20	100+	10 / 224	100+	21						
12.2 / 223.4	12.6 / 223.0 SILT: Trace to some clay, trace sand, very dense, grey, moist	SS	11	15	100+	12	100+							
	Borehole Terminated at 12.6 m													

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 3.0 m.
Cave depth after auger removal: Open
Groundwater Elevation: 232.6 m

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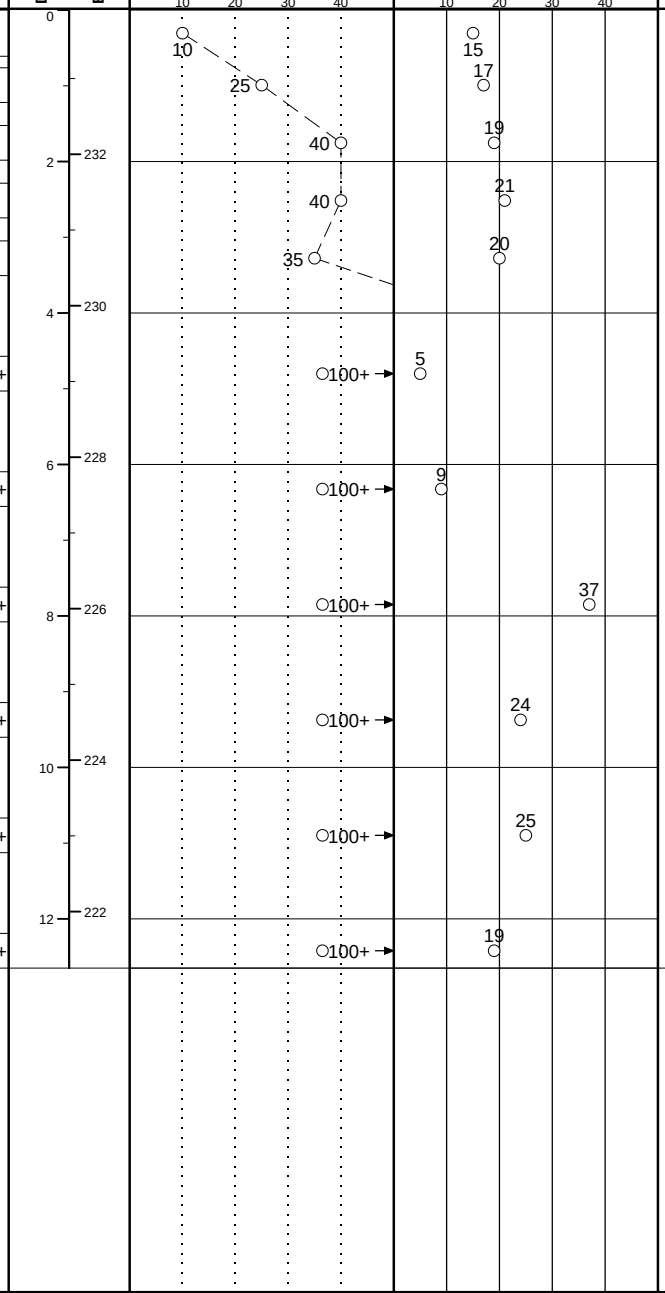
Scale **1 :100**

RECORD OF BOREHOLE No. 217

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4852798** Date Started: **Dec 11/24**
Reviewed By: **GW** Easting: **601237** Date Completed: **Dec 11/24**

Depth	Description	Sample Type	Sample Number	Recovery (%)	SPT "N" Value
0.0 / 233.9					
0.3 / 233.6	TOPSOIL: 150 mm	SS	1	75	10
	WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, stiff, brown to dark brown, moist	SS	2	100	25
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, very stiff to hard, light brown, moist	SS	3	90	40
		SS	4	90	40
		SS	5	100	35
	- - - Some sand, dry - - -	SS	6	35	100+
		SS	7	35	100+
	- - - Wet - - -	SS	8	20	100+
	- - - Shale - - -	SS	9	20	100+
		SS	10	20	100+
12.6 / 221.3		SS	11	1	100+
	Borehole Terminated at 12.6 m				



Instrumentation Installation

COMMENTS & GRAIN SIZE DISTRIBUTION (%)

GR	SA	SI	CL
1	11	37	51

First Water Strike SS8

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on:
Cave depth after auger removal: Open
Groundwater Elevation:

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Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale **1 :100**
Page: **1 of 1**

RECORD OF BOREHOLE No. 218

Project Number: **2408195**
Project Client: **Global Properties Inc.**
Project Name: **Wildfield Village Solmar**
Project Location: **12561 Centreville Creek Rd Bolton, ON**
Drilling Location: **See Borehole Location Plan**
Local Benchmark:

Drilling Method: **Solid Stem Augers** Drilling Machine: **Track Mount**
Logged By: **TA** Northing: **4853116** Date Started: **Dec 12/24**
Reviewed By: **GW** Easting: **601481** Date Completed: **Dec 12/24**

LITHOLOGY PROFILE		SOIL SAMPLING					FIELD TESTING	LAB TESTING		COMMENTS & GRAIN SIZE DISTRIBUTION (%)			
Lithology Plot	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT "N" Value	DEPTH (m) / ELEVATION (m)	Shear Strength Testing (kPa); Penetration Testing (SPT ○, DCPT ●)	Atterberg Limits; Water Content (%)	Instrumentation Installation	GR	SA	SI	CL
0.0 / 230.3	TOPSOIL: 100 mm WEATHERED/DISTURBED: Clayey silt, some sand, trace gravel, inferred cobbles and boulders, stiff, brown to dark brown, moist	SS	1	35	14	0 / 230	14	15					
0.8 / 229.5		SS	2	100	39		39	15					
	CLAY AND SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	3	100	50	2 / 228	50	16					
		SS	4	100	50		50	15					
		SS	5	100	50		50	17					
		SS	6	100	37	4 / 226	37	17					
	- - - Brown to grey - - -	SS	7	45	100+	6 / 224	100+	8					
7.6 / 222.7													
	SILT: Trace to some clay, trace sand, very dense, grey, moist	SS	8	35	100+	8 / 222	100+	15					
		SS	9	30	100+		100+	5					
10.7 / 219.6						10 / 220							
	SILT GLACIAL TILL: Trace sand, trace gravel, inferred cobbles and boulders, hard, light brown, moist	SS	10	35	100+		100+	8					
12.6 / 217.7		SS	11	10	100+	12 / 218	100+	15					
	Borehole Terminated at 12.6 m												

Groundwater depth encountered on completion of drilling: Dry
Groundwater depth observed on: Dec 16/24 at depth of: 3.3 m.
Cave depth after auger removal: Open
Groundwater Elevation: 227.0 m

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Borehole details presented do not constitute a thorough understanding of all potential conditions present and require interpretative assistance from a qualified geotechnical engineer. Also, borehole information should be read in conjunction with the geotechnical report for which it was commissioned and the accompanying 'Explanation of Boring Log'.

Scale **1 :100**

Appendix A2 – Borehole Logs from Other Consultant

Log of Borehole: MW1

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: July 31, 2023 **Project Manager:** EN

Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value (20, 40, 60)	Shear Strength (kPa, 100, 200)	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)	Laboratory Analysis
		Ground Surface	243.24											
0		**Fill** brown to dark brown silty clay, trace wood fragments, stiff, WTPL	0.00 / 242.48		SS	1	60	10			23.9	1	0/0	PHCs, VOCs, PAHs, metals
1		**Possible Fill** Brown to greyish-brown silty clay, firm, APL.	0.76 / 241.72		SS	2	40	12			19.1	2	0/0	
2		**Silty Clay** brown-grey silty clay, very stiff to hard, WTPL to APL	1.52 / 240.95		SS	3	75	26			21.4	3	0/0	
		hard, APL-DTPL	2.29	Riser / Bentonite	SS	4	80	30			19.9	4	0/0	
3					SS	5	90	29			15.4	5	0/0	
4				Silica Sand										
5				Screen	SS	6	90	30			21.1	6	0/0	
6			237.14											
		stiff	6.10 / 236.53		SS	7	0	13			-	7	0/0	
		End of Borehole	6.71											
7														
8														
9														

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 243.24 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: 244.12 masl

Well Casing Size: 5.1 cm

Sheet: 1 of 1

Log of Borehole: BH2

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: July 31, 2023 **Project Manager:** EN

Depth (m)	Description	Elevation (m)
0	Ground Surface	242.47
	Fill brown silty clay, trace sand, trace gravel, trace organics, firm, WTPL	0.00 / 241.71
1	**Silty Clay** brown silty clay, trace sand, grey seams, APL, very stiff	0.76
2		
3	some sand, DTPL-APL	239.42 / 3.05
4		
5	some gravel, hard	237.59 / 4.88
6	very stiff	236.38 / 6.10
7	End of Borehole	235.77 / 6.71
8		
9		

Monitoring Well Details: No Monitoring Well Installed

Sample Type	Sampler #	Recovery (%)	SPT N-Value	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)	Laboratory Analysis
SS	1	60	6	24.1	1	0/0	
SS	2	60	15	22.6	2	0/0	
SS	3	90	28	20.5	3	0/0	
SS	4	90	27	19.5	4	0/0	
SS	5	90	28	15.1	5	0/0	
SS	6	90	31	19.6	6	0/0	
SS	7	90	18	16.5	7	0/0	

Standard Penetration N-Value: 20, 40, 60

Shear Strength △ kPa △: 100, 200

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 242.47 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: NM

Well Casing Size: NA

Sheet: 1 of 1

Log of Borehole: MW3

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: July 31, 2023 **Project Manager:** EN

Depth (m)	Description	Elevation (m)
0	Ground Surface	242.68
	Fill sandy silt, some gravel and brick fragments, trace clay, compact, moist.	0.00 / 241.92
1	**Silty Clay** Brown to dark brown silty clay, trace sand, organic staining, stiff, APL-DTPL.	0.76 / 240.39
2	**Silt** Brown silt, trace clay, trace sand and gravel, compact, very moist	2.29 / 239.63
3	**Silty Clay** Grey silty clay, trace gravel, hard, APL	3.05 / 238.87
4	very stiff, WTPL	3.81 / 237.34
5	occasional saturated grey seams, very stiff to stiff	5.33 / 235.97
6	End of Borehole	6.71
7		
8		
9		

Monitoring Well Details: Riser, Bentonite, Silica Sand, Screen

Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value (20, 40, 60)	Shear Strength (kPa, 100, 200)	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)	Laboratory Analysis
SS	1	35	13			11.6	1	0/0	
SS	2	25	12			19.4	2	0/0	
SS	3	80	21			13.6	3	0/0	
SS	4	75	23			20.4	4	0/0	
SS	5	90	31			21.5	5	0/0	
SS	6	90	18			23.7	6	0/0	PHCs, VOCs, PAHs, metals
SS	7	90	19			22.8	7	0/0	
SS	8	75	17			22.8	8	0/0	
SS	9	90	11			21	9	0/0	

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 242.68 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: 243.66 masl

Well Casing Size: 5.1 cm

Sheet: 1 of 1

Log of Borehole: MW4

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: August 1, 2023 **Project Manager:** EN

Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value (20, 40, 60)	Shear Strength (kPa, 100, 200)	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)	Laboratory Analysis
		Ground Surface	243.41											PHCs, VOCs, PAHs, metals, OCPs
0		***Silt*** Brown Silt, some clay, trace sand and gravel, compact, very moist	0.00		SS	1	40	10			13	1	0/0	
1			241.89		SS	2	75	19			15.1	2	0/0	
		Silty Clay Brown and grey silty clay, trace sand, trace gravel, very stiff, APL-WTPL.	1.52		SS	3	75	21			18.8	3	0/0	
2		oxidation staining	241.12 2.29	Riser	SS	4	75	27			21	4	0/0	
3				Bentonite	SS	5	75	24			21.4	5	0/0	
		grey, very stiff to stiff	239.60 3.81		SS	6	85	19			22.3	6	0/0	
4				Silica Sand	SS	7	90	14			21.9	7	0/0	
5				Screen	SS	8	90	13			21.6	8	0/0	
6			236.70		SS	9	90	14			22	9	0/0	
		End of Borehole	6.71											
7														
8														
9														

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 243.41 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: 244.36 masl

Well Casing Size: 5.1 cm

Sheet: 1 of 1

Log of Borehole: BH5

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: August 1, 2023 **Project Manager:** EN

Depth (m)	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)
0	Ground Surface	240.69								
0	**TopSoil**	0.00								
0	**Silty Clay** Brown and grey, trace to some sand and gravel, very stiff, APL.			SS	1	60	16	18.6	1	0/0
1				SS	2	50	16	21.9	2	0/0
2				SS	3	60	20	21.2	3	0/0
2		238.40								
2	**Silt Till** Brown-grey sandy silt, some clay, some gravel, compact, wet	2.29		SS	4	70	29	19.7	4	0/0
3		237.64								
3	**Silty Clay** Greyish-brown, trace gravel, grey seams, very stiff, APL.	3.05		SS	5	75	19	20.1	5	0/0
4										
4		236.11								
4	Grey, stiff	4.57		SS	6	80	14	19.1	6	0/0
5										
6		234.59								
6	DTPL	6.10		SS	7	90	15	11.1	7	0/0
6		234.13								
6	End of Borehole	6.55								
7										
8										
9										

No Monitoring Well Installed

Standard Penetration N-Value: 20, 40, 60

Shear Strength △ kPa △: 100, 200

Laboratory Analysis

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 240.69 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: NM

Well Casing Size: NA

Sheet: 1 of 1

Log of Borehole: BH6

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: August 1, 2023 **Project Manager:** EN

Depth (m)	Description	Elevation (m)	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)
0	Ground Surface	240.75							
0	**TopSoil**	0.00							
0	**Silty Clay** Brown and grey, trace sand, soft, WTPL.	239.99	SS	1	40	3	28.5	1	0/0
0.76	Trace gravel, firm to very stiff, APL.		SS	2	70	8	17.9	2	0/0
1			SS	3	60	23	19.7	3	0/0
2		238.46							
2.29	grey, trace rock fragments, hard		SS	4	50	31	20.8	4	0/0
3		237.70							
3.05	very stiff		SS	5	60	18	19.9	5	0/0
4		236.48							
4.27	stiff		SS	6	70	11	19.1	6	0/0
5									
6			SS	7	60	12	16.1	7	0/0
6		234.20							
6.55	End of Borehole								
7									
8									
9									

Monitoring Well Details: No Monitoring Well Installed

Standard Penetration N-Value: 20, 40, 60

Shear Strength: kPa 100, 200

Laboratory Analysis

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 240.75 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: NM

Well Casing Size: NA

Sheet: 1 of 1

Log of Borehole: BH7

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: August 1, 2023 **Project Manager:** EN

Depth (m)	Description	Elevation (m)
0	Ground Surface	239.59
	TopSoil	0.00
	Silty Clay	
	Brown and grey silty clay, trace sand and gravel, trace rootlets, firm, WTPL	238.83
1		0.76
	Some grey seams, stiff	238.07
	very stiff, APL	1.52
2		237.31
	hard	2.29
		236.55
3	grey, some sand, very stiff to stiff	3.05
4		
5		
6		233.04
	End of Borehole	6.55
7		
8		
9		

Monitoring Well Details: No Monitoring Well Installed

Sample Type	Sampler #	Recovery (%)	SPT N-Value	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)	Laboratory Analysis
SS	1	50	7	24.1	1	0/0	
SS	2	60	12	22.3	2	0/0	
SS	3	70	21	20.8	3	0/0	
SS	4	70	31	21.1	4	0/0	
SS	5	60	16	20.4	5	0/0	
SS	6	70	10	22.3	6	0/0	
SS	7	80	10	20.8	7	0/0	

Standard Penetration N-Value: 20, 40, 60

Shear Strength △ kPa △: 100, 200

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 239.60 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: NM

Well Casing Size: NA

Sheet: 1 of 1

Log of Borehole: MW8

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: August 3, 2023 **Project Manager:** EN

Depth (m)	Description	Elevation (m)	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)	Laboratory Analysis
0	Ground Surface	237.78								
0	**TopSoil**	0.00	SS	1	60	11	30.3	1	0/0	Metals, OCPs, pH
1	**Silty Clay** Orange-grey, trace sand and gravel, mottled, oxidation staining, stiff, WTPL to APL.		SS	2	40	12	21.8	2	0/0	
1.52	236.25									
2	some gravel, very stiff		SS	3	70	27	20.1	3	0/0	pH and Grain Size
3	234.73		SS	4	60	25	19.6	4	0/0	
3.05	grey, some sand		SS	5	50	23	20.8	5	0/0	
4			SS	6	40	17	21.7	6	0/0	
5			SS	7	60	15	18.8	7	0/0	
6	231.68		SS	8	40	15	21.1	8	0/0	
6.10	stiff		SS	9	60	13	19.2	9	0/0	
7	231.07									
6.71	End of Borehole									
8										
9										

Monitoring Well Details: Riser, Bentonite, Silica Sand, Screen

Standard Penetration N-Value: 20, 40, 60

Shear Strength: kPa 100 200

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 237.78 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: 238.75 masl

Well Casing Size: 5.1 cm

Sheet: 1 of 1

Log of Borehole: BH9

Project #: 325252.002 **Logged By:** CG

Project: Geotechnical Investigation

Client: Paul and Gail Piercey

Location: 12561 Centreville Creek Road, Caledon, Ontario

Drill Date: August 3, 2023 **Project Manager:** EN

Depth (m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Sample Type	Sampler #	Recovery (%)	SPT N-Value	Standard Penetration N-Value (20, 40, 60)	Shear Strength (kPa) (100, 200)	Water Content (%)	Sample ID	Soil Vapour Concentration (ppm)	Laboratory Analysis
		Ground Surface	239.01											
0		**TopSoil**	0.00		SS	1	50	17			22	1	0/0	
		Silty Clay Dark brown silty clay, trace sand and gravel, trace organics, very stiff to hard, APL.												
1					SS	2	10	35			18.8	2	0/0	
			237.49											
		Silt Brown silt, some clay, compact, wet	1.52		SS	3	70	18			21.7	3	0/0	
2			236.73											
		Silty Clay brown-grey silty clay, some gravel, very stiff	2.29		SS	4	80	26			20.8	4	0/0	
			235.96											
3		very stiff to stiff, DTPL	3.05		SS	5	80	26			17.2	5	0/0	
4														
					SS	6	75	13			19.6	6	0/0	
5			233.83											
		APL	5.18											
6					SS	7	100	11			20.2	7	0/0	
			232.46											
		End of Borehole	6.55											
7														

No Monitoring Well Installed

Contractor: Tec Geological Drilling Inc.

Grade Elevation: 239.01 masl

Drilling Method: Split Spoon/Solid Stem Auger

Top of Casing Elevation: NM

Well Casing Size: NA

Sheet: 1 of 1

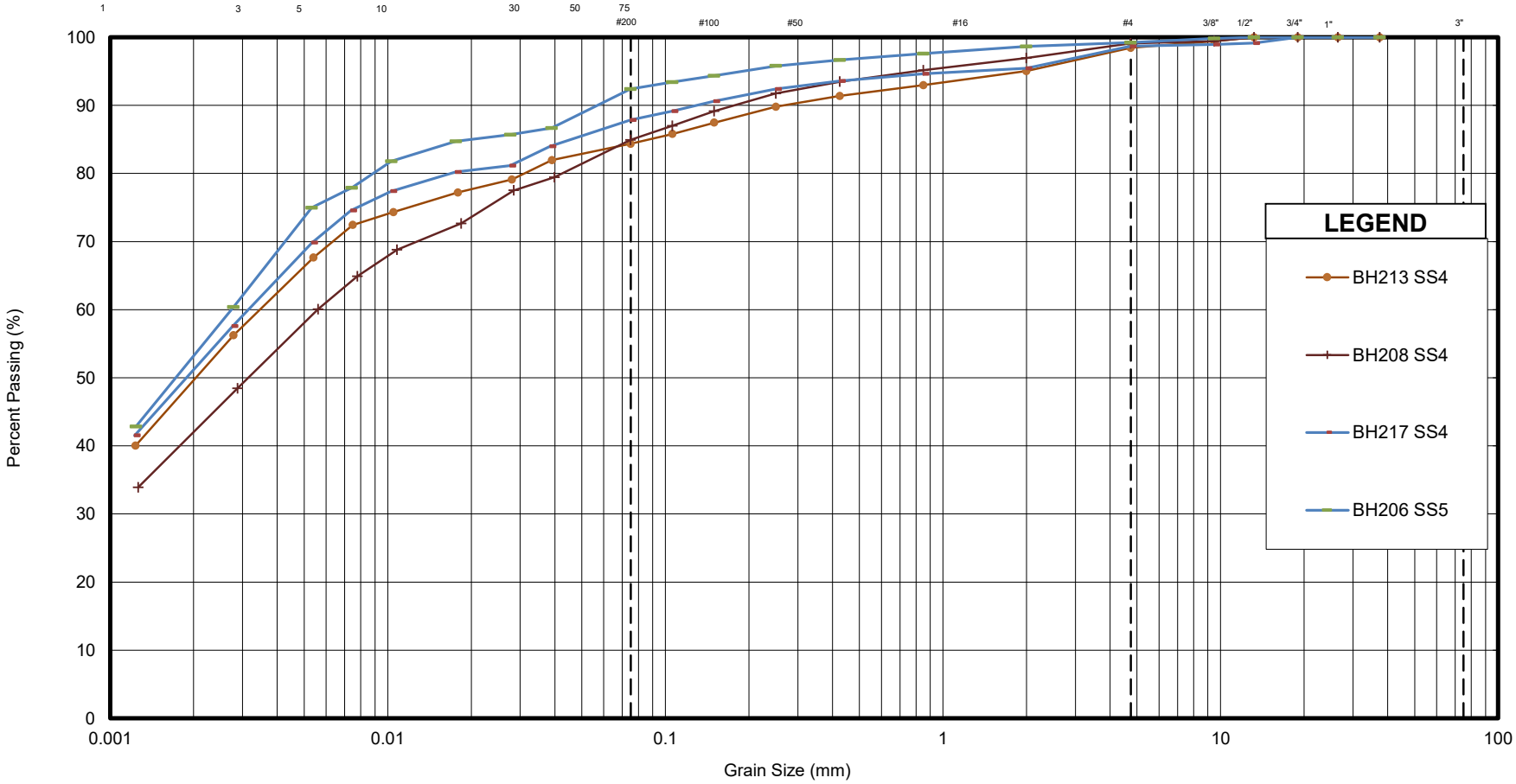
Appendix B Geotechnical Laboratory Data

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse

GRAIN SIZE IN MICROMETERS

SIEVE DESIGNATION (IMPERIAL)



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH213 SS4	SILT AND CLAY, Some Sand, Trace Gravel	2	14	35	49	-	-	0.003	-	-
BH208 SS4	SILT AND CLAY, Some Sand, Trace Gravel	1	14	43	42	-	-	0.006	-	-
BH217 SS4	SILT AND CLAY, Some Sand, Trace Gravel	1	11	37	51	-	-	0.003	-	-
BH206 SS5	SILT AND CLAY, Trace Sand, Trace Gravel	1	7	39	53	-	-	0.003	-	-

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GRAIN SIZE DISTRIBUTION - Wildfield Village

GLACIAL TILL

FIGURE No. B1

REF. No. 2408195

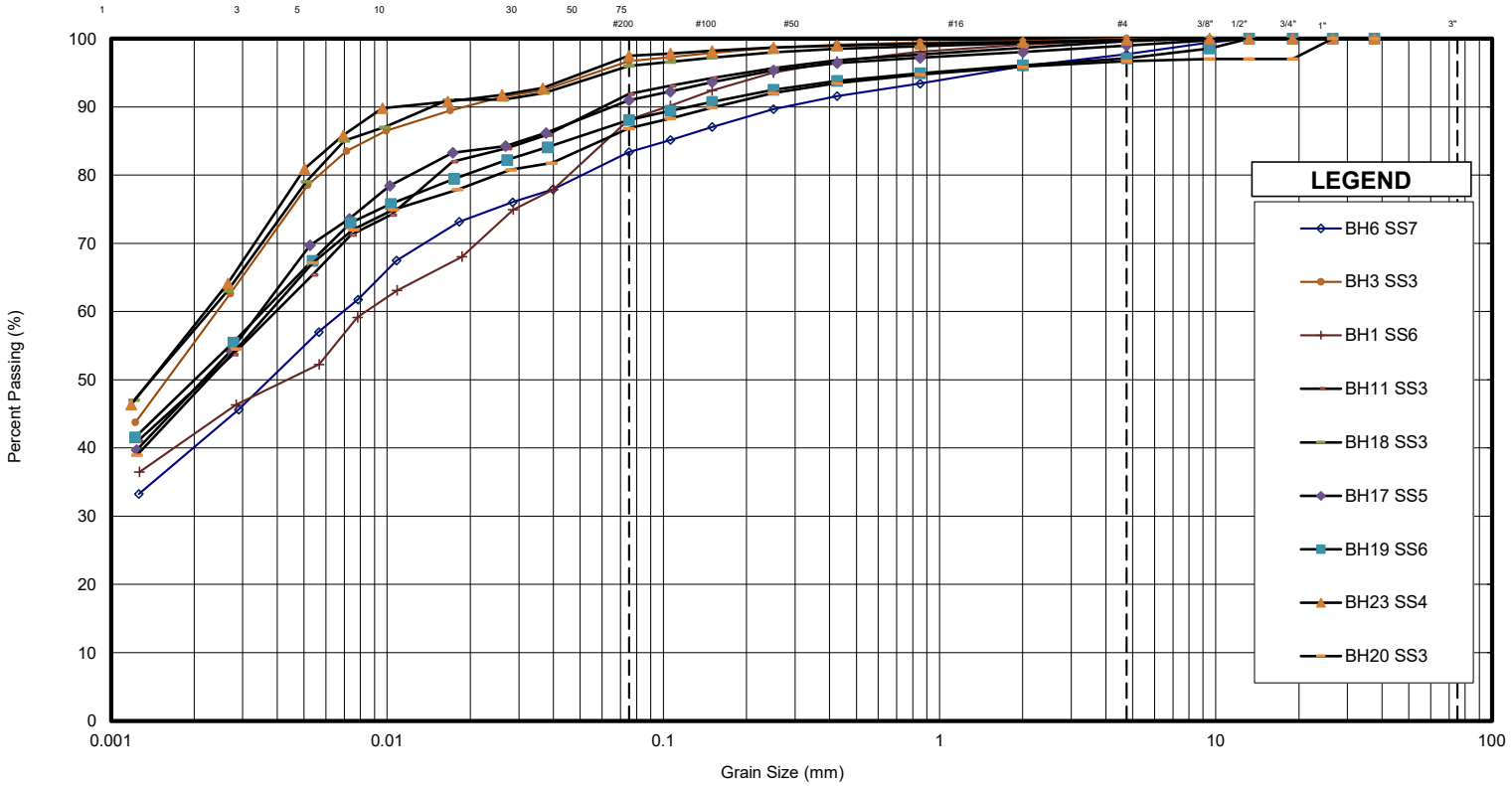
DATE January 2025

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse

GRAIN SIZE IN MICROMETERS

SIEVE DESIGNATION (IMPERIAL)



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH6 SS7	SILT AND CLAY, Some Sand, Trace Gravel	2	14	43	40	-	-	0.007	-	-
BH3 SS3	CLAY AND SILT, Trace Sand	0	3	41	56	-	-	0.002	-	-
BH1 SS6	SILT AND CLAY, Some Sand	0	12	46	42	-	-	0.008	-	-
BH11 SS3	CLAY AND SILT, Trace Sand	0	8	43	49	-	-	0.004	-	-
BH18 SS3	CLAY AND SILT, Trace Sand	0	4	39	57	-	-	0.002	-	-
BH17 SS5	CLAY AND SILT, Trace Sand, Trace Gravel	1	8	42	49	-	-	0.003	-	-
BH19 SS6	CLAY AND SILT, Trace Sand, Trace Gravel	3	9	38	50	-	-	0.004	-	-
BH23 SS4	CLAY AND SILT, Trace Sand	0	2	40	58	-	-	0.002	-	-
BH20 SS3	CLAY AND SILT, Trace Sand, Trace Gravel	3	10	39	48	-	-	0.004	-	-

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GRAIN SIZE DISTRIBUTION - Wildfield Village

COHESIVE GLACIAL TILL

FIGURE No. 1A

REF. No. 2100463

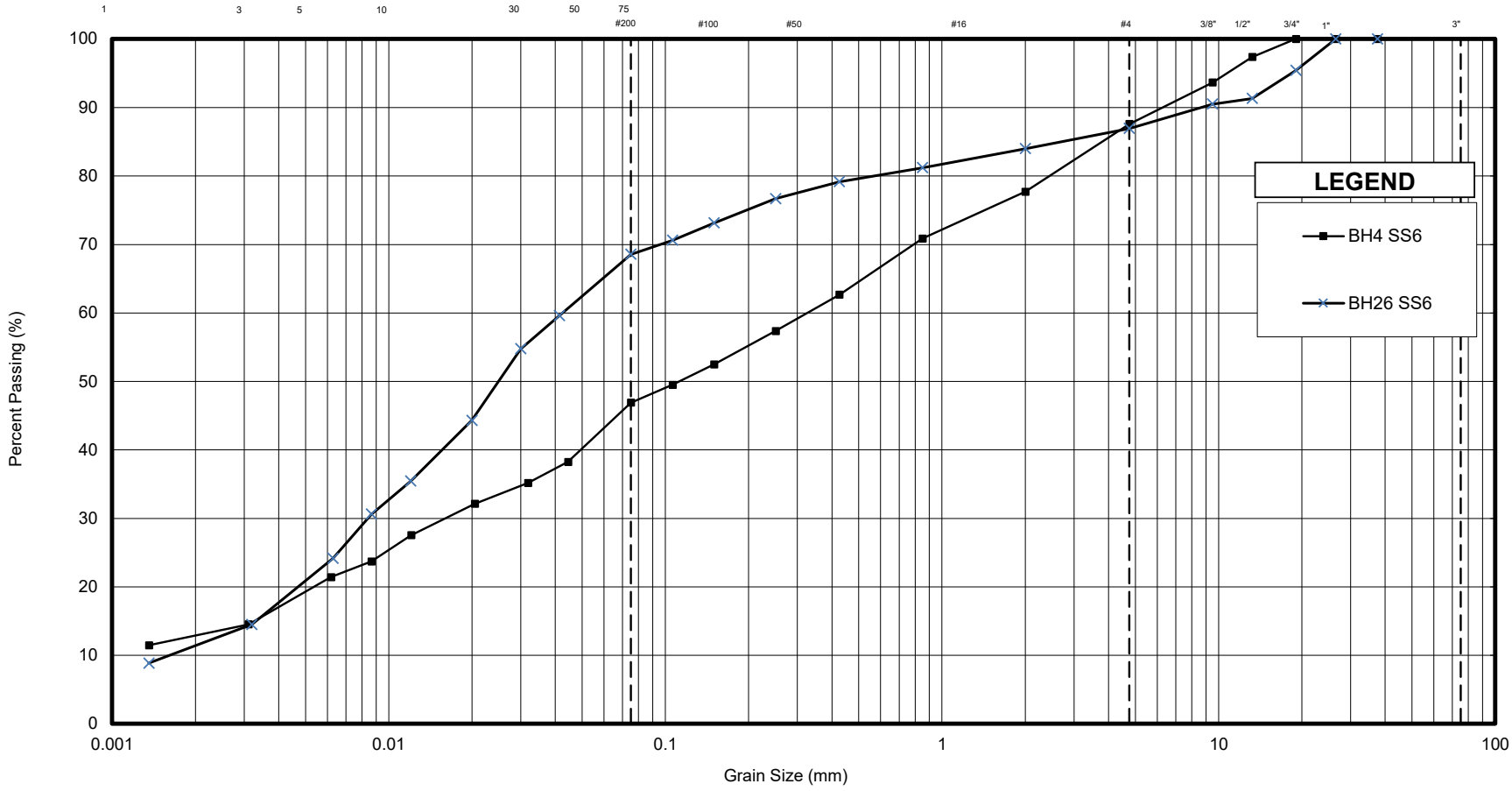
DATE January 2025

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse

GRAIN SIZE IN MICROMETERS

SIEVE DESIGNATION (IMPERIAL)



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH26 SS6	SILT, Some Sand, Some Gravel, Some Clay	13	18	58	11	0.002	0.008	0.042	26.3	1.0
BH4 SS6	SILTY SAND, Some Clay, Some Gravel	12	41	34	13	-	0.016	0.326	-	-

GEI Consultants

GRAIN SIZE DISTRIBUTION - Wildfield Village

COHESIONLESS GLACIAL TILL

FIGURE No. 1B

REF. No. 2100463

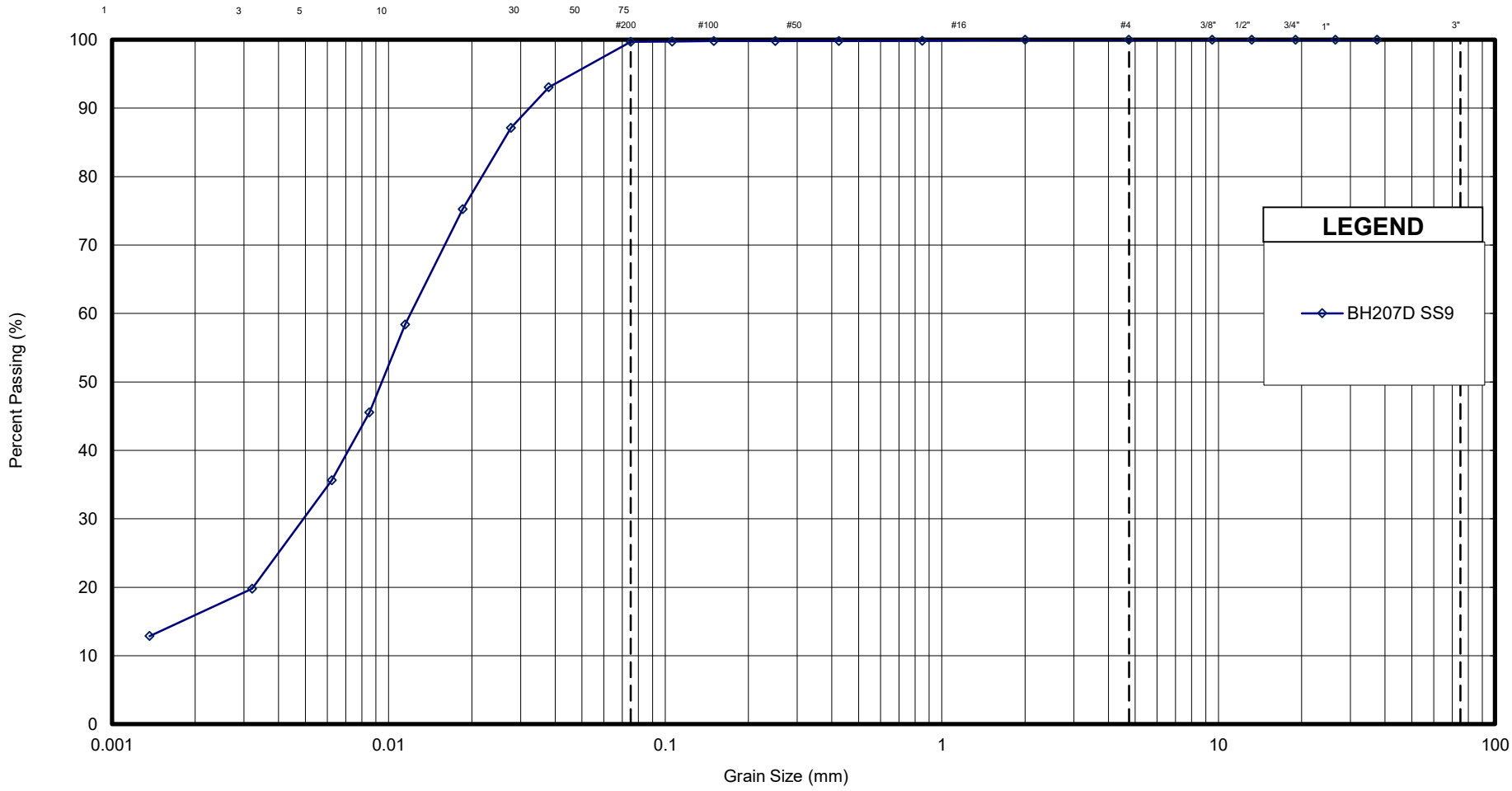
DATE January 2025

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse

GRAIN SIZE IN MICROMETERS

SIEVE DESIGNATION (IMPERIAL)



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH207D SS9	SILT, Some Clay	-	-	84	16	-	0.005	0.012	-	-

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GRAIN SIZE DISTRIBUTION - Wildfield Village

SILT

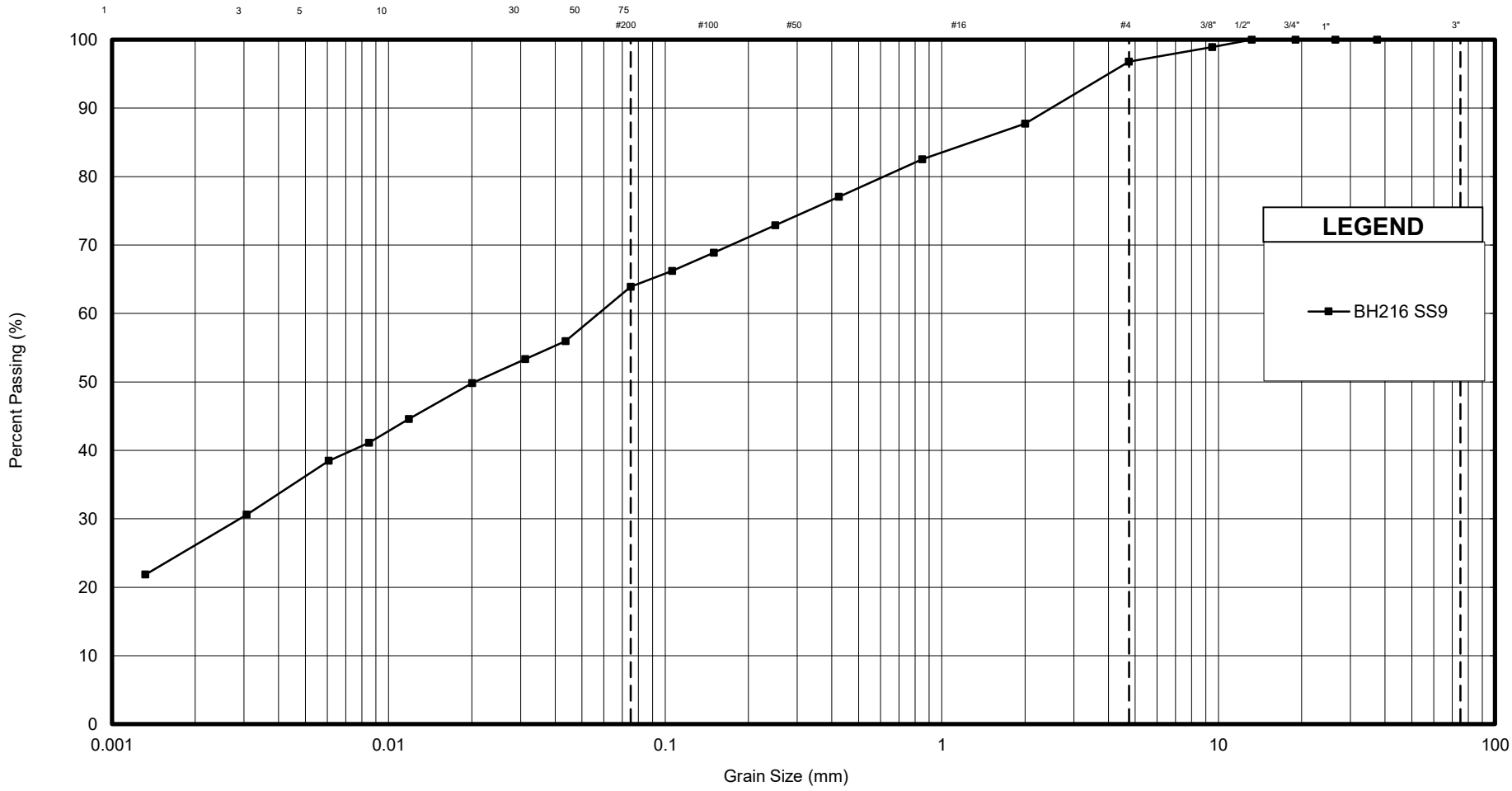
FIGURE No.	B2
REF. No.	2408195
DATE	January 2025

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY AND SILT	SAND			GRAVEL	
	Fine	Medium	Coarse	Fine	Coarse

GRAIN SIZE IN MICROMETERS

SIEVE DESIGNATION (IMPERIAL)



Sample	Description	Gr.	Sa.	Si.	Cl.	D_{10}	D_{30}	D_{60}	C_u	C_c
BH216 SS9	CLAYEY SANDY SILT, Trace Gravel	3	33	38	26	-	0.003	0.057	-	-

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GRAIN SIZE DISTRIBUTION - Wildfield Village

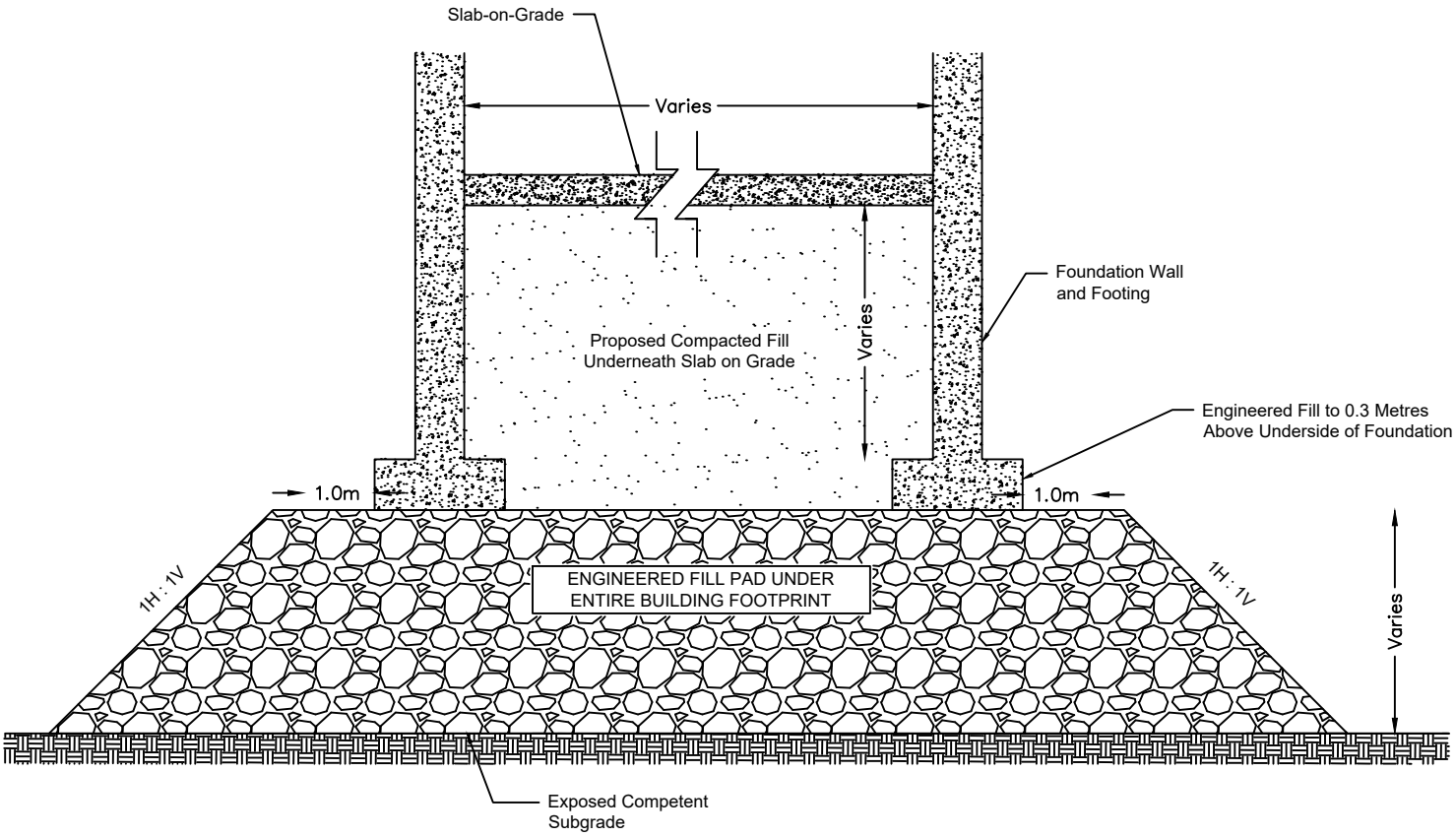
CLAYEY SANDY SILT

FIGURE No.	B3
REF. No.	2408195
DATE	January 2025

Appendix C Typical Details

Notes:

1. Engineered Fill compacted to 100% Standard Proctor Maximum Dry Density (SPMDD) and inspected under the full time supervision of GEI.
2. Engineered fill must be placed in loose lifts of 200 mm or less and then compacted as noted above.
3. Interior non-structural compacted fill compacted to 98% SPMDD with recommended part-time inspection.



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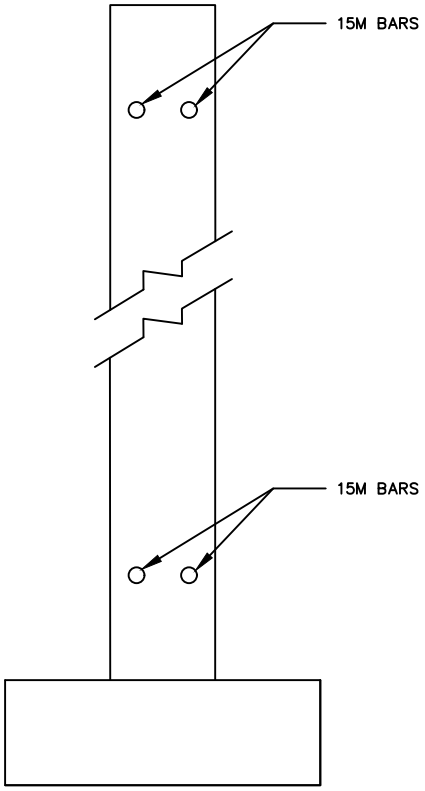
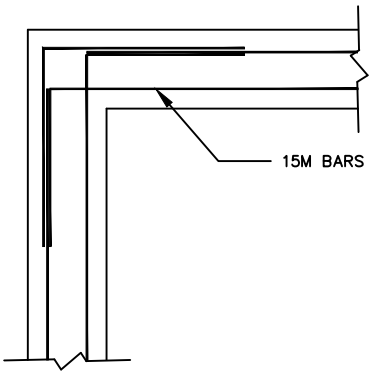
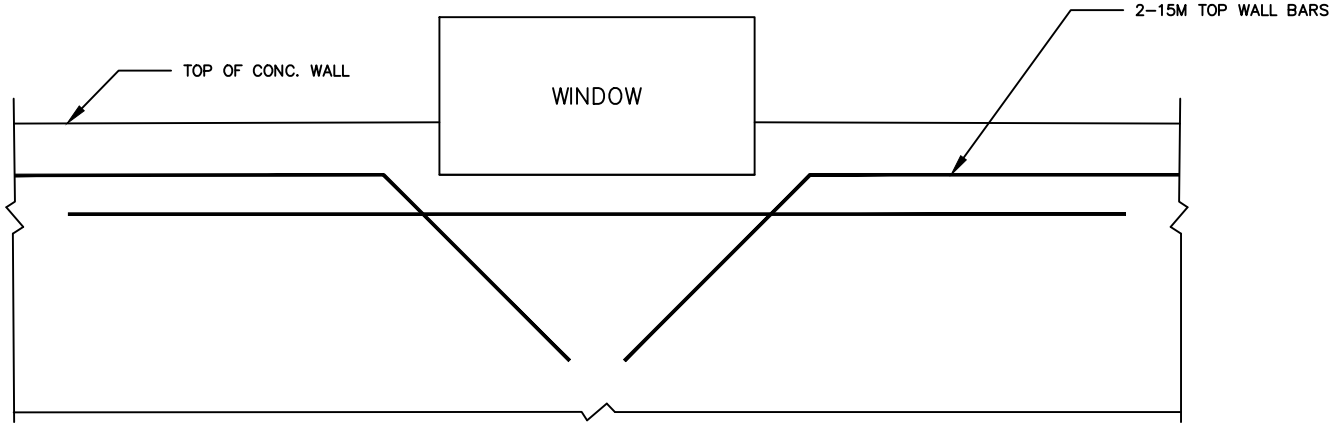
ENGINEERED FILL PAD DIMENSIONING TYPICAL DETAIL



TYPICAL REINFORCED WALL



TYPICAL SPLICING AT CORNERS



TYPICAL WINDOW REINFORCING

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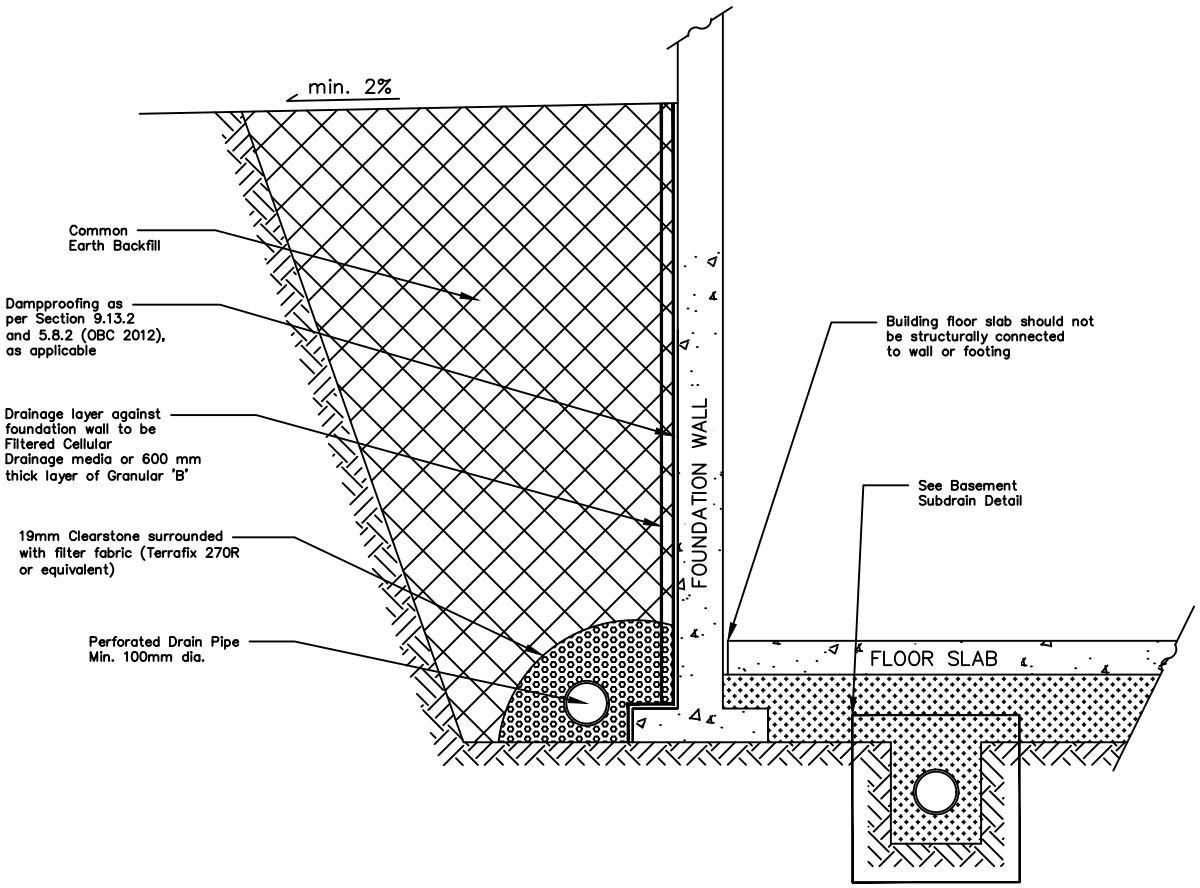
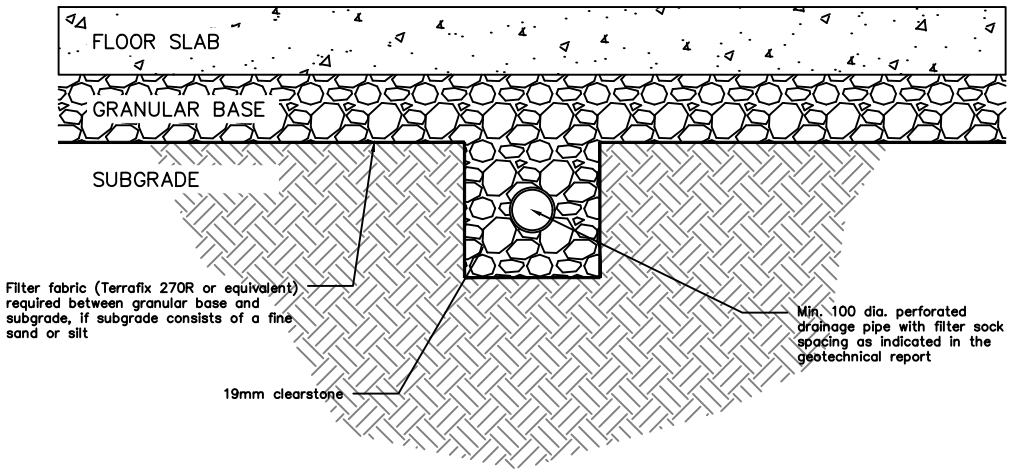
FOUNDATION WALL REINFORCING ON ENGINEERED FILL TYPICAL DETAIL





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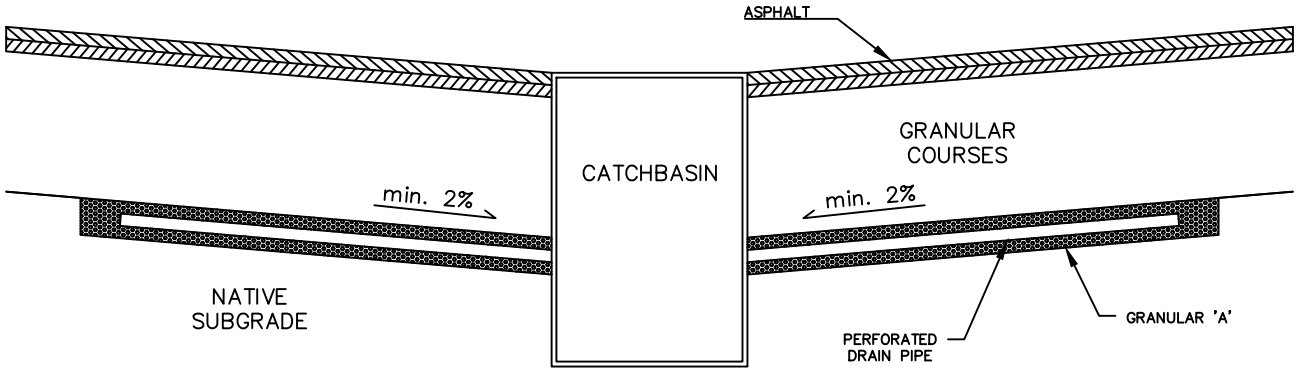
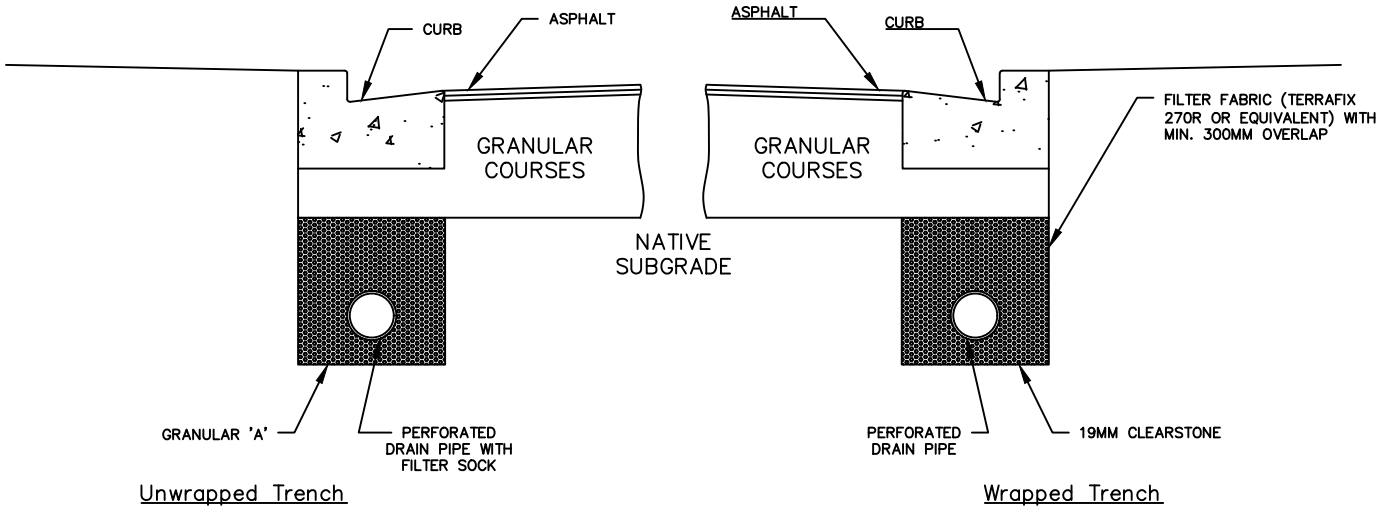
BASEMENT FOUNDATION WALL & SUBFLOOR DRAINAGE TYPICAL DETAIL

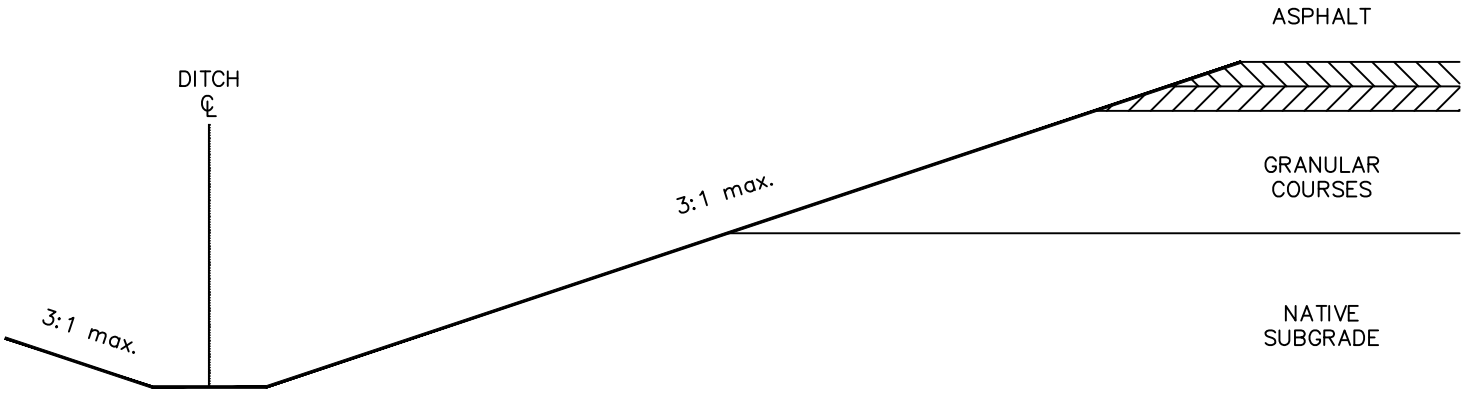




Unwrapped Trench

Wrapped Trench

Urban Cross Sections



Rural Cross Section

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PAVEMENT DRAINAGE ALTERNATIVES TYPICAL DETAILS