



Project No.: BRM-21000267-C0

March 22, 2021

Farah Ibrahim, MES (Pl.), MCIP, RPP, Senior Project Manager - Land Development

**Highfair Investments Inc.**

**c/o Treasure Hill**

1-1681 Langstaff Road

Vaughan, Ontario

L4K 5T3

via Email:

[farahi@treasurehill.com](mailto:farahi@treasurehill.com)

**RE: Slope Assessment  
Proposed Residential Subdivision  
5 - 65 Archerhill Court, Aurora, Ontario**

This letter report presents the results of a slope assessment of the existing slopes at 5 - 65 Archerhill Court, Aurora, Ontario. The subject site is located on the northwest quadrant of the intersection of Bayview Avenue and Vandorf Sideroad. Currently, the subject lands are divided into fourteen (14) residential lots, each developed with an occupied home surrounded by landscaped areas and scattered trees. It is understood that a residential subdivision is proposed for future development. In general, this site is bounded by Vandorf Sideroad to the south, Holland River Valley Trail to the west, a vacant parcel of land to the north, and Bayview Avenue to the east. It is understood that the west, north and northeast sides of the proposed development are close to regulated areas under the jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA), as illustrated in the map included in Appendix A.

The following documents were reviewed in conjunction with the provided drawings:

- Topographic Survey. R-PE Surveying Limited, Ontario Land Surveyors. CAD File No. 20298TP02, Job No. 20-298.
- Preliminary Concept Plan. Part of Lot 76, Concession 1, EYS, Town of Aurora. miCAD Inc. Project No. 20049, Drawing No. 04, dated December 30, 2020.
- Preliminary Geotechnical Investigation, Residential Subdivision Development, 5 to 65 Archerhill Court, Aurora, Ontario. EXP Services Inc. (EXP) Project No. BRM-21000267-A0, dated January 22, 2021.

The preliminary geotechnical investigation by EXP was carried out within the footprint of the proposed residential development. The preliminary concept plan and topographic map are

shown in Appendix B. The borehole location plan and borehole logs of the geotechnical investigation are presented in Appendix C.

## Visual Examination

Visual examination of the existing slopes at the subject site was undertaken on March 10, 2021. The site observations were supplemented with survey information and relevant borehole data. The photographs showing the general conditions of the existing slopes taken during the visual examination are presented in Appendix D.

Our observations and findings during the site examination are summarized as follows:

- **Slope configuration, including location, height and inclination**

North boundary: The slope at the north boundary of this site is a northward slope. The slope is up to about 8 m in height and the slope gradient varies from approximate 12 horizontal to 1 vertical (12H:1V) to 5.5H:1V.

South boundary: Along the south boundary of the site, the southward slope slopes down towards Vandorf Sideroad. The slope is up to about 2 m in height and the slope gradient is approximate 3.5H:1V.

West boundary: Near the west boundary, the ground slopes westward towards Holland River Valley Trail and a tributary of the Holland River. The slope is about 5 to 10 m in height and the slope gradient varies from approximate 9H:1V to 4H:1V. A local slope with a gradient of about 3H:1V with a height of 6 m was observed near the intersection of Vandorf Sideroad and Holland River Valley Trail.

East boundary: The slope at the east boundary of this site is an eastward slope. The slope is up to about 7 m in height and the slope gradient varies from approximate 6H:1V to 5.5H:1V.

Slopes towards Archerhill Court: The slopes from the existing buildings towards Archerhill Court are up to about 4 m in height, and approximate 5H:1V or flatter.

The slope near the west project limit is considered to be critical due to the slope configurations of its maximum height and having the steepest slope gradient.

- **Structures in the vicinity of the slopes**

In general, the distribution of the existing residential buildings is in a horseshoe shape around Archerhill Court. The buildings were observed near or at the physical top of slope. Archerhill Court slopes downward from south to north.

- **Signs of previous landslide, erosion, and other unstable features**

No surficial longitudinal cracking was observed on the slope crests. No sign of previous shallow or deep-seated landslide on the existing slope faces along or perpendicular to the physical top of slopes was discovered during the visual examination. No other tension crack or erosion was observed on the slope faces. No erosion was observed at the slope toes near the tributaries of the Holland River.

- **Soil stratigraphy in exposed slope faces**

Soil stratum exposure was observed near the tributary of the Holland River near the west boundary during the visual examination. Moist to wet clayey soils with some sand content were found at the slope toe near the intersection of Vandorf Sideroad and Holland River Valley Trail. No soil stratum exposure was observed at the other areas.

- **Surface drainage and seepage zone**

Based on the slope configurations, the surface drainage from this site is anticipated to be discharged to the nearby roadways or open spaces. No seepage zone was identified on any existing slope crest, face and toe.

Within the project limits, the surface water is collected by the ditches along Archerhill Court, and discharged through the storm outlet between 65 and 70 Archerhill Court towards the open space and a tributary of the Holland River beyond the north project limit.

- **Vegetative cover**

The slopes are covered with matured trees and small vegetation such as shrubs and weeds. The majority of the tree trunks are near vertical.

- **Watercourse features**

Tributaries of the northward flowing Holland River were observed at the slope toes on the west, north and northeast sides of the proposed development. During the visual examination, the bankful width of the stream near the west boundary was about 2 to 3 m. The water depth of the stream was less than 0.4 m at the time of the investigation.

- **Proposed development**

The proposed residential subdivision includes 146 residential lots for the future development. Based on the concept plan, the footprint of the proposed lots occupies the majority of the site, and open spaces were kept on the west, north and northeast sides of the subject site for the regulated area of the LSRCA. The distance from the proposed residential lots to the tributaries of Holland River is from about 50 to 150 m.

## Subsurface Condition Summary

In the previous geotechnical investigation, a total of seven (7) boreholes (designated as Boreholes 1 through 7) were drilled to a depth of 8.2 m below existing grade. The approximate borehole locations and logs are shown in Appendix C.

Reference is made to the aforementioned geotechnical report by EXP for detailed soil profiles encountered on site. The following is a brief description of the subsurface conditions encountered during the previous investigation within the study area.

### Soil Conditions

#### **Topsoil**

Topsoil was encountered from ground surface in all boreholes. The thicknesses of topsoil ranged from 125 to 225 mm.

#### **Fills**

Dark brown to brown cohesive fills / reworked parent soils were encountered below the topsoil in Boreholes 1, 3, 6 and 7. The fills were found to extend to elevations ranging from 276.8 to 268.5 m. It should be noted that a layer of topsoil with a thickness of 0.7 m was observed below the fills in Borehole 1; and in Borehole 6, the cohesive fills are overlain by a layer of 0.1 m thick non-cohesive fills.

With the recorded SPT N-values ranging from 3 to 12 blows/0.3 m, the fills were in a typical loose state of compactness. The fills have measured moisture contents from 16 to 32 percent of dry weight indicating a moist condition. The high moisture contents are likely due to the presence of organic matters. The measured unit weight of the fills was from 18.8 to 21.5 kN/m<sup>3</sup>.

#### **Silty Clay**

A layer of silty clay was encountered below the fills in Boreholes 1, 3, 6 and 7, and encountered below the topsoil in the remaining boreholes. This soil unit extended to the borehole termination elevations from 269.7 to 263.8 m.

This silty clay deposit is brown to grey in colour and has a typical stiff to very stiff consistency, with the SPT N-values ranging from 3 to in excess of 50 blows/0.3 m. The moisture contents within this deposit were found to range from 17 to 28 percent of dry weight, indicating generally a moist to wet condition. The measured unit weight of the representative samples ranged from 19.0 to 21.8 kN/m<sup>3</sup>.

## Groundwater Conditions

Groundwater levels were observed in the open boreholes during the course of the fieldwork. Water level monitoring was also carried out in the installed monitoring wells in the previous geotechnical investigation. Short-term observations in the monitoring wells are summarized in the following table.

Borehole No.	Depth/Elevation of Monitoring Well Tip (m)	Screened Strata	Date of Water Level Measurement (mm/dd/yyyy)	Measured Water Level Depth/Elevation (m)
2	7.6 / 268.0	Silty clay	01/20/2021	2.2 / 273.4
5	7.6 / 270.4	Silty clay	01/20/2021	0.7 / 277.3
6	7.6 / 268.7	Silty clay	01/20/2021	3.6 / 272.8

Based on the locations and configurations of the monitoring wells, and the observation of groundwater at the time of the investigation, the groundwater level was envisaged to vary with ground surface topography, and towards the streams near the west, north and northeast project limits.

## Slope Stability, Toe Erosion Allowance and Setback

### Slope Stability

Based on the results of visual examination and the topographic study, in relative terms, the slope near the west boundary is considered to be the steepest and therefore, selected for slope stability assessment. The maximum height of the slope in this area is about 10 m, and the slope gradient is 3H:1V or flatter. The minimum distance from the proposed residential lots to the nearby watercourse is greater than 50 m.

According to Watershed Development Guideline, LSRCA (June 1, 2020), stable slope allowance is determined to be 3H:1V. At the critical location of the southwest corner of this site, as the maximum slope height is about 7 m, the stable top of slope is estimated to be 21 m from the slope toe / stream, with an imaginary slope of 3H:1V towards the Holland River Valley Trail.

### Toe Erosion Allowance and LSRCA Required Setback

The regression of the slope toe, due to erosion, over the design life of a typical structure (typically 100 years for long-term) is compensated in the Ontario Ministry of Natural Resources (MNR) Policy Guidelines by the introduction of a toe erosion allowance which is measured as a horizontal distance from the existing river / stream bank. The toe erosion allowance is based on the type of the slope toe material and the stream characteristics including the distance between the stream edge and the slope toe, bankfull width as well as the current toe erosion condition. A

toe erosion allowance is required in areas where the watercourse position is within 15 m of the slope toe.

Near the west boundary of the proposed development, especially at the southwest corner, the distance from the existing slope toe to the stream is less than 15 m. Therefore, in general, a toe erosion allowance should be considered. For cohesive soils where no active erosion is evidenced, the MNR Policy Guidelines recommends a minimum toe erosion allowance of 1 m for a stream with bankfull width less than 5 m.

According to Watershed Development Guideline, LSRCA (June 1, 2020), all development shall be setback the greater value of either a minimum of 15 m from the stable slope line or top of bank.

### **Conclusion**

Based on the afore-mentioned stable slope allowance, toe erosion allowance and LSRCA required setback, the total setback from the existing stream is tabulated in the following table.

<b>Maximum Distance of Stable Top of Slope (m)</b>	<b>Toe Erosion Allowance (m)</b>	<b>LSRCA Required Setback (m)</b>	<b>Total Setback from the Existing Stream (m)</b>
30	1	15	46

Based on the tabulated values, the maximum total setback is about 46 m from the existing stream. This value is less than the minimum distance from the proposed residential lots to the stream, i.e. 50 m. Therefore, the proposed concept plan meets the LSRCA requirements for watershed development.

### **Closure**

The comments and recommendations are based on our understanding of the design features of the proposed development. If actual features vary or changes are made, we should review the changes in order to modify our recommendations, as required.

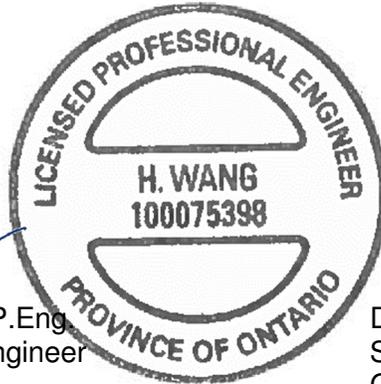
We trust that this letter meets your immediate requirements. Should you have any queries or if you require any further assistance, please do not hesitate to contact this office.

Yours truly,

**EXP Services Inc.**



Hongliu Wang, Ph.D., P.Eng.  
Senior Geotechnical Engineer  
Earth & Environment



David Dennison, P. Eng.  
Senior Project Manager  
Geotechnical Division

Stephen S. M. Cheng, P.Eng.  
Discipline Manager  
Geotechnical Division

## **APPENDICES**

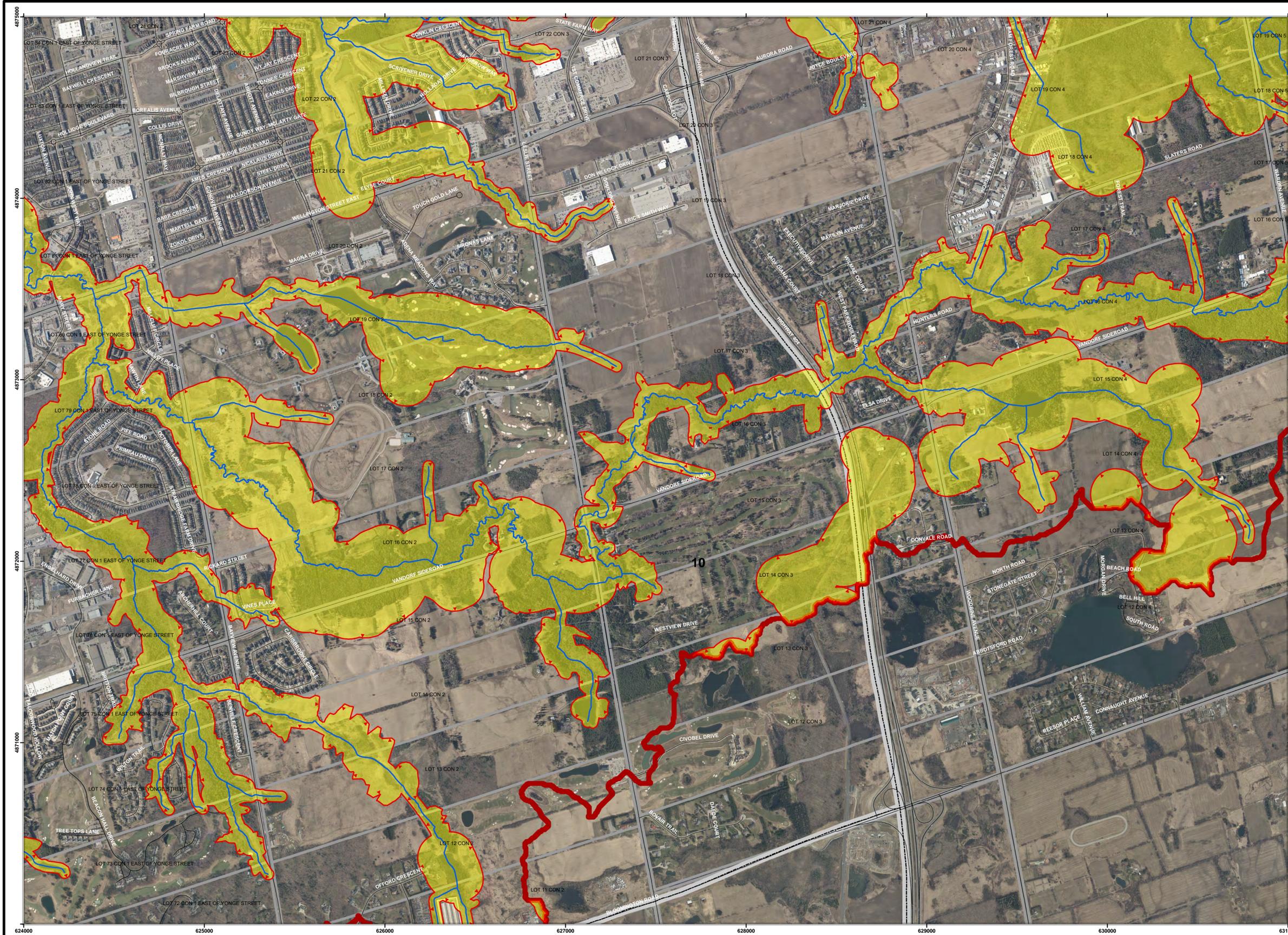
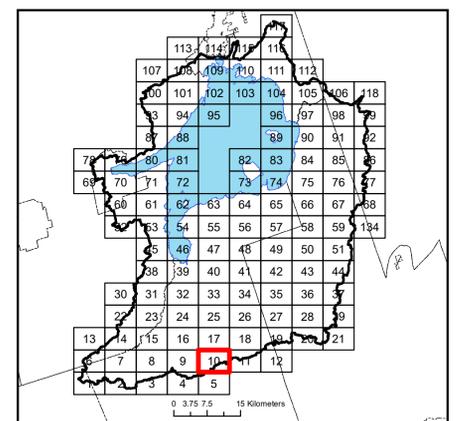
## **APPENDIX A**

### **LSRCA. Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses. Sheet No. 10**



**Legend**

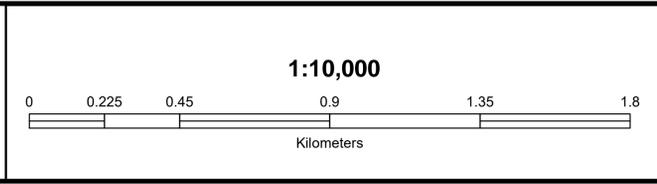
-  WATERCOURSE
-  ROAD
-  REGULATION AREA
-  LOT\_CONCESSION
-  LSRCA JURISDICTION
-  MUNICIPAL BOUNDARY
-  LAKE SIMCOE



THIS PRODUCT WAS PRODUCED BY THE LAKE SIMCOE REGION CONSERVATION AUTHORITY AND SOME INFORMATION DEPICTED ON THIS MAP MAY HAVE BEEN COMPILED FROM VARIOUS SOURCES. WHILE EVERY EFFORT HAS BEEN MADE TO ACCURATELY DEPICT THE INFORMATION, DATA MAPPING ERRORS MAY EXIST. THIS MAP WAS PRODUCED FOR ILLUSTRATIVE PURPOSES ONLY. © LAKE SIMCOE REGION CONSERVATION AUTHORITY, 2019. ALL RIGHTS RESERVED. THE FOLLOWING DATA SETS OF MUNICIPAL BOUNDARY, LOT\_CONCESSION ARE © QUEEN'S PRINTER FOR ONTARIO (2018). REPRODUCED WITH PERMISSION. ORTHOPHOTOCOPYRY 2016, 2018, 2019 © FIRST BASE SOLUTIONS INC.

RIVERINE HAZARDS WERE BASED ON EXISTING FLOOD PLAIN MAPPING. FLOOD PLAIN LIMITS WHERE ENGINEERING PRODUCTS DID NOT EXIST WERE DETERMINED BY LSRCA STAFF. RIVERINE EROSION HAZARDS WERE DETERMINED BY LSRCA STAFF. A 15-METER SETBACK WAS APPLIED FROM THE LIMITS OF ALL RIVERINE HAZARDS. SHORELINE FLOOD HAZARDS WERE DETERMINED BY LSRCA STAFF BY APPLYING THE EQUATIONS PREVIOUSLY DEVELOPED THROUGH AN ENGINEERING STUDY. SHORELINE EROSION HAZARDS WERE DETERMINED BY LSRCA STAFF. SETBACKS OF 120-M FROM PROVINCIALLY SIGNIFICANT WETLANDS (PSWs) AND 30-M FROM ALL OTHER WETLANDS WERE APPLIED. MEANDERBELT WIDTHS WERE ESTABLISHED THROUGH A STUDY. IN THE ABSENCE OF A STUDY, MEANDERBELT WIDTHS WERE CALCULATED AS 20 TIMES THE BANKFULL WIDTHS ESTIMATED FROM THE CORRESPONDING DRAINAGE AREAS.

PLEASE REFER TO "REFERENCE MANUAL FOR DETERMINATION OF REGULATION LIMITS" (LSRCA, 2005) OR CONTACT LSRCA (905-895-1281) FOR MORE INFORMATION



NO.	REVISIONS	DATE	CHECKED	DATE	APPROVED
0	ONTARIO REGULATION 179/06 APPROVED	MAY 8, 2006	CHECKED-NATURAL HERITAGE	KB	
1	Mapping revisions to the regulation limit have been completed as referenced in the document "Regulation Limit Changes, May 2007"	SEPT. 28, 2007	CHECKED-REGULATIONS	JP	
2	Mapping revisions to the regulation limit have been completed as referenced in the document "Regulation Limit Changes, April 2009"	APRIL 24, 2009	CHECKED-ENGINEERING	JP	
3	Ortho imagery changed to reflect most recent imagery available. Mapdata disclaimer changed to reflect most current disclaimers in use.	JULY 26, 2013	CHECKED-ENGINEERING	JP	
4	Mapping revisions to the regulation limit have been completed as referenced in the document "Regulation Limit Changes, September, 2014"	SEPT. 26, 2014	APPROVED	TH	
5	Mapping revisions to the regulation limit have been completed as referenced in the document "Regulation Limit Changes, April, 2019"	APRIL 1, 2019	DATE:	JANUARY 2006	
6	Mapping revisions to the regulation limit have been completed as referenced in the document "Regulation Limit Changes, April, 2019"	APRIL 1, 2019	DATE:	JANUARY 2006	

**(ONTARIO REGULATION 97/04)**

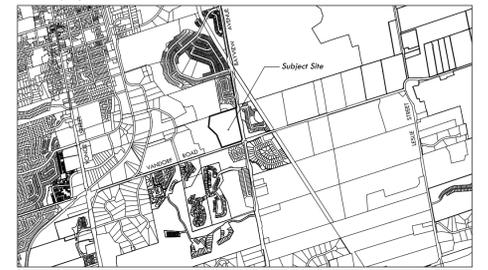
**REGULATION OF DEVELOPMENT, INTERFERENCE WITH WETLANDS AND ALTERATIONS TO SHORELINES AND WATERCOURSES.**

ONTARIO REGULATION 179/06

PLOT DATE: APRIL 2019      FILE LOCATION:      SHEET NO. **10** OF **134**

## **APPENDIX B**

### **Preliminary Concept Plan and Topographic Map**



Key Plan 1:40 000

**Schedule of Land Use**

PROPOSED LAND USE	Legend	REQUIREMENT	YIELD	ha	AREA
1) Single Detached Lots (18.3m (60') min.)		15	run/m	(run/m)	run/m
2) Single Detached Lots (13.7m (45') min.)		0	run/m	(run/m)	run/m
3) Single Detached Lots (12.1m (40') min.)		54	run/m	(run/m)	run/m
4) Single Detached Lots (11.0m (36') min.)		77	run/m	(run/m)	run/m
5) Park - 5%		-	run/m	(run/m)	run/m
6) Open Space / Potential S.W.M. Pond		4	run/m	(run/m)	run/m
7) Roads		-	run/m	(run/m)	run/m
<b>TOTALS</b>		<b>146</b>	<b>4</b>	<b>12,333</b>	<b>[30.47] 100</b>

- PLAN NOTES:
- Limits of Developable Area are subject to ground truthing by LSRC and site walks.
  - Open Space Block A has been extrapolated from existing subdivision adjacent north of this plan, and follows Centre 270, consistent with Bear Lot Lines of Lots fronting Strawberry Farm Dr and Colyton Cr north of this plan.
  - Proposed Lots backing onto Bayview Ave and Vandorf Rd have been provided 38.0m (125') Lot Depths.
  - Proposed Premium Lots backing onto KNHF lands have been provided 60.80m (200') Lot Depths.
  - ...

**Additional Information**

- REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT
- a) Shown on Draft Plan and Surveyor's Certificate
  - b) Shown on Draft and Key Plans
  - c) Shown on Key Plan
  - d) Land to be used in accordance with Land Use Schedule
  - e) Shown on Draft Plan
  - f) Shown on Draft Plan

**Owner's Authorization**

I/We, being the Registered Owner of the Subject Lands, hereby Authorize Treasure Hill Homes to prepare and submit this Draft Plan of Subdivision for Approval.

Signed: Jaron Weiner, Vice-President Date: \_\_\_\_\_  
 Treasure Hill Homes

**Surveyor's Certificate**

I hereby Certify that the Boundaries of the Subject Lands and their relationship to the Adjacent Lands are accurately and correctly shown on this Plan.

Signed: Name, O.L.S. Date: MONTH 00, 2020  
 Surveying Company, Ontario Land Surveyors

No.	PLAN	REVISION	BY	DATE
02	...	...	...	...
01	01	Submission	mvs	2020-09-25

REVISIONS

SOURCES

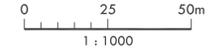
Base information comprised of Plan of Survey by Surveying Company to be named, Job No. m-mmm, and Parcel Mapping obtained from Teramet - LRO65 York and York Insights Open Data GIS. Aerial Photography has been taken from YorkMaps.

The Contractor shall verify and be responsible for all dimensions. Do not scale the drawing; any errors or omissions shall be reported to Treasure Hill Homes without delay. The Copyright to all designs and drawings are the property of Treasure Hill Homes. Reproduction or use for any purpose other than that authorized by Treasure Hill Homes is forbidden.

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**PRELIMINARY CONCEPT PLAN**

PART OF LOT 76, CONCESSION 1, EYS  
 [ ARCHERHILL COURT PROPERTIES ]  
 TOWN OF AURORA  
 REGIONAL MUNICIPALITY OF YORK

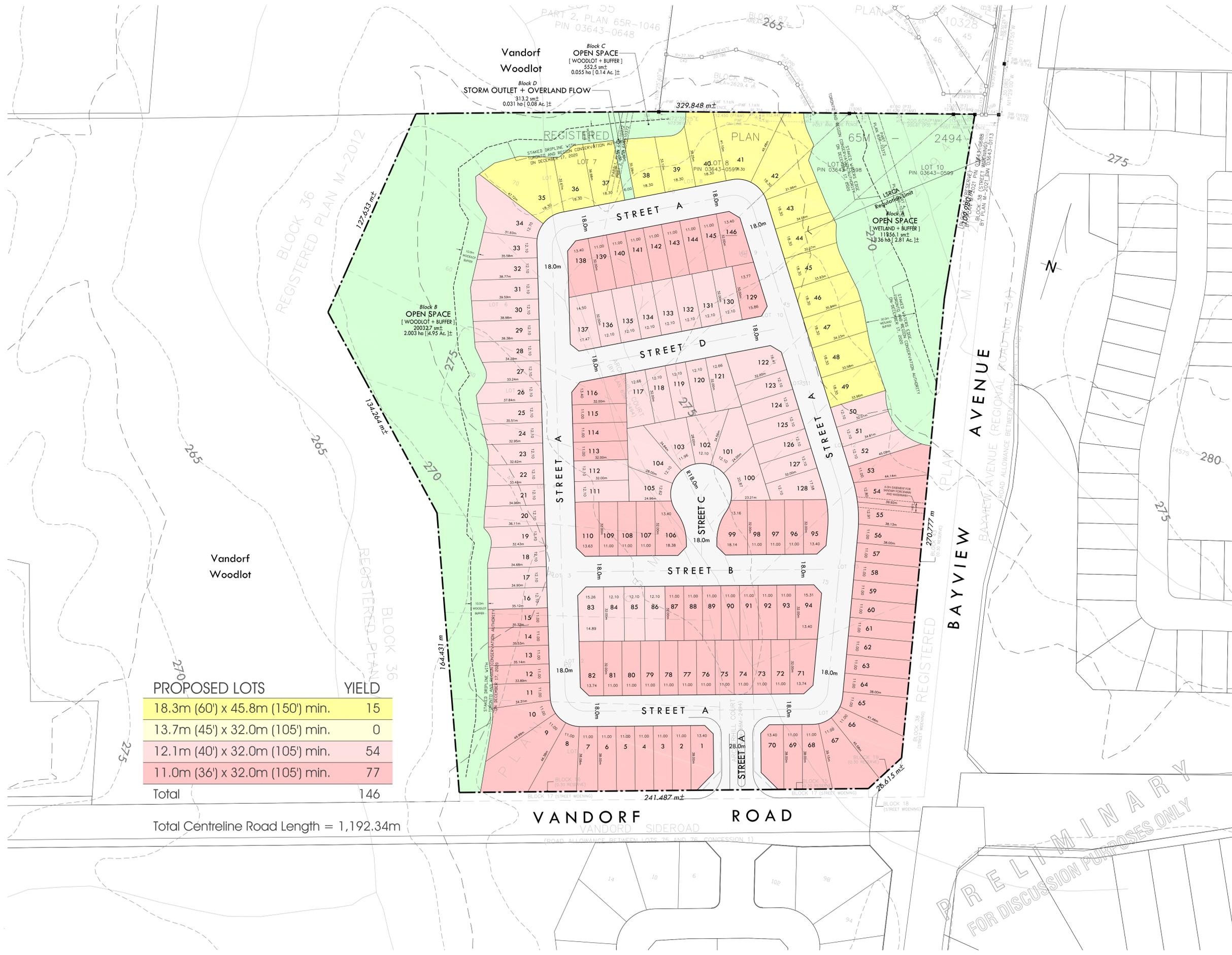


seal prepared for north



**miCAD inc.**  
 359 Park Avenue  
 Newmarket, ON L3Y 1V4  
 437-996-4223  
 437-99-MICAD  
 www.micadinc.com

PROJECT: 20049 SCALE: 1:1000  
 DESIGN: miCAD DATE: 2020-12-30  
 DRAWN: MVS DRAWING: 04  
 CHECKED: JW



**PROPOSED LOTS**

PROPOSED LOTS	YIELD
18.3m (60') x 45.8m (150') min.	15
13.7m (45') x 32.0m (105') min.	0
12.1m (40') x 32.0m (105') min.	54
11.0m (36') x 32.0m (105') min.	77
<b>Total</b>	<b>146</b>

Total Centreline Road Length = 1,192.34m

**PRELIMINARY**  
 FOR DISCUSSION PURPOSES ONLY

SKETCH SHOWING ELEVATIONS  
FOR CONSULTANT'S USE

SCALE 1:500  
R-PE SURVEYING LTD., O.L.S.  
METRIC

REGISTERED PLAN M-2012  
BLOCK 36  
PLAN 03843-0087

REGISTERED PLAN M-2012  
BLOCK 36  
PLAN 03843-0087

- NOTES**
- P.I.N. DENOTES PROPERTY IDENTIFIER NUMBER
  - DS DENOTES DOOR SILL ELEVATION
  - GS DENOTES GARAGE SILL ELEVATION
  - MH DENOTES MANHOLE
  - TS DENOTES TRAFFIC SIGNAL
  - MHSA DENOTES MANHOLE SANITARY
  - WV DENOTES WATER VALVE
  - BVC DENOTES COMMUNICATION UTILITY BOX
  - OV DENOTES OVERHEAD WIRE
  - UP DENOTES UTILITY POLE
  - INV DENOTES INVERT ELEVATION
  - LS DENOTES LAMP STAND
  - BKE DENOTES HYDRO UTILITY BOX
  - CB DENOTES CATCH BASIN
  - HV DENOTES HYDRO VAULT (BOX)
  - Ø DENOTES DIAMETER
  - ⊙ DENOTES DECIDUOUS TREE
  - ⊙ DENOTES CONIFEROUS TREE

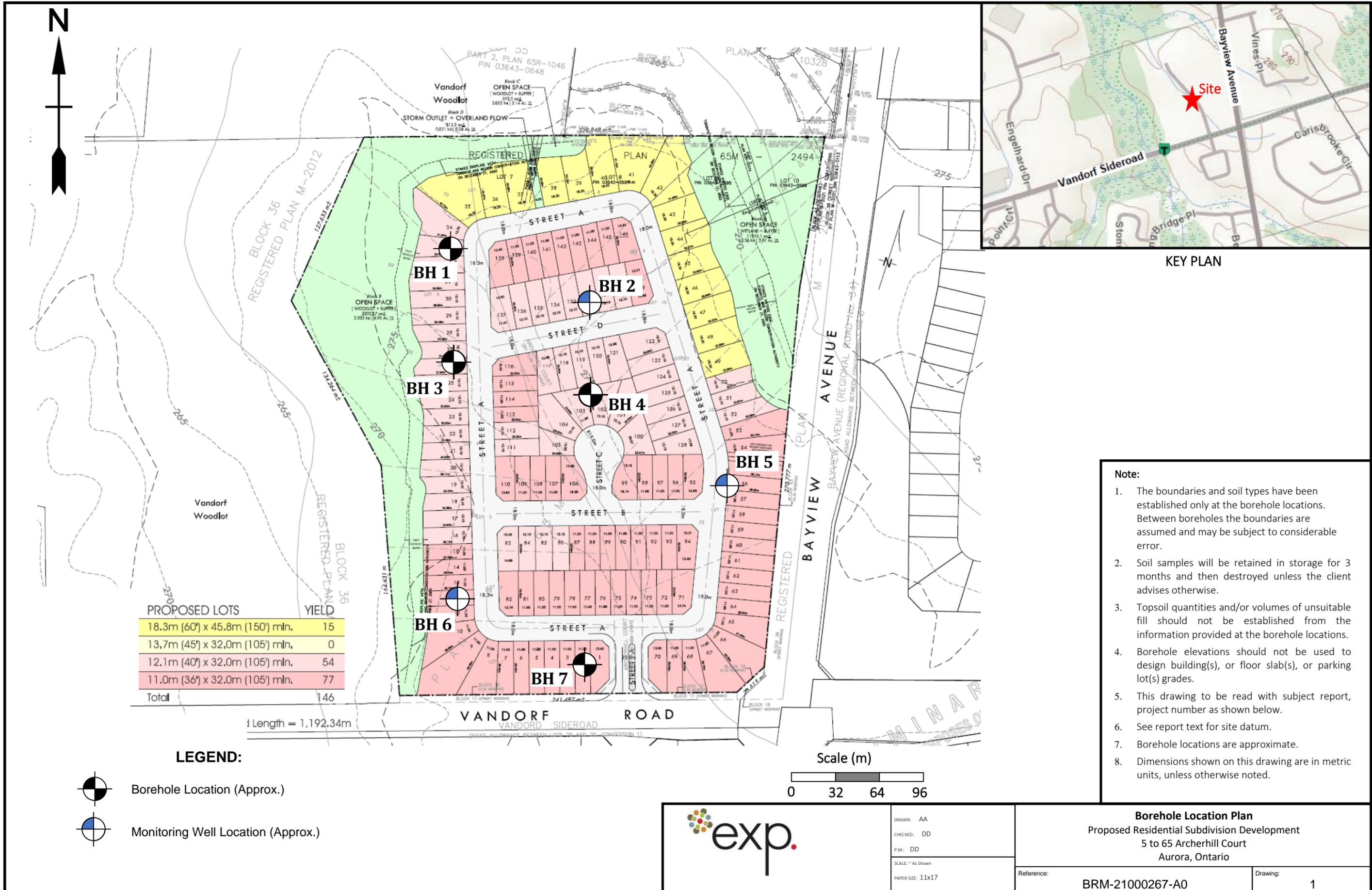
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**BENCHMARK NOTE**  
ELEVATIONS ARE GEODETIC AND ARE REFERRED TO THE REGIONAL MUNICIPALITY OF YORK BENCHMARK NO. 2460 HAVING AN ORTHOMETRIC ELEVATION OF 271.284 METRES. ELEVATIONS ARE REFERRED TO THE CANADIAN VERTICAL DATUM OF 1985, 1978 ADJUSTMENT (CGVD-1985/1978ADJ).  
BRASS CAP SET ON HEADWALL BEING 39.5 METRES EAST OF THE CENTRELINE OF BAYVIEW AVENUE AND 38.5 METRES SOUTH OF THE CENTRELINE OF RICKARD STREET WITHIN BLOCK 59, PLAN 034-4292



## **APPENDIX C**

### **Borehole Location Plan and Borehole Logs**



KEY PLAN

PROPOSED LOTS	YIELD
18.3m (60') x 45.8m (150') mln.	15
13.7m (45') x 32.0m (105') mln.	0
12.1m (40') x 32.0m (105') mln.	54
11.0m (36') x 32.0m (105') mln.	77
<b>Total</b>	<b>146</b>

**LEGEND:**

-  Borehole Location (Approx.)
-  Monitoring Well Location (Approx.)

- Note:**
- The boundaries and soil types have been established only at the borehole locations. Between boreholes the boundaries are assumed and may be subject to considerable error.
  - Soil samples will be retained in storage for 3 months and then destroyed unless the client advises otherwise.
  - Topsoil quantities and/or volumes of unsuitable fill should not be established from the information provided at the borehole locations.
  - Borehole elevations should not be used to design building(s), or floor slab(s), or parking lot(s) grades.
  - This drawing to be read with subject report, project number as shown below.
  - See report text for site datum.
  - Borehole locations are approximate.
  - Dimensions shown on this drawing are in metric units, unless otherwise noted.



DRAWN: AA  
 CHECKED: DD  
 P.M.: DD  
 SCALE: As Shown  
 PAPER SIZE: 11x17

<b>Borehole Location Plan</b>	
Proposed Residential Subdivision Development 5 to 65 Archerhill Court Aurora, Ontario	
Reference: BRM-21000267-A0	Drawing: 1

# Log of Borehole 1

Project No. BRM-21000267-A0

Drawing No. 2

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: Archerhill Court, Aurora

Date Drilled: January 8, 2021

Auger Sample

Combustible Vapour Reading

SPT (N) Value

Natural Moisture

Drill Type: CME 75 Track

Dynamic Cone Test

Plastic and Liquid Limit

Datum: Geodetic

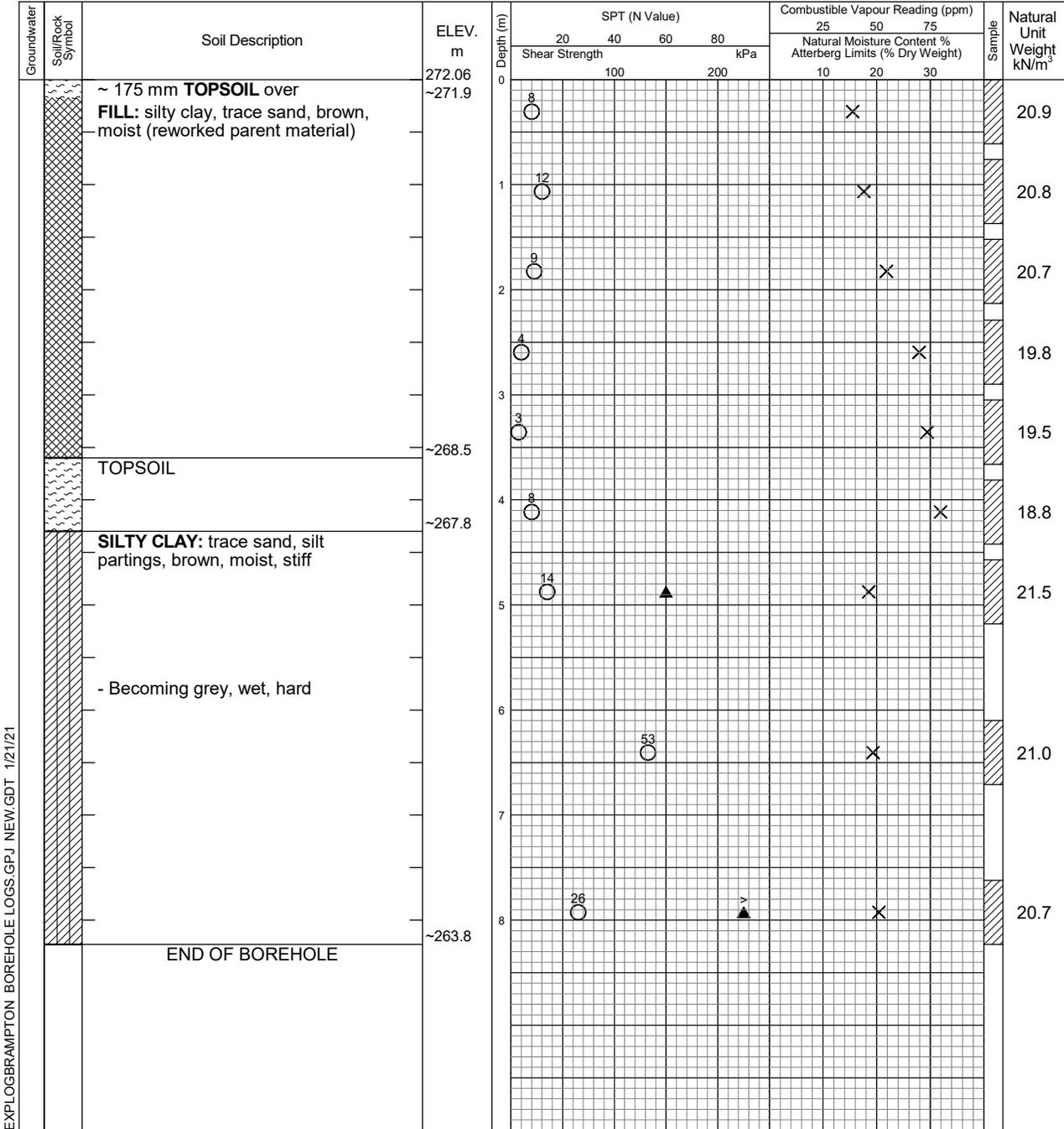
Shelby Tube

Undrained Triaxial at

Field Vane Test

% Strain at Failure

Penetrometer



EXPLOGBRAMPTON BOREHOLE LOGS.GPJ NEW.GDT 1/21/21

Date	Water Level (m)	Hole Open to (m)
On Completion	3.05	Open



# Log of Borehole 2

Project No. BRM-21000267-A0

Drawing No. 3

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: Archerhill Court, Aurora

Date Drilled: January 8, 2021

Auger Sample

Combustible Vapour Reading

SPT (N) Value

Natural Moisture

Drill Type: CME 75 Track

Dynamic Cone Test

Plastic and Liquid Limit

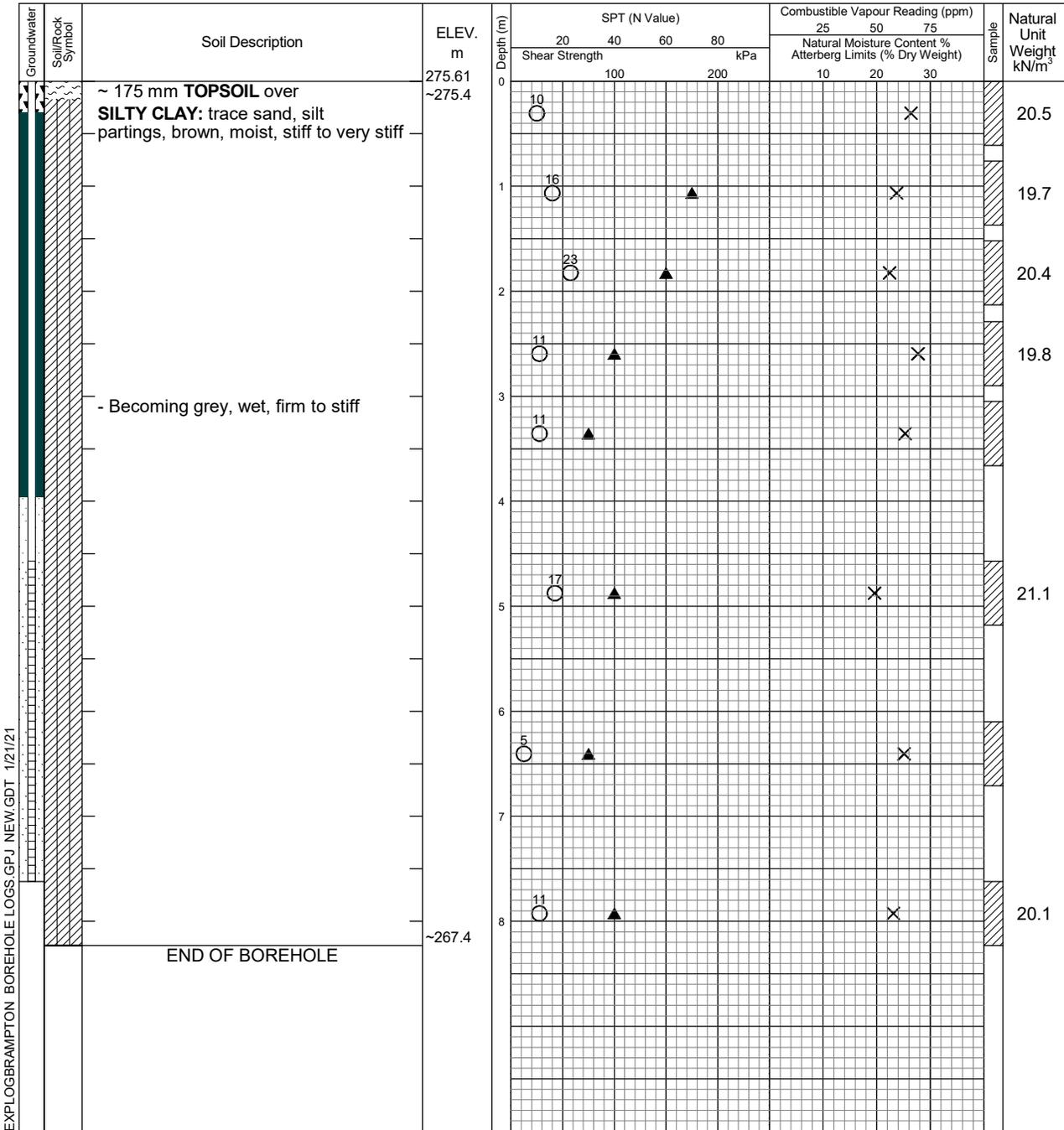
Datum: Geodetic

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



EXPLOGBRAMPTON BOREHOLE LOGS.GPJ NEW.GDT 1/21/21

Date	Water Level (m)	Hole Open to (m)
On Completion January 20, 2021	Dry 2.24	Open



# Log of Borehole 3

Project No. BRM-21000267-A0

Drawing No. 4

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: Archerhill Court, Aurora

Date Drilled: January 8, 2021

Auger Sample

Combustible Vapour Reading

SPT (N) Value

Natural Moisture

Drill Type: CME 75 Track

Dynamic Cone Test

Plastic and Liquid Limit

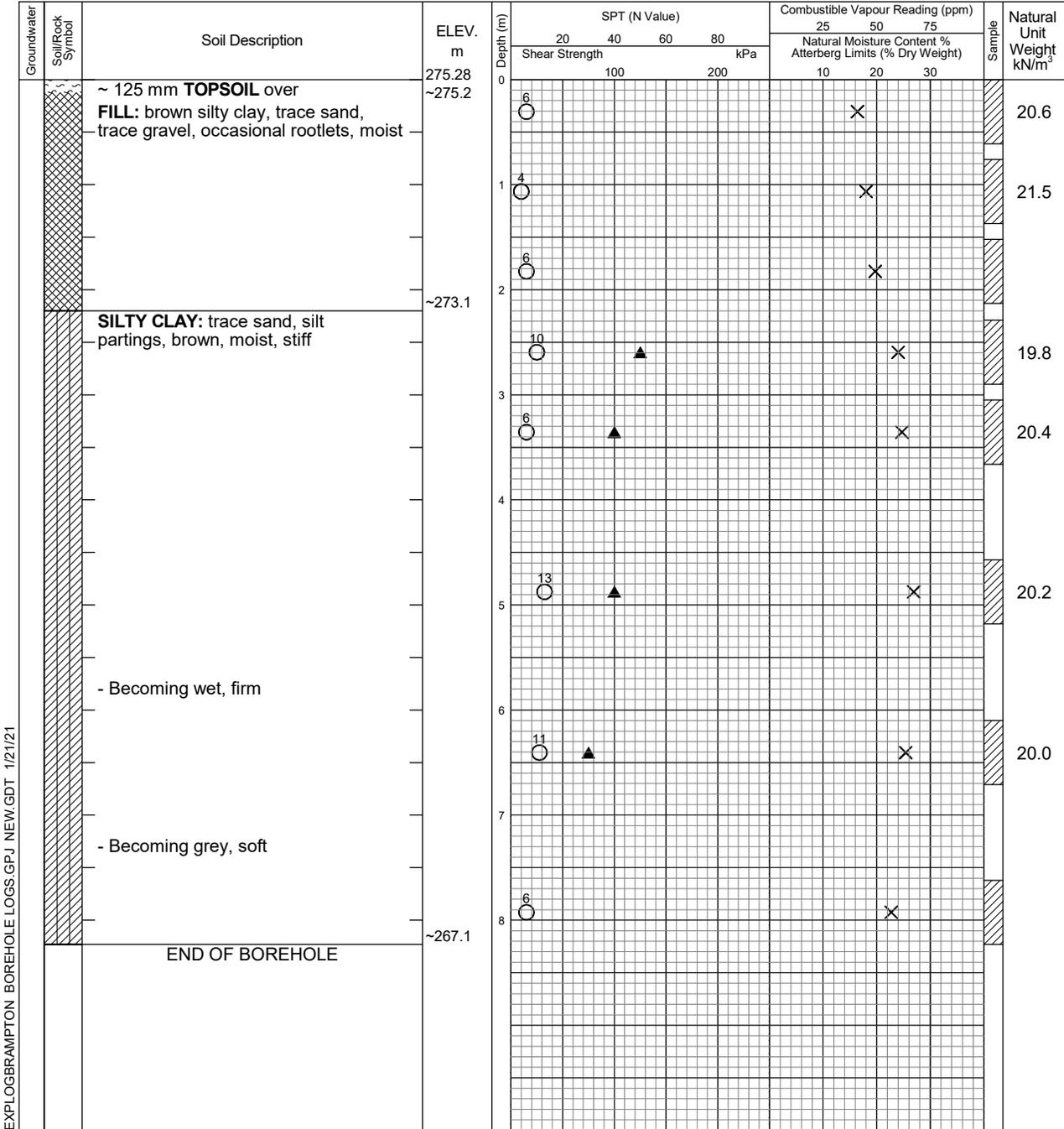
Datum: Geodetic

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



EXPLOGBRAMPTON BOREHOLE LOGS.GPJ NEW.GDT 1/21/21

Date	Water Level (m)	Hole Open to (m)



# Log of Borehole 4

Project No. BRM-21000267-A0

Drawing No. 5

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: Archerhill Court, Aurora

Date Drilled: January 7, 2021

Auger Sample 

Combustible Vapour Reading 

SPT (N) Value 

Natural Moisture 

Drill Type: CME 75 Track

Dynamic Cone Test 

Plastic and Liquid Limit 

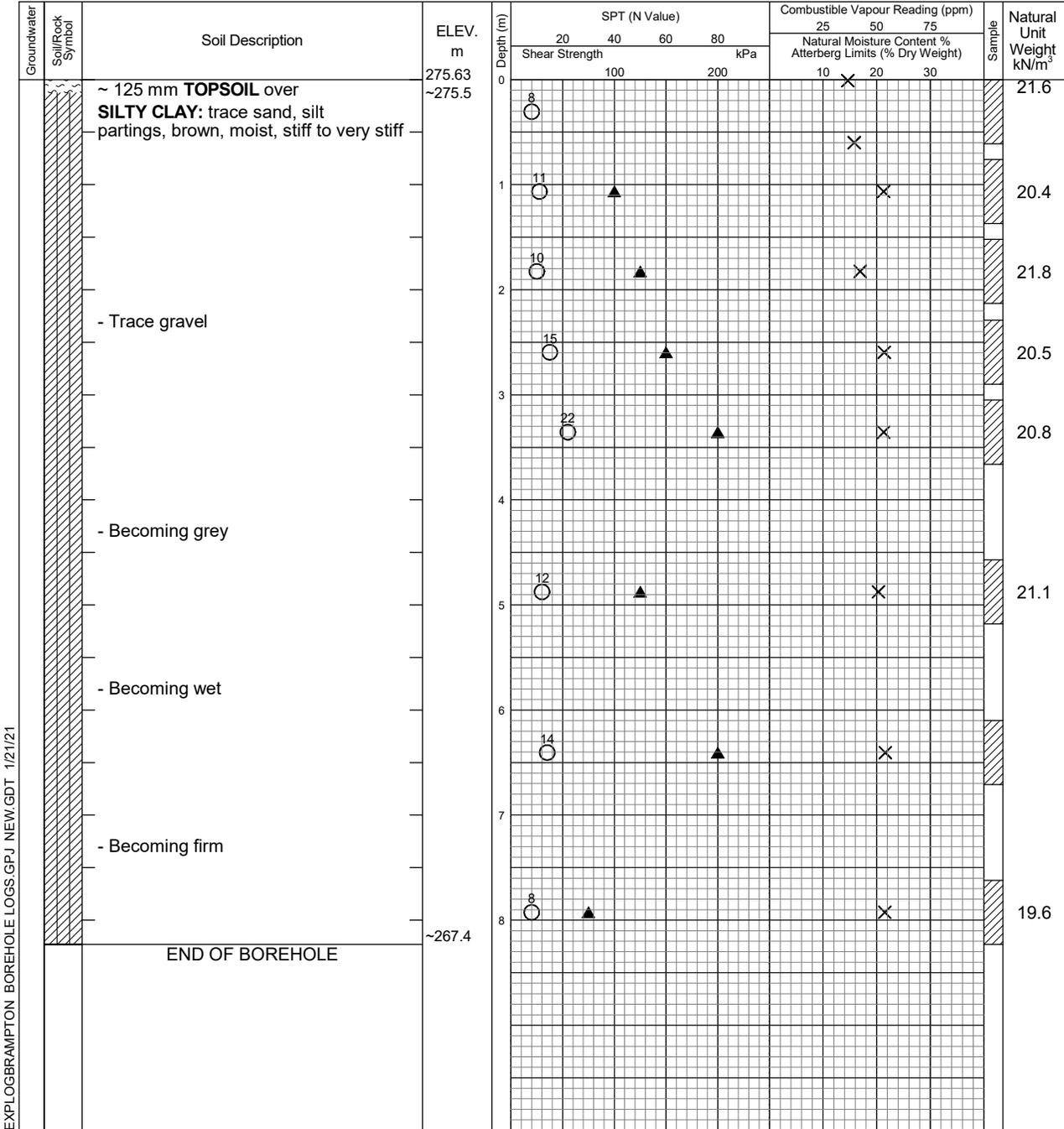
Datum: Geodetic

Shelby Tube 

Undrained Triaxial at % Strain at Failure 

Field Vane Test 

Penetrometer 



EXPLOGBRAMPTON BOREHOLE LOGS.GPJ NEW.GDT 1/21/21

Date	Water Level (m)	Hole Open to (m)
On Completion	Dry	Open



# Log of Borehole 5

Project No. BRM-21000267-A0

Drawing No. 6

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: Archerhill Court, Aurora

Date Drilled: January 7, 2021

Auger Sample

Combustible Vapour Reading

SPT (N) Value

Natural Moisture

Drill Type: CME 75 Track

Dynamic Cone Test

Plastic and Liquid Limit

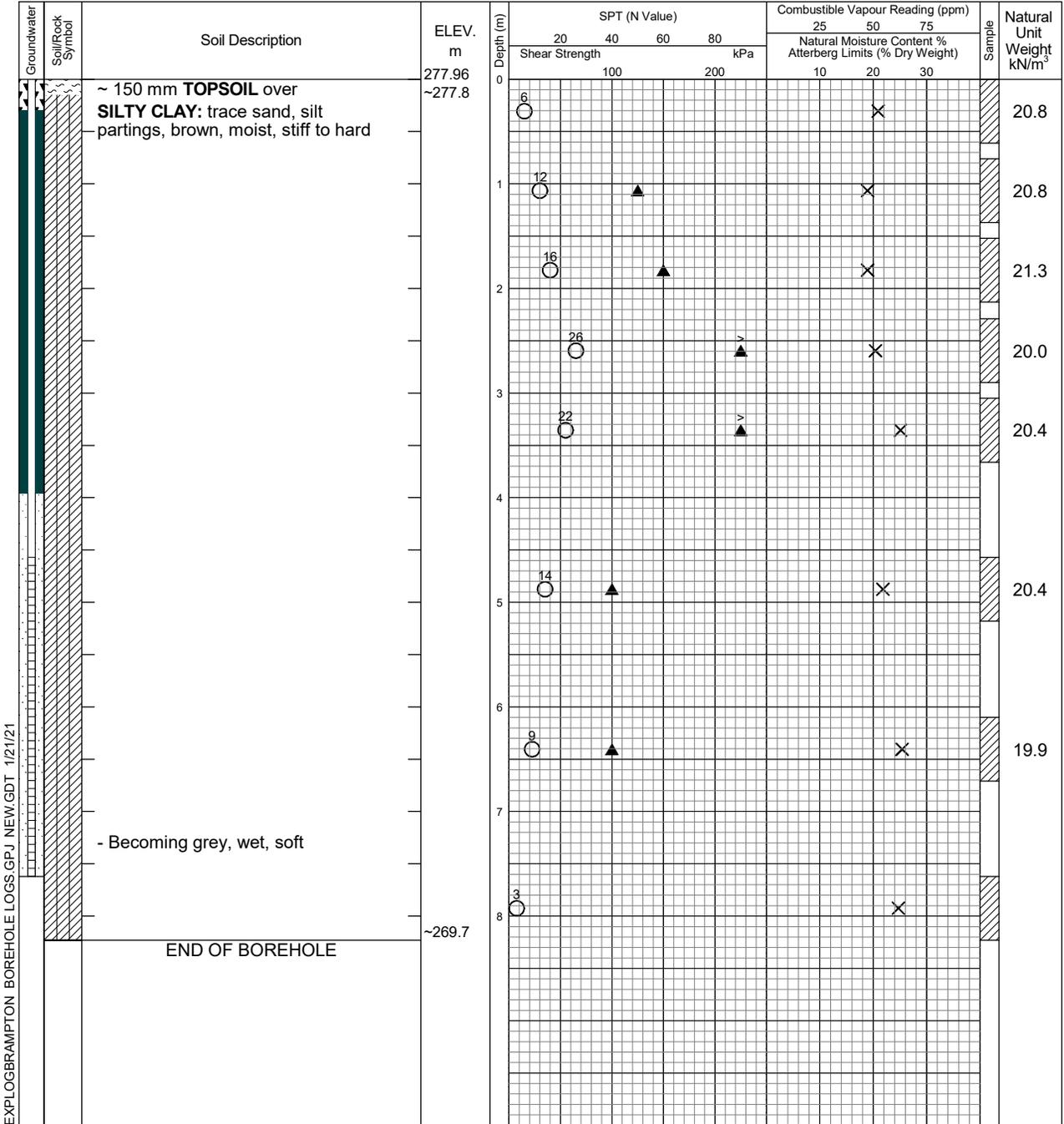
Datum: Geodetic

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



EXPLOGBRAMPTON BOREHOLE LOGS.GPJ NEW.GDT 1/21/21

Date	Water Level (m)	Hole Open to (m)
On Completion January 20, 2021	4.27 0.67	Open



# Log of Borehole 6

Project No. BRM-21000267-A0

Drawing No. 7

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: Archerhill Court, Aurora

Date Drilled: January 7, 2021

Auger Sample

Combustible Vapour Reading

SPT (N) Value

Natural Moisture

Drill Type: CME 75 Track

Dynamic Cone Test

Plastic and Liquid Limit

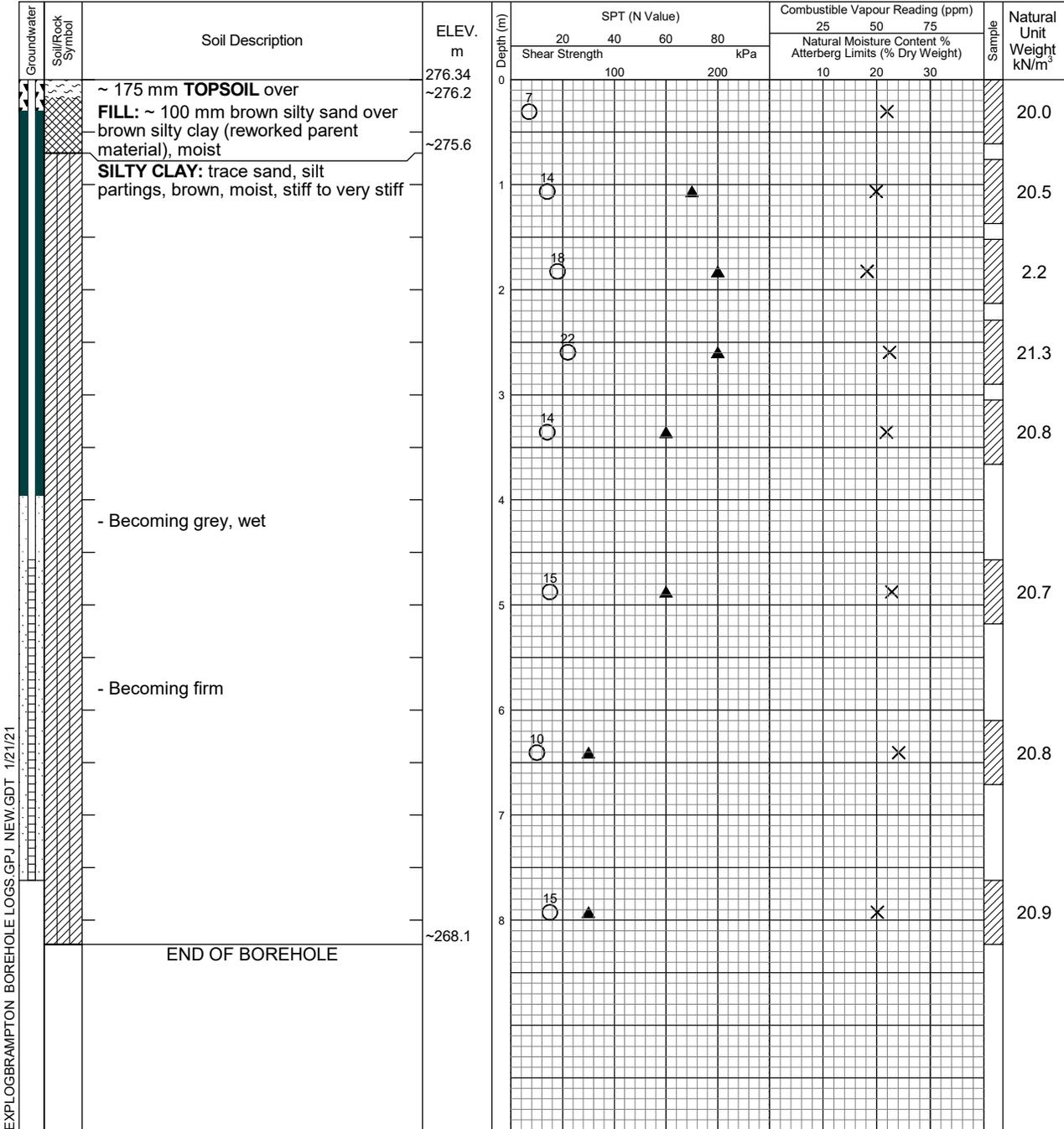
Datum: Geodetic

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



EXPLOGBRAMPTON BOREHOLE LOGS.GPJ NEW.GDT 1/21/21

Date	Water Level (m)	Hole Open to (m)
On Completion January 20, 2021	7.01 3.55	Open



# Log of Borehole 7

Project No. BRM-21000267-A0

Drawing No. 8

Project: Geotechnical Investigation

Sheet No. 1 of 1

Location: Archerhill Court, Aurora

Date Drilled: January 7, 2021

Auger Sample

Combustible Vapour Reading

SPT (N) Value

Natural Moisture

Drill Type: CME 75 Track

Dynamic Cone Test

Plastic and Liquid Limit

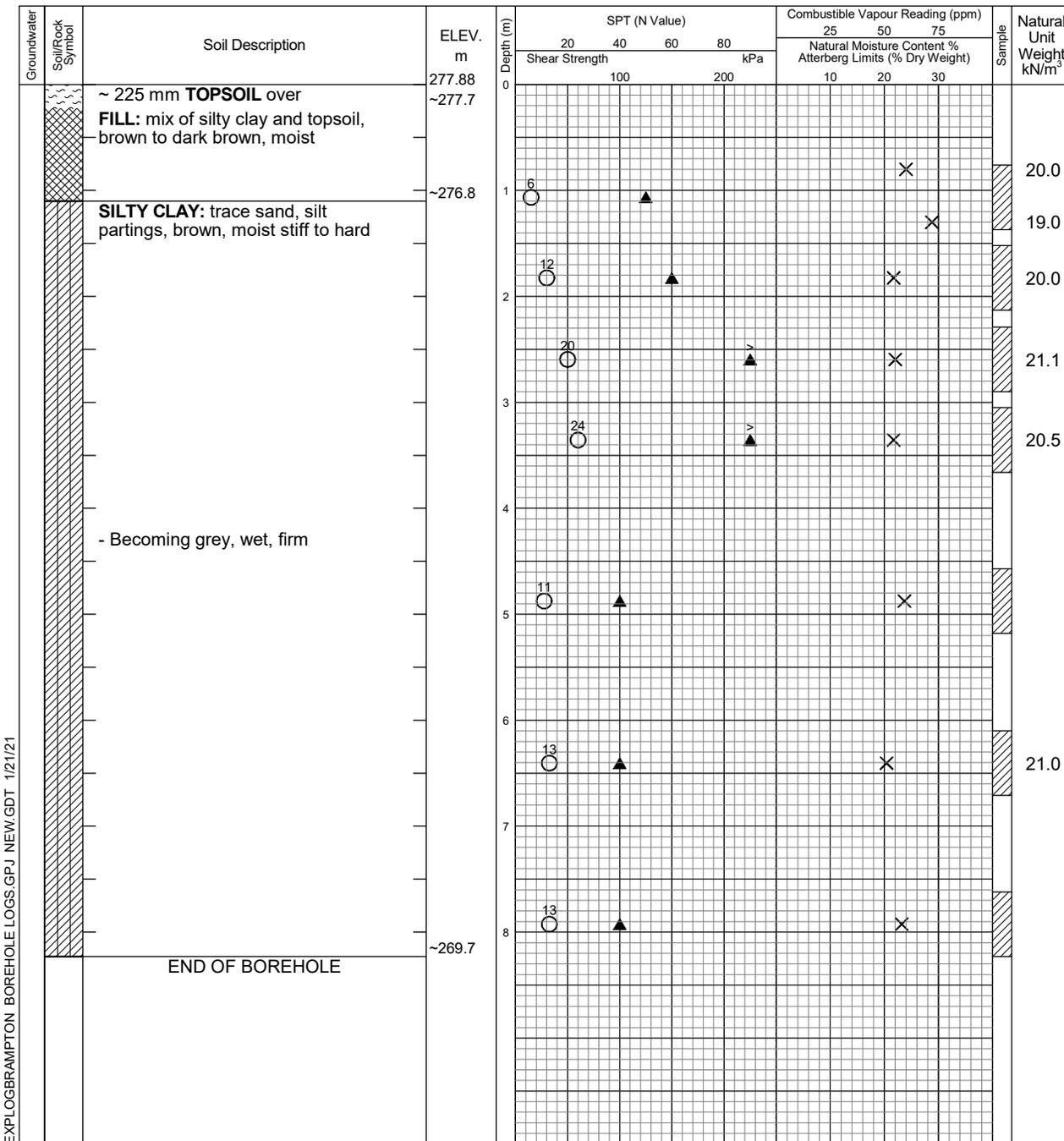
Datum: Geodetic

Shelby Tube

Undrained Triaxial at % Strain at Failure

Field Vane Test

Penetrometer



EXPLOGBRAMPTON BOREHOLE LOGS.GPJ NEW.GDT 1/21/21

Date	Water Level (m)	Hole Open to (m)
On Completion	Dry	Open



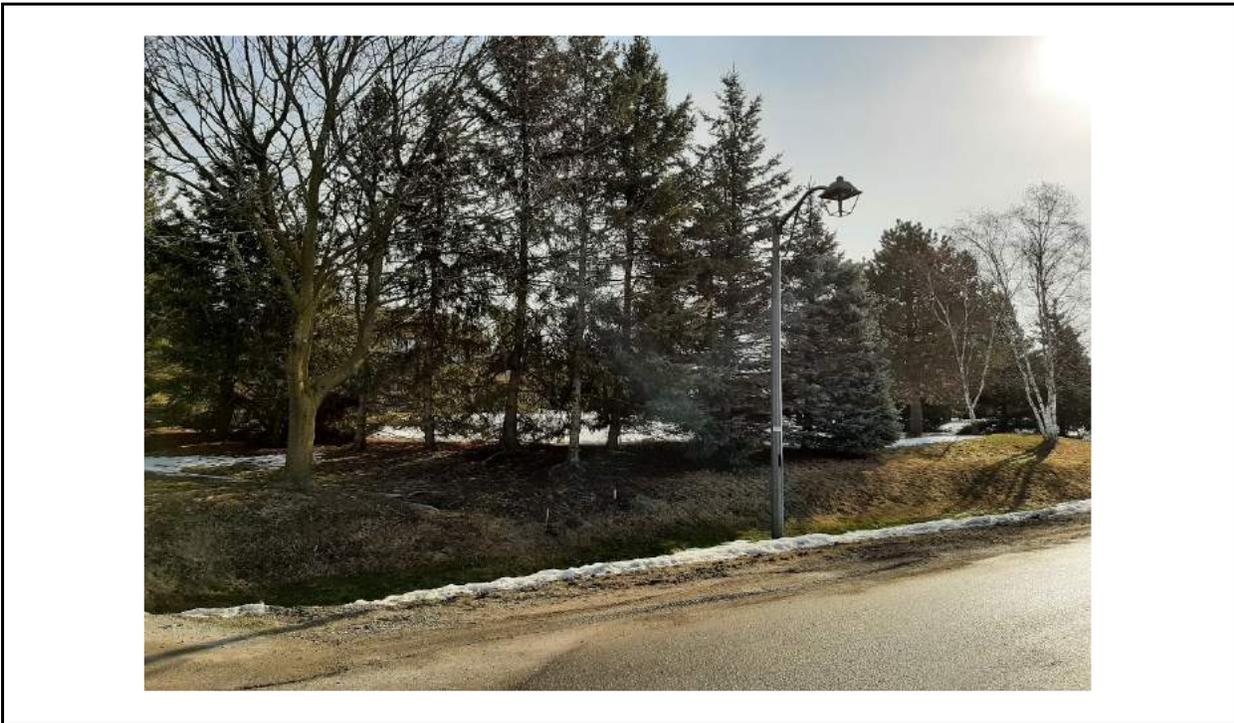
**APPENDIX D**  
**Site Photographs**



Photograph #1: Archerhill Crt, North End, Looking South



Photograph #2: 30 Archerhill Crt, Looking Northeast



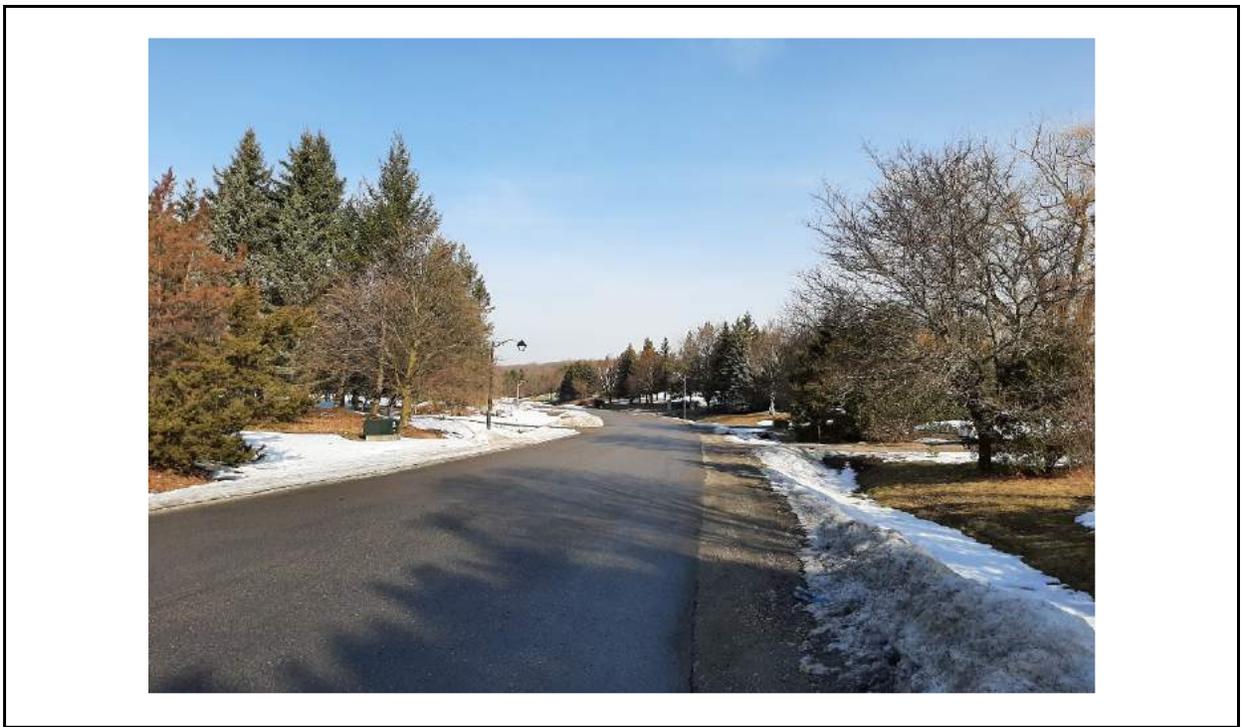
Photograph #3: 30 Archerhill Crt, Looking Southeast



Photograph #4: 30 Archerhill Crt, Looking Southwest



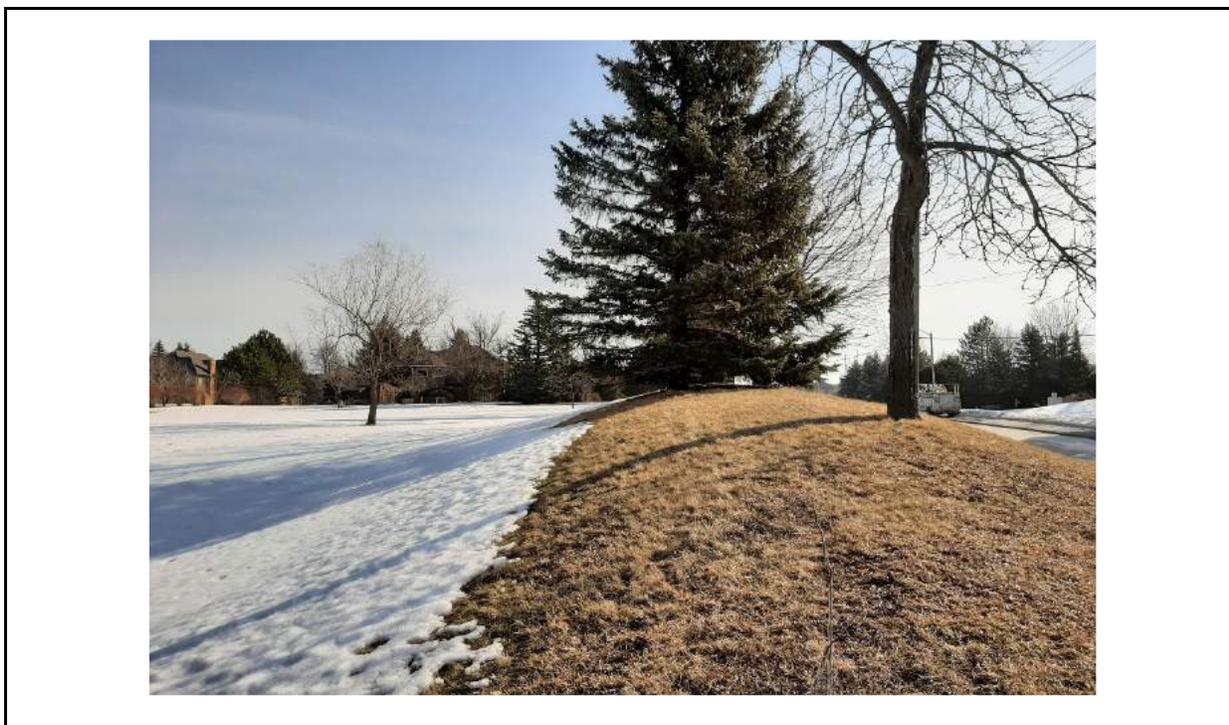
Photograph #5: 30 Archerhill Crt, Looking Northwest



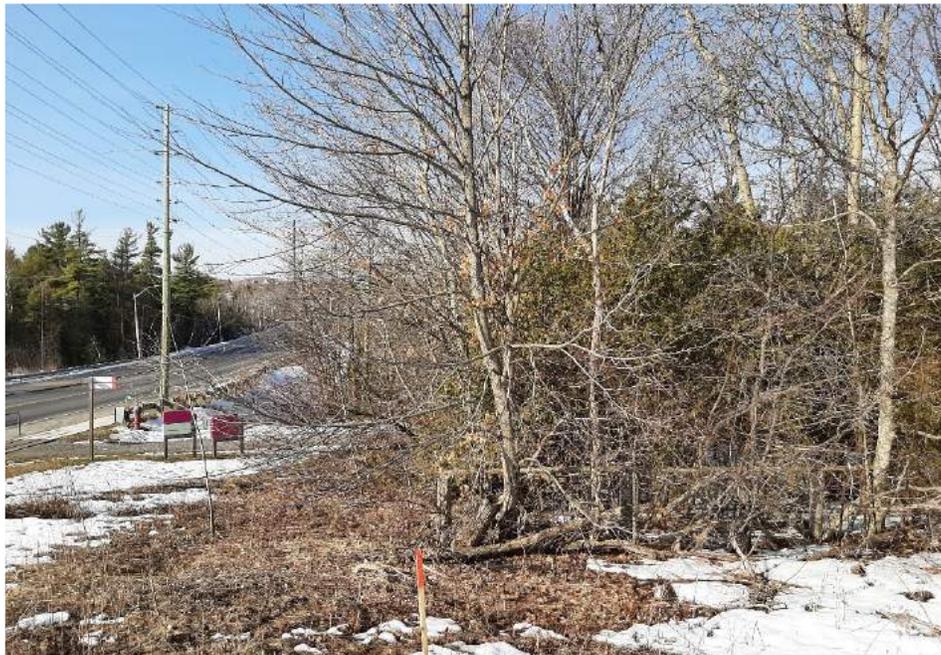
Photograph #6: Archerhill Crt & Vandorf Sideroad, Looking North



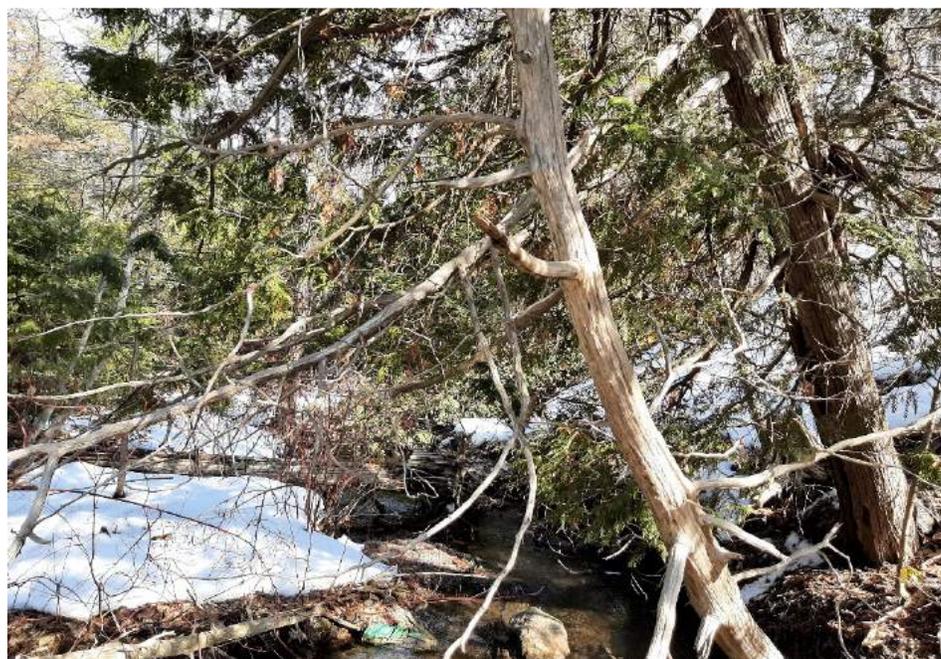
Photograph #7: Vandorf Sideroad & Holland River Valley Trail, Looking North



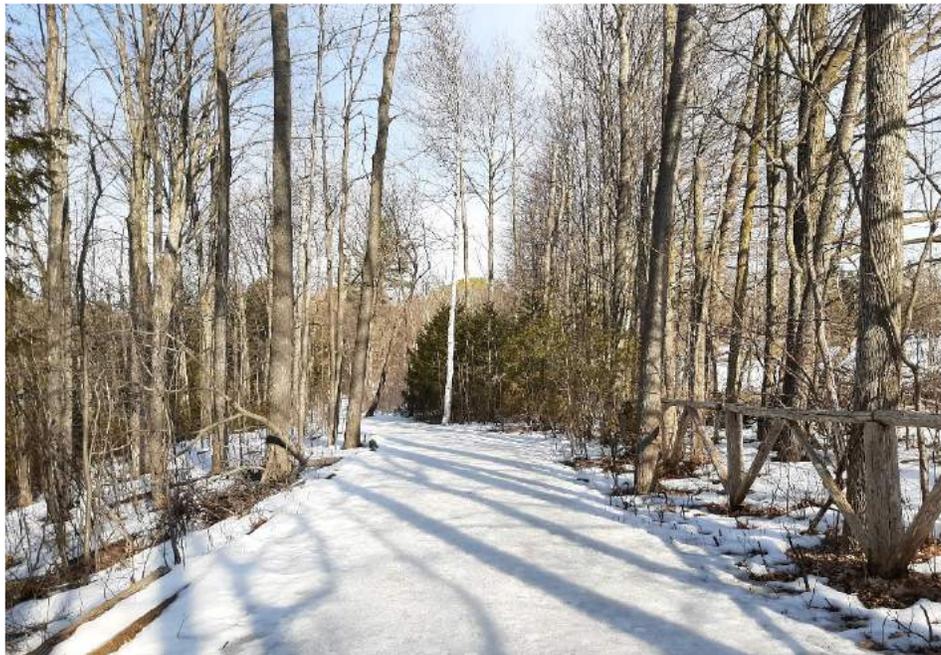
Photograph #8: Vandorf Sideroad & Holland River Valley Trail, Looking East



Photograph #9: Vandorf Sideroad & Holland River Valley Trail, Looking West



Photograph #10: Vandorf Sideroad & Holland River Valley Trail, Holland River, Looking North



Photograph #11: Holland River Valley Trail, Close to South End, Looking North



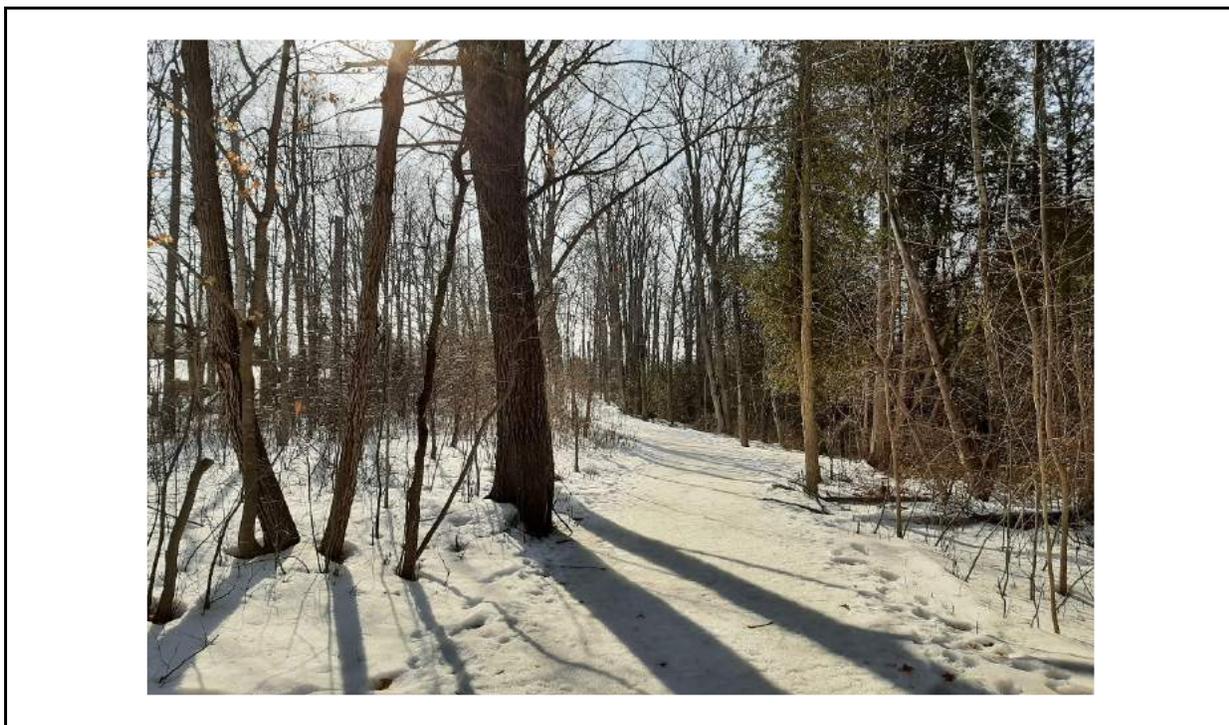
Photograph #12: Holland River Valley Trail, Close to South End, Looking Southwest



Photograph #13: Holland River Valley Trail, Middle, Looking Southwest



Photograph #14: Holland River Valley Trail, Middle, Looking North



Photograph #15: Holland River Valley Trail, Middle, Looking South



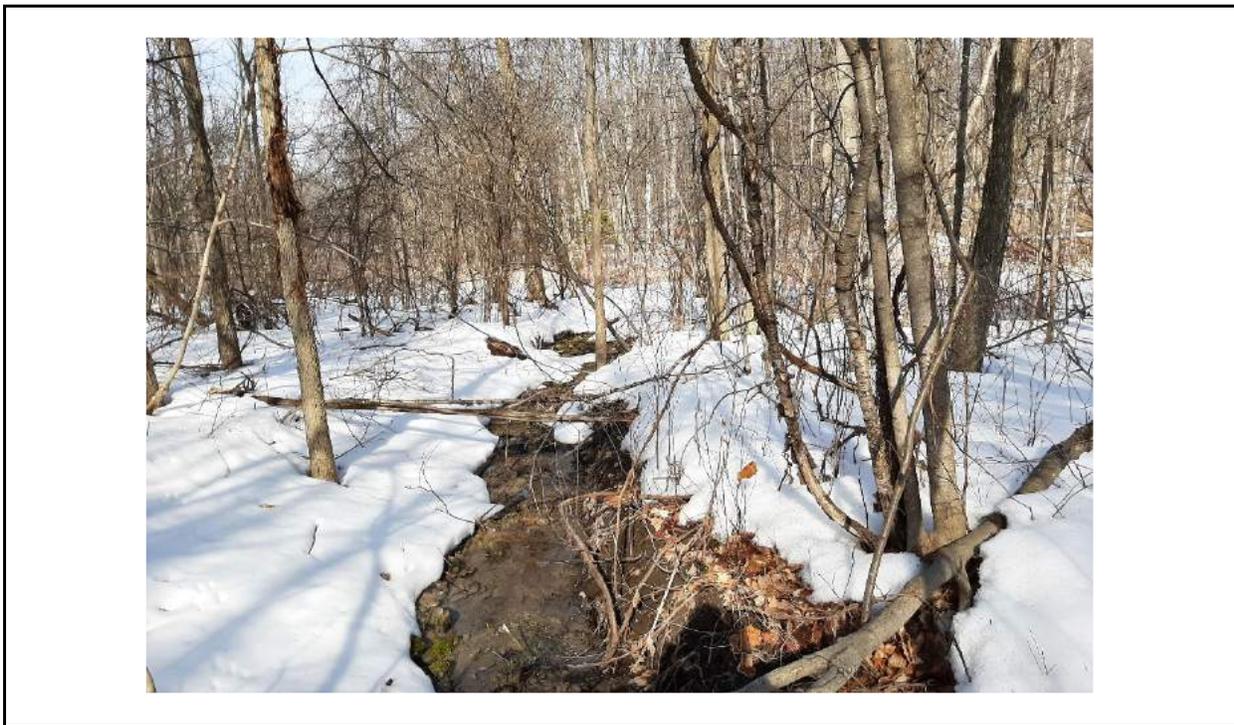
Photograph #16: Holland River Valley Trail, Middle, Looking Northwest



Photograph #17: Northwest Corner of Project Limits, Looking East



Photograph #18: Northwest Corner of Project Limits, Looking South



Photograph #19: North Project Limit, Middle, Looking North



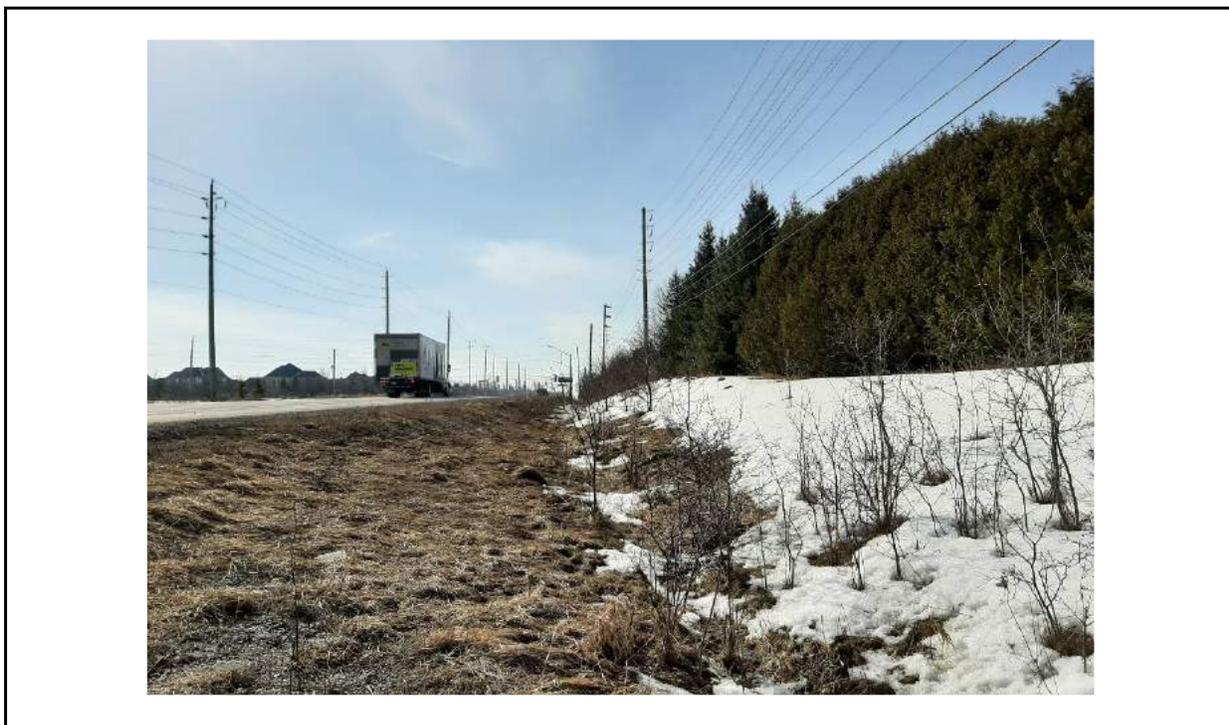
Photograph #20: Northeast Corner of Project Limits, Looking Southwest



Photograph #21: Bayview Ave, Middle of East Project Limit, Looking West



Photograph #22: Bayview Ave, Middle of East Project Limit, Looking North



Photograph #23: Bayview Ave, Middle of East Project Limit, Looking South



Photograph #24: Bayview Ave & Vandorf Sideroad, Looking West