ARCADIS Design & Consultancy for natural and built assets

Sheppard Pharmacy GP Inc. c/o

Cope Project Management Corporation

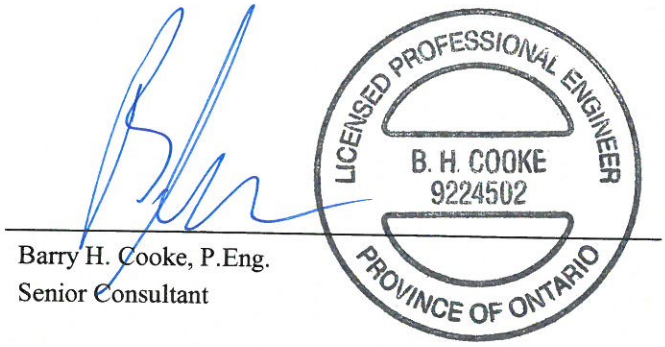
GEOTECHNICAL INVESTIGATION

2993-3011 Sheppard Avenue East and

1800-1814 Pharmacy Avenue, Toronto, Ontario

March 27, 2019

102934-000



Barry H. Cooke, P.Eng.
Senior Consultant

GEOTECHNICAL INVESTIGATION

2993-3011 Sheppard Avenue East and
1800-1814 Pharmacy Avenue
Toronto, Ontario

Prepared for:

Sheppard Pharmacy GP Inc.
150 Connie Crescent, Unit 4
Concord, Ontario L4K 1L9

c/o

Cope Project Management Corporation
457A Danforth Avenue
Toronto, Ontario M4K 1P1

Prepared by:

Arcadis Canada Inc.
121 Granton Drive, Suite 12
Richmond Hill, Ontario L4B 3N4
Tel 905 764 9380

Our Ref.:

102934-000

Date:

March 27, 2019

CONTENTS

APPENDICES

1 INTRODUCTION

Arcadis Canada Inc. (Arcadis) was retained by Sheppard Pharmacy GP Inc. (the Client) to complete a geotechnical investigation for a mixed use building to be built at the southwest corner of Sheppard Avenue East and Pharmacy Avenue in Toronto, Ontario. The location and general layout of the site are shown on Figures 1 and 2 provided in Appendix A.

It is understood that the Client proposes to construct a mixed use building at the site. It is understood that the proposed building will be 18 storeys in height and will have up to three levels of underground parking and will cover most of the property.

The purpose of the geotechnical investigation was to determine subsurface conditions at the site and to provide comments and recommendations to guide the design and construction of foundations and subsurface elements of the proposed development, from a geotechnical perspective.

1.1 Previous Investigations

The following reports were made available to Arcadis to review:

- *Draft Phase II Environmental Site Assessment, 2992-3011 Sheppard Avenue East, Toronto, ON,* prepared by Pinchin Ltd., dated December 12, 2014;
- *Draft Report, Supplementary Subsurface Investigation, 3005 Sheppard Avenue East, Toronto, Ontario,* prepared by Hemmera Envirochem Inc., dated September 2015; and,
- *Limited Phase II Environmental Site Assessment at Sheppard and Pharmacy, Toronto, Ontario*, prepared by XCG Consulting Limited, dated November 8, 2017.

2 SITE CONDITIONS

The site is located at the southwest corner of Sheppard Avenue East and Pharmacy Avenue in Toronto, Ontario. The site covers approximately 0.7 ha. The general layout of the site is shown on Figure 2 in Appendix A.

The site consists of two parcels. The parcel on the northern portion of the site, with a municipal address of 2993-3011 Sheppard Avenue East, has been developed as a multi-tenant commercial building with a single basement. The eastern portion of the building is a two storey structure while the balance of the building is only a single storey. The parcel on the southern portion of the site, with a municipal address of 1800-1814 Pharmacy Avenue, has been developed as a one storey commercial building which is of slab-on-grade construction, and is occupied by various commercial tenants.

The site is relatively flat with a gentle slope down to the southwest, and outside of the buildings' footprints is mostly paved.

3 FIELD INVESTIGATION

3.1 Preparatory Work

The boreholes that were completed during the current investigation were laid out in the field with respect to existing features such as the existing on site buildings. Prior to drilling, Arcadis arranged for the locations of the boreholes to be cleared of interference with utilities and underground plant. A site specific Health and Safety Plan was prepared for the work and a copy of the HASP was kept on site during field activities.

3.2 Field Work

The boreholes were drilled between 6 and 8 and 12 and 15 March 2019 at the locations shown on Figure 2 in Appendix A. Fourteen boreholes in total were drilled (BH/MW19-1A/B to 12) with boreholes BH/MW19-1B to 4 drilled principally for geotechnical investigation purposes. The balance of the boreholes was drilled for either environmental or hydrogeological purposes.

Boreholes BH/MW 19-1B to 4 were drilled using an auger rig supplied and operated by GeoEnvironmental Drilling while boreholes BH/MW 19-1A and 19-5 to 12 were drilled by Strata Drilling group using a Geoprobe 7822DT rig. Ground surface elevations at monitoring well locations were determined relative to Geodetic datum. All boreholes were completed under the supervision of an Arcadis representative. Boreholes BH/MWs 19-1A/B to 8 were completed as groundwater monitoring wells.

Sampling in boreholes BH/MW 19-1B to 4 was carried out using a 50 mm diameter split-spoon sampler in conjunction with the Standard Penetration Test. Standard Penetration Tests (SPTs) were conducted in these boreholes in conjunction with split spoon sampling with the resulting ‘N’ values recorded on the borehole logs. The ‘N’ value refers to the number of blows required to drive a split-spoon sampler 300 mm into the soil after an initial 150 mm penetration using a 63.5 kg hammer free falling from a height of 760 mm.

Sampling in all other boreholes was completed using direct push methodologies, with samples recovered in clear plastic tubes.

The recovered samples were logged in the field for foreign matter, colour, texture and degree of saturation. Borehole logs are provided in Appendix B.

3.3 Summarized Subsurface Conditions

A summary of the subsurface conditions encountered in the boreholes is presented in the following paragraphs. The locations of the boreholes are shown on Figure 2 in Appendix A. The logs of the boreholes are provided in Appendix B. The reader is cautioned that conditions between and beyond boreholes may vary.

Laboratory testing of recovered soil samples was completed (moisture contents), The results of this testing are provided on the borehole logs.

3.3.1 Fill Soils

Fill soils were encountered beneath an asphalt pavement in all boreholes. Generally, the fill material comprised sands and gravels. Fill soils extended to a depth below ground surface (bgs) ranging from 0.30 to 1.83 m bgs. A single 'N' value obtained during sampling in BH/MW 19-1B was 11.

3.3.2 Native Soils

The native soils at the site comprised multiple layers of silty sand to silt and clayey silts to the maximum investigated depth of 21.95 m.

3.3.2.1 Upper Clayey Silt to Silty Clay

The fill layer was underlain in boreholes BH/MW 19-1A/1B, 4 and 7 and beneath an upper silt layer in borehole BH/MW 5A/B at a depth of 0.76 m bgs by a layer of clayey silt to silty clay at depths ranging from 0.76 to 2.29 m bgs. This layer was observed to extend to depths ranging from 2.29 to 3.81 m bgs.
.
Standard Penetration Test 'N' values obtained during sampling ranged from 5 to 22, suggesting a firm to very stiff consistency.

3.3.2.2 Upper Silt

Beneath the fill layer in boreholes BH/MW 5A/B, 6 and 8 at a depth of 0.30 m bgs was a layer of silt that extended to depths ranging from 0.76 to 1.83 m bgs.

3.3.2.3 Silt to Silty Sand

All boreholes encountered a stratum of silt to silty sand beneath the upper silt and clayey silt layers. This is the principal soil unit at the site. This stratum was observed to extend to depths ranging from 15.24 to 21.34 m bgs.

Standard Penetration Test 'N' values obtained during sampling above a depth of about 12 m ranged from 7 to in excess of 50, indicating a loose to very dense state of relative density. Generally, the 'N' values exceeded 30, indicating an overall dense to very dense state of relative density. Below a depth of about 12 m the 'N' values ranged from 4 to 24 indicating a loose to compact state of relative density.

3.3.2.4 Lower Silty Clay to Clayey Silt

Boreholes BH/MW 19-1B, 3 and 4 encountered a lower layer of silty clay to clayey silt beneath the silt to silty sand stratum at depths ranging from13.72 to 21.24 m bgs. This layer was observed to extend to a

depth of 15.24 m bgs in borehole BH/MW 19-3 and boreholes BH/MW 19-1B and 4 were terminated in this layer at depths of 18.90 and 21.95 m bgs, respectively.

Standard Penetration Test 'N' values obtained during sampling ranged from 5 to 16, suggesting a firm to very stiff consistency.

3.3.3 Bedrock

Bedrock was not encountered in any of the boreholes drilled on the site.

3.3.4 Groundwater Conditions

Groundwater monitoring wells were installed in boreholes BH/MW 19-1 to 8. Water levels were measured on March 21, 2019 and ranged from 1.09 t0 13.03 m bgs. The deeper groundwater levels were measured in wells with screens sealed at depth, while the shallower water levels were measured in wells installed at shallower depths.

The hydrogeological conditions at the site are reported on in depth under separate cover.

4 DISCUSSION AND RECOMMENDATIONS

It is understood that it is proposed to redevelop the site with a mixed building 18 storeys in height. It is further understood that the proposed building may include up to three levels of underground parking, and that the building will cover most of the property.

On the basis of the subsurface conditions determined by the current investigation, our comments and recommendations from a geotechnical perspective are provided in the following sections.

4.1 Foundation Design

The mass excavation for three levels of underground parking will be approximately 9 to 10 m in depth, and is expected to expose a surface of the dense silt to silty sand stratum The foundations of the proposed building may be designed as shallow foundations bearing on an undisturbed surface of the dense silt to silty sand stratum, at elevations between 166 and 168 m asl, with a bearing capacity at SLS of 300 kPa, and at ULS of 450 kPa. Total and differential settlements of properly constructed foundations are anticipated to be less than 25 mm and 20 mm, respectively.

It should be noted that the silt to silty sand stratum is susceptible to disturbance from construction activities, and it is important that the exposed foundation surfaces be protected against disturbance.

4.2 Frost Protection

Equivalent thermal insulation of 1.2 m of earth-cover is required for exterior foundations, or any part of the subgrade of the building exposed to freezing conditions, to protect against frost damage.

4.3 Earthquake Load and Effects (i.e. Seismic ‘Site Classification’)

In accordance with Table 4.1.8.4.A (i.e. 'Site Classification for Seismic Site Response') of the 2012 Ontario Building Code, the soil/ground conditions at this site, in our opinion, may be classified as 'Site Class D’ [i.e. Stiff Soil].

4.4 Basement Walls

Basement walls should be designed to resist lateral earth pressures of retained soils. The parameters used in the determination of unbalanced earth pressures are defined as:

Parameter	Definition	Units
φ	internal angle of friction	degrees
γ	bulk unit weight of soil	kN/ m^3
K_a	active earth pressure coefficient (Rankin)	dimensionless
K_o	at-rest earth pressure coefficient (Rankin)	dimensionless
K_p	passive earth pressure coefficient (Rankin)	dimensionless

The appropriate values for use in the design of structures subject to unbalanced earth pressures at this site are tabulated as follows:

Soil	φ	γ (kN/m^3)	K_a	K_o	K_p
Fill: Sand and Gravel/Silty Clay	30	20	0.33	0.50	3.00
Upper Clayey Silt to Silty Clay	30	20	0.33	0.50	3.00
Upper Silt	30	20	0.33	0.50	3.00
Dense Silt to Silty Sand	32	21	0.31	0.47	3.26
Lower Silty Clay to Clayey Silt	30	20	0.33	0.50	3.00

Walls subject to unbalanced earth pressures must be designed to resist a pressure that can be calculated based on the following equation:

$$P = K\left[\gamma\left(h - h_w\right) + \gamma' h_w + q\right] + \gamma_w h_w$$

where:

P = the horizontal pressure at depth, h (m)
K = the earth pressure coefficient,
h_w = the depth below the groundwater level (m)
γ = the bulk unit weight of soil, (kN/m^3)
γ’ = the submerged unit weight of the exterior soil, (γ - 9.8 kN/m^3)
q = the surcharge loading (kPa)

Where the wall backfill can be drained effectively to eliminate hydrostatic pressures on the wall, acting in conjunction with the earth pressure, this equation can be simplified to:

$$P = K\left[\gamma h + q\right]$$

The building should therefore be provided with a perimeter drainage system. The water level at the site should be taken as 1.0 m bgs.

Resistance to sliding of earth retaining structures is developed by friction between the base of the footing and the silt to silty sand stratum. This friction, R, depends on the normal load on the supporting contact (N) and the frictional resistance of the silt to silty sand stratum (tan φ) expressed as: R = N tan φ. This is an ultimate resistance value. The factored resistance at ULS is expressed as: Rf = 0.8 N tan φ.

4.5 Utility Construction

Pipe bedding and backfill materials should be constructed with at least 150 mm thickness of OPSS Granular A beneath sewer and water pipes. The bedding should not extend above the spring line of the pipe. Cover material, from the spring line to at least 300 mm above the obvert of pipe should also consist of OPSS Granular A. Bedding and cover materials are to be placed in a maximum 225 mm lift thickness and compacted to a minimum of 95% of the material's Standard Proctor Maximum Dry Density (SPMDD).

4.6 Slabs-on-Grade

The excavation for three basement levels is expected to expose the silt to silty sand stratum which is suitable to support the basement slab on grade. The exposed surface should be inspected and proof rolled to identify soft spots, which should be repaired with well compacted granular soils. A minimum of 200 mm thick layer of Granular 'A' [or equivalent] aggregate should be placed below the underside of the concrete floor slab and compacted to 100% SPMDD.

4.7 Temporary Excavations

Foundation and basement excavations that are carried out in open cut must comply with O.Reg 213/91, as amended. Fill soils would be classified as a Type 3 soil. The native soil strata would be considered as Type 2 soils. If excavations are carried out in open cut without control of groundwater, seepage forces through saturated cohesionless soil layers would likely result in slumping of the exposed slopes to flat angles, perhaps 3H:1V, or even flatter.

Lateral earth pressures on temporary shoring may be calculated using the parameters provided in Section 4.4. Lateral earth pressures may be resisted using earth anchors, and the design of earth anchors should comply with Section 26.12.4.1 of the 4th edition of the Canadian Foundation Engineering Manual. It is recommended that at least 1% of the earth anchors to be installed be 'design' anchors and load tested to 200% of the design anchor load. All production anchors should be load tested to 133% of the design anchor load.

If earth anchors cannot be utilized, lateral earth pressures may be resisted using rakers, with the foundations of the rakers designed following the recommendations provided in Section 4.1.

4.8 Pavements

Most of the proposed building will extend to the property lines, except along the southern perimeter where access will be provided to the building's loading area and to the ramp leading down to the underground parking levels.

The access driveway may be constructed as per the following:

	Light Traffic (e.g. cars)	Heavier Traffic (e.g. trucks)
Asphalt HL3/8	75 mm	100 mm
Base (Gran A)	150 mm	150 mm
Subbase (Gran B, Type II)	300 mm	450 mm

Preparation of the access roadway surface will involve removal of existing topsoil and all foreign or deleterious materials. The exposed subgrade should be proof rolled with heavy compaction plant to identify soft spots which should be excavated and replaced with well compacted granular fill.

The wearing course should consist of 25 mm of HL3 while the binder course should consist of HL8. Asphalt courses should be compacted to at least 97% of their Marshall density. Base and subbase courses should be placed in loose lifts no thicker than 300 mm and compacted to not less than 100% of their Standard Proctor Dry Density Value.

4.9 Groundwater Considerations

Groundwater was measured at depths ranging from 1.09 to 13.03 m bgs. Groundwater infiltration to excavations should be anticipated below a depth of 1.0 m bgs. Installation of temporary shoring using soldier piles and timber lagging may require advance dewatering to allow installation of the lagging. Dewatering of the excavation may also be required to guard against basal heave so as to allow for construction of foundations and slabs on grade. Design of dewatering programs is outside of the scope of this geotechnical investigation, and the reader is referred to the report of the hydrogeological study for the site, which is provided under separate cover. Groundwater that reports to excavations discharging to the municipal sewer system will likely require a permit from the City, and a Permit to Take Water from the MECP if the quantity exceeds 400,000 L/day.

Groundwater is expected to impinge on the permanent basement walls of the proposed building, where up to 3 levels (~10 m bgs) of underground parking are anticipated. The exterior of basement walls should be provided with full face drainage panels, with the collected groundwater reporting to interior sumps. A system of perforated drainage pipes should be installed at maximum 6 m spacing in the crushed stone vapour barrier layer beneath the basement slab on grade, with collected groundwater also reporting to interior sumps, for discharge to the municipal sewer system. For the quantity of groundwater that will report to the permanent dewatering systems of the proposed building the reader is referred to the hydrogeological study for the site, provided under separate cover. Groundwater that reports to the interior sumps post construction that discharges to the municipal sewer system will likely require a permit from the City, and a Permit to Take Water from the MECP if the quantity exceeds 50,000 L/day.

4.10 Winter Construction

Precautions must be taken if winter construction is considered for this project. The subsoil conditions at this site consist of frost susceptible materials (sandy silts to silts to silty clay). In the presence of water and freezing conditions, ice lenses could form within the soil mass. Heaving and settlement upon thawing could occur.

In the event of construction during below zero temperatures, the founding stratum should be protected from freezing temperatures by the use of straw, propane heaters and tarpaulins or other suitable means. In this regard, the base of the excavations should be protected from sub-zero temperatures immediately upon exposure and until such time as heat is adequately supplied to the building and the foundation is protected with sufficient soil cover to prevent freezing at founding level.

Trench excavations and slab-on-grade construction are also difficult activities to complete during freezing conditions without introducing frost in the sub-grade or in the excavation walls and bottoms. Precautions should be taken if such activities are to be carried out during freezing conditions.

4.11 Geotechnical Review

The geotechnical recommendations provided herein to assist foundation and building design should be reviewed by Arcadis prior to construction to assess their applicability to the proposed structures and final construction design drawings. Site-specific foundation design recommendations may be required for components of the proposed structures. Construction design drawings should be reviewed by the geotechnical engineer to confirm that the guidelines presented in this geotechnical investigation report have been interpreted as intended.

4.12 Construction Supervision

Redevelopment of the subject property will require movement of a variety of soil types. It is recommended that a qualified geotechnical engineer be retained to inspect and approve the subgrade prior to placement of building foundations. Geotechnical supervision should also be provided to ensure that engineered fills placed beneath floor slab areas and pavements are properly compacted. The qualified geotechnical field engineer should also provide compaction control and field density testing as well as inspection of the condition of any unsupported excavation slopes, if required. Sampling and testing of concrete and fill materials is recommended.

5 USE AND LIMITATIONS OF THIS GEOTECHNICAL INVESTIGATION REPORT

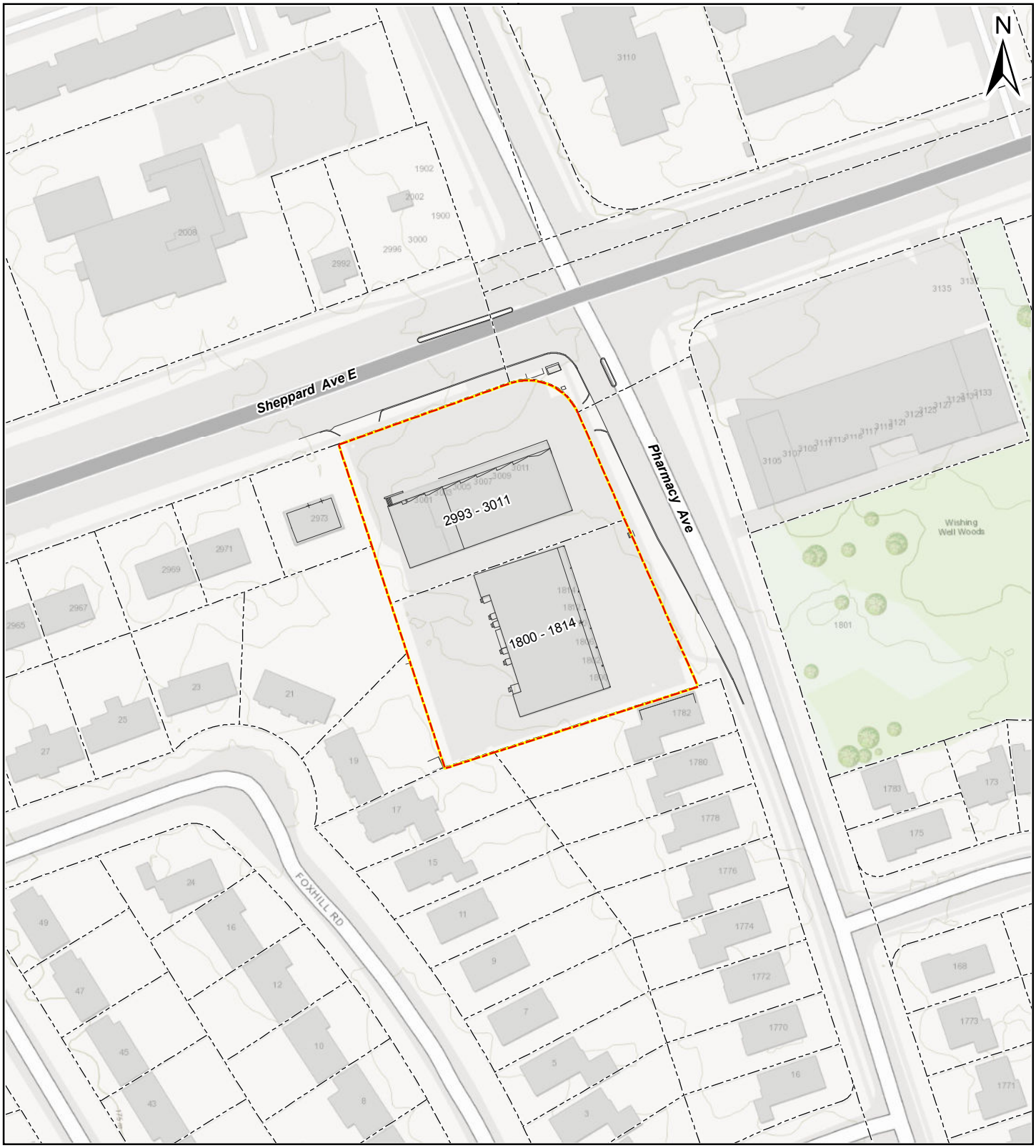
The conclusions and recommendations presented in this geotechnical investigation report are based on the information determined at the borehole locations. The information contained within this report in no way reflects the environmental aspect of the site or soil, unless specifically reported upon. Subsurface soil and groundwater conditions between and beyond the test locations may differ from those encountered at the specific locations tested, and conditions may be encountered during construction which were not detected and could not be anticipated at the time of the site investigation. It is recommended that Arcadis be retained during construction to confirm that the subsurface conditions throughout the site do not differ materially from those conditions encountered at the test locations. Any benchmark and ground surface elevations in this report were used to establish relative elevation differences between the test locations and should not be used for other purposes, such as grading, excavating, planning, development, etc.

The design recommendations provided in this report are applicable only to the project described in the text and then only if constructed substantially in accordance with the details stated in this report. Since all details of the design may not have been available at the time this report was prepared, it is recommended that Arcadis be retained during future stages of the design process to verify that the design is consistent with the recommendations of this report, and that the assumptions made in the analyses contained in this report are still valid.

The comments given in this report on potential construction problems and possible methods of construction are intended only for the guidance of the designer. The number of boreholes may not be sufficient to determine all of the factors that may affect construction methods and costs (e.g., the thickness of surficial topsoil and fill layers can vary markedly and unpredictably). Contractors bidding on the project or undertaking the construction should, therefore, make their own interpretations of the factual information in this report and draw their own conclusions as to how the subsurface conditions may affect their bid or work. Furthermore, this report was prepared by Arcadis for Sheppard Pharmacy GP Inc. Cope Project Management Corporation may rely on the contents of this geotechnical investigation report. Arcadis accepts no liability, whether in negligence, contract or arising on any other basis for damages or from indemnification arising from decisions or actions by other based on this report.

APPENDIX A

Figures



Legend

- Site Boundary
- Property Line

1:1,500

30 15 0 30 60

Metres

Title: **GENERAL SITE SEETING**

Project: **GEOTECHNICAL INVESTIGATION 2993-3011 SHEPPARD AVE EAST AND 1800-1814 PHARMACY AVE, SCARBOROUGH, ON**

Client: **SHEPPARD PHARMACY GP INC**

ARCADIS

Date: **March 2019**

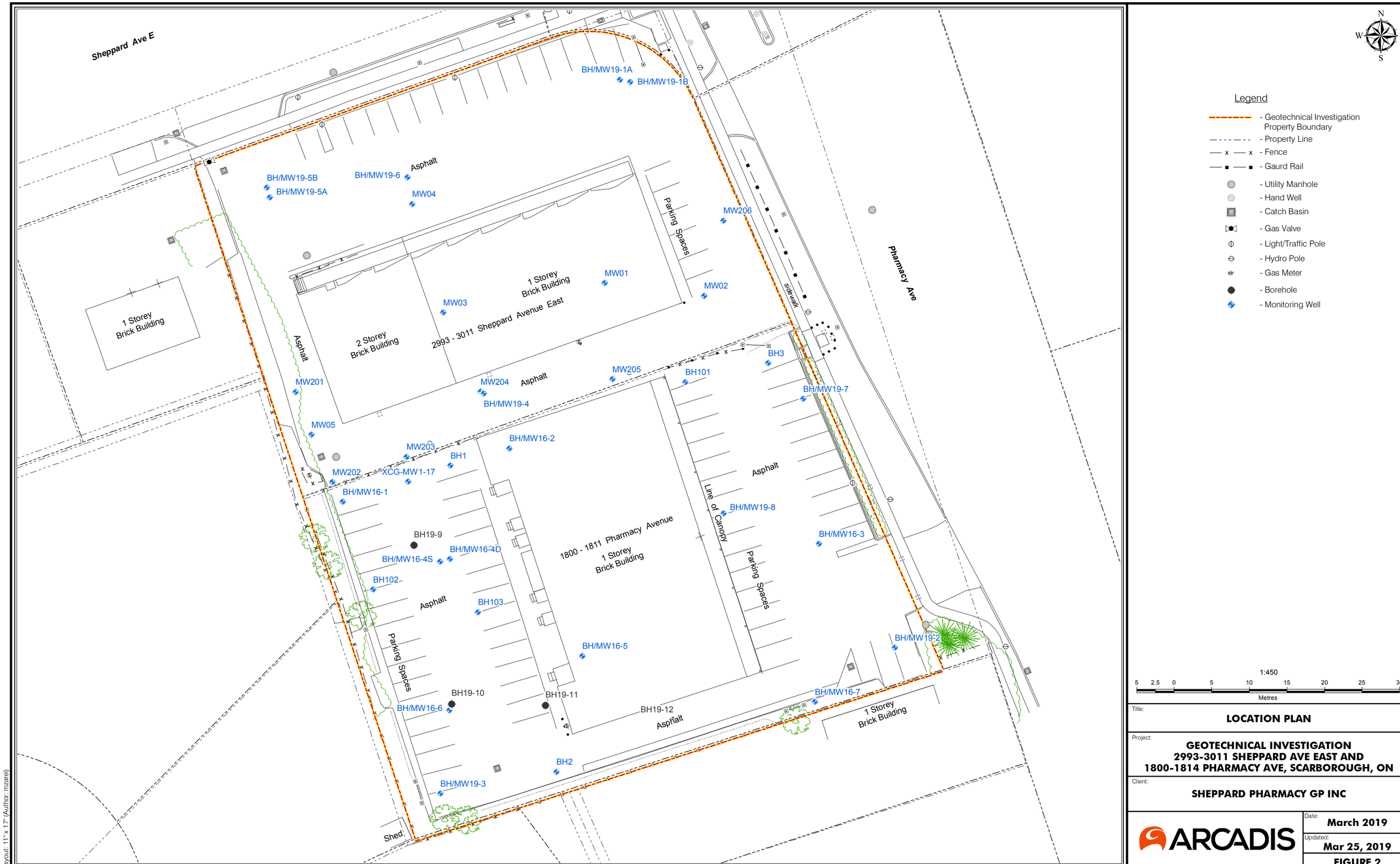
Updated: **Mar 25, 2019**

FIGURE 1

Layout: 8.5" x 11" (Author: mzarei)

background reference: ESRI ArcGIS Online Base Map

{SA\mzarei} Z:\GISProjects_ENV\102934_3011_ShappardAveE\000_00001_GeoTech\SiteSetting.mxd



Legend

- Geotechnical Investigation Property Boundary
- Property Line
- Fence
- Gaurd Rail
- Utility Manhole
- Hand Well
- Catch Basin
- Gas Valve
- Light/Traffic Pole
- Hydro Pole
- Gas Meter
- Borehole
- Monitoring Well

1:450

5 2.5 0 5 10 15 20 25 30

Metres

Title:

LOCATION PLAN

Project:

GEOTECHNICAL INVESTIGATION
2993-3011 SHEPPARD AVE EAST AND
1800-1814 PHARMACY AVE, SCARBOROUGH, ON

Client:

SHEPPARD PHARMACY GP INC

ARCADIS

Date: **March 2019**

Updated: **Mar 25, 2019**

FIGURE 2

Layout: 11"x 17" (Author: mzarei)

imagery: First Base Solutions, 2018

{SA\mzarei} Z:\GISProjects_ENV\102934_3011_ShappardAveE\000_00001_GeoTech\SitePlan.mxd

APPENDIX B

Borehole Logs

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-6** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-1A**

Monitoring Well: **Installed**

Sheet 1 of 1

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:179.25m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	179.15 0.10	**ASPHALT** - 100 mm -Borehole Augered to 4 m - Lithology assumed as BH19-1B											
		GRAVELLY SAND (FILL), brown, dry to moist, compact											
	178.49 0.76	**SILTY CLAY (NATIVE)**, dark brown, moist, some grey mottling, soft											
1													
		-becomes clayey silt, moist to wet, trace gravel, firm @ 1.52 m											
2													
	176.96 2.29	**SILT**, brown, moist, trace gravel, dense to very dense -dark brown oxidation from 2.29 to 3.81 m			▽								
3													
		-gravel in mouth of spoon @ 3.66 m -becomes dry to moist, orange-brown oxidation @ 3.81 m											
4	175.25 4.00	**End of Borehole @ 4.00 m** Water Level @ 3.105 m bgs (el. 176.144) on 21 Mar. 2019											Groundwater Analyzed for: Metals, PAHs, PHCs, PCBs, VOCs
5													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-12** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-1B**

Monitoring Well: **Installed**

Sheet 1 of 4

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:179.31m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV(%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	179.21	**ASPHALT** - 100 mm				SS-1		8	17		N	7.8	
	0.10	**GRAVELLY SAND (FILL)**, brown, dry to moist, compact						6 5 3					
	178.55												
1	0.76	**SILTY CLAY (NATIVE)**, dark brown, moist, some grey mottling, soft				SS-2		2 2 2 3	50		N	24.6	Analyses: Metals, PAHs, PHCs, PCBs, pH
		-becomes clayey silt, moist to wet, trace gravel, firm @ 1.52 m				SS-3		2 3 5 11	88		N	11.3	
2	177.02												
	2.29	**SILT**, brown, moist, trace gravel, dense to very dense -dark brown oxidation from 2.29 to 3.81 m				SS-4		7 12 18 30	92		N	8.9	
3						SS-5		16 12 24 50/ 75 mm	86		N	8.2	Analyses: Metals, PAHs, PCBs, pH
		-gravel in mouth of spoon @ 3.66 m -becomes dry to moist @ 3.81 m -orange-brown oxidation from 3.81 to 5.33 m				SS-6		26 50/ 125 mm	100		N	6.8	Analyses: PHCs, VOCs
4						SS-7		40 50/ 75 mm	67		N	8.6	
5		-gravel @ 5.18 m -becomes grey, trace sand @ 5.33 m				SS-8		26 50/ 100 mm	80		N	7.9	

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-12** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-1B**

Monitoring Well: **Installed**

Sheet 2 of 4

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	173.06												
	6.25	**SAND**, grey, wet, dense				SS-9		12 20 29 40	75		N	12.4	
	172.76												
7	6.55	**SILT**, grey, moist, trace gravel, very dense			▽	SS-10		24 33 29 47	75		N	7.6	
						SS-11		20 28 38 40	75		N	6.4	
8													
						SS-12		22 30 32 50/ 100 mm	73		N	7.7	
9													
						SS-13		16 30 40 45	75		N	6.5	
10													
						SS-14		17 25 32 33	75		N	6.8	
11													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-12** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-1B**

Monitoring Well: **Installed**

Sheet 3 of 4

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
13		-becomes wet, compact, trace clay @ 12.19 m				SS-15		7 8 9 10	75		N	⊕△ 9	
14						SS-16		3 6 5 8	83		N	⊕△ 9.3	
15	164.07 15.24	**CLAYEY SILT**, grey, wet, trace gravel, stiff				SS-17		4 7 7 7	75		N	⊕△ 10.4	
16		-becomes firm @ 16.76 m				SS-18		1 2 3 4	100		N	⊕△ 10.3	
17													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-12** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-1B**

Monitoring Well: **Installed**

Sheet 4 of 4

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
		-trace sand @ 18.29 m				SS-19		1 3 5 7	83		N	⊕△ 10.3	
	160.41 18.90	**End of Borehole @ 18.90 m** Water Level @ 7.604 m bgs (el. 171.706) on 21 Mar. 2019											
19													
20													
21													
22													
23													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-14** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-2**

Monitoring Well: **Installed**

Sheet 1 of 4

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:178.70m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	178.60 0.10 178.40 0.30	**ASPHALT** - 100 mm **SAND AND GRAVEL (FILL)**, brown, dry				SS-1		24 16 24 24	75		N	13.9	
	177.94 0.76	**SANDY SILT (NATIVE)**, brown, moist, trace gravel, dense **SILT**, dark brown to brown, moist, trace gravel, loose				SS-2		7 3 4 6	83		N	27.3	
1		-trace fine sand from 0.76 to 2.29 m											
		-trace to some orange-brown oxidation from 1.52 to 6.10 m				SS-3		2 3 4 7	75		N	12.2	
2		-becomes compact @ 2.29 m				SS-4		7 9 15 26	100		N	9.5	
3		-becomes very dense @ 3.05 m				SS-5		18 28 35 41	79		N	7.7	
						SS-6		20 38 50/ 125 mm	100		N	7.9	
4						SS-7		22 26 50/ 125 mm	94		N	9.3	
5													
		-becomes brown-grey @ 5.33 m				SS-8		22 30 38 35	83		N	6.6	

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-14** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-2**

Monitoring Well: **Installed**

Sheet 2 of 4

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
		-becomes grey, compact @ 6.10 m				SS-9		9 12 15 22	92		N	7.8	
7		-becomes very dense @ 6.86 m				SS-10		15 27 35 32	75		N	6.4	
						SS-11		22 32 36 50/ 100 mm	75		N	7.1	
8						SS-12		26 50/ 100 mm	100		N	7.1	
9						SS-13		21 35 40 50/ 125 mm	61		N	7	
10					▽								
						SS-14		16 29 38 42	67		N	7.9	
11													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-14** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-2**

Monitoring Well: **Installed**

Sheet 3 of 4

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
13		-becomes moist to wet, trace sand, dense to compact @ 12.19 m				SS-15		11 15 19 19	75		N	8.1	
14						SS-16		6 11 18 18	75		N	9.3	
15	163.46 15.24	**SANDY SILT**, grey, moist to wet, trace gravel, compact				SS-17		8 8 15 20	50		N	7.7	
16	161.94 16.76	**SILT**, grey, moist to wet, trace gravel, trace sand, compact				SS-18		9 11 11 14	63		N	9.7	
17													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-14** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-2**

Monitoring Well: **Installed**

Sheet 4 of 4

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	160.41												
	18.29	**SANDY SILT**, grey, wet, trace gravel, very loose to loose				SS-19		1 2 2 2	67		N	⊕ △ 11.5	
	159.80												
19	18.90	**End of Borehole @ 18.90 m** Water Level @ 9.637 m bgs (el. 169.067) on 21 Mar. 2019											
20													
21													
22													
23													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-15** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-3**

Monitoring Well: **Installed**

Sheet 1 of 4

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:177.68m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) / Headspace TOV (%LEL) / Water Content (%)	Remarks and Sample Analyses
	177.58	**ASPHALT** - 100 mm				SS-1		10	75		N	19	Analyses: Metals
	0.10	**SAND AND GRAVEL (FILL)**, brown, moist to wet						10					
	177.38							8					
	0.30	**SILTY SAND (NATIVE)**, brown, some dark brown, moist to wet, trace gravel, loose						4					
						SS-2		2	50		N		Analyses: PAHs
1								3					
								5					
								5					
	176.16												
	1.52	**SANDY CLAYEY SILT**, brown, moist to wet, trace gravel, firm				SS-3		3	50		N	19.3	
2								3					
								2					
								3					
	175.39												
	2.29	**SILT**, brown, moist, trace gravel, trace gravel, oxidation, compact to dense				SS-4		6	100		N	10.3	
								11					
								15					
								17					
3						SS-5		8	75		N	9	Analyses: Metals, PAHs, PHCs, VOCs
								16					
								22					
								35					
		-becomes very dense @ 3.81 m				SS-6		12	100		N	8.6	
4								18					
								35					
								33					
		-becomes dense @ 4.57 m				SS-7		12	67		N	9.4	Analyses: PHCs, VOCs
								20					
5								26					
								42					
		-becomes brown-grey @ 5.33 m				SS-8		23	92		N	9.1	
								31					
								16					
								20					

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-15** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-3**

Monitoring Well: **Installed**

Sheet 2 of 4

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	171.58												
	6.10	**CLAYEY SILT**, grey, moist, crushed rock in mouth of spoon -boulder from 6.25 to 6.55 m				SS-9		6 50/ 50 mm	100		N	9.8	
7	170.67												
	7.01	**SILT**, grey, moist to wet, trace gravel, dense -trace sand from 7.01 to 7.62 m				SS-10		12 15 20 28	58		N	8.2	
						SS-11		7 15 18 22	83		N	7.9	
8													
	169.30												
	8.38	**SANDY SILT**, grey, moist to wet, trace gravel, very dense				SS-12		10 25 38 48	75		N	10.2	
9													
		-becomes compact @ 9.14 m				SS-13		12 15 11 9	83		N	10.3	
10													
	167.01												
	10.67	**SILT**, grey, moist, trace gravel, trace fine sand, very dense to dense				SS-14		16 22 38 35	75		N	7.8	
11													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-15** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-3**

Monitoring Well: **Installed**

Sheet 3 of 4

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
13					▽	SS-15		12 20 20 26	75		N	9.1	
	163.96 13.72	**SANDY CLAYEY SILT**, grey, wet, trace gravel, firm				SS-16		4 4 4 6	100		N	9.7	
14													
15	162.44 15.24	**SANDY SILT**, grey, wet, trace gravel, loose				SS-17		3 4 5 5	75		N	7.4	
16													
						SS-18		6 4 5 7	75		N	10.6	
17													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-15** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-3**

Monitoring Well: **Installed**

Sheet 4 of 4

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	159.39												
	18.29	**SILT**, grey, wet, very loose to loose				SS-19		2 2 2 3	42		N	⊕ 21.2 △	
	158.78												
19	18.90	**End of Borehole @ 18.90 m** Water Level @ 13.032 m bgs (el. 164.648) on 21 Mar. 2019											
20													
21													
22													
23													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-13** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-4**

Monitoring Well: **Installed**

Sheet 1 of 4

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:178.28m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
1		-hole daylighted from 0 to 2.13 m											
2	175.99 2.29	**CLAYEY SILT (NATIVE)**, brown, wet to moist, trace gravel, some oxidation staining, stiff to very stiff				SS-4		3 6 7 11	83		N	13	
3						SS-5		6 8 14 22	100		N	8.7	
4	174.47 3.81	**SILT**, brown, moist, trace gravel, very dense -orange-brown oxidation staining from 3.81 to 6.10 m				SS-6		11 20 33 43	75		N	9.6	Analyses: PHCs, VOCs
5						SS-7		17 30 35 45	100		N	8.2	
						SS-8		12 33 50/ 125 mm	71		N	10.4	Analyses: PHCs, VOCs

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-13** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-4**

Monitoring Well: **Installed**

Sheet 2 of 4

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
		-becomes grey, dry to moist, dense @ 6.10 m				SS-9		15 23 20 27	100		N	10.6	
7		-becomes moist to wet, very dense @ 6.86 m				SS-10		14 24 34 40	75		N	7.3	
						SS-11		18 32 36 40	75		N	8.5	
8						SS-12		10 25 27 32	75		N	8.2	
9		-fine sand layer from 8.92 to 9.00 m				SS-13		19 30 39 40	75		N	8.1	
10													
		-becomes moist, dense, trace gravel ends @ 10.67 m				SS-14		10 16 18 23	100		N	8.3	
11													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-13** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-4**

Monitoring Well: **Installed**

Sheet 3 of 4

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
13		-becomes moist to wet, compact, trace gravel, trace fine sand begin @ 12.19 m				SS-15		6 11 10 9	100		N	11.6	
	164.56 13.72	**SANDY SILT**, grey, moist to wet, loose, trace gravel				SS-16		2 4 4 7	92		N	10.1	
14													
15						SS-17		3 3 5 5	100		N	10.3	
16													
						SS-18		2 3 4 8	92		N	10	
17													

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-13** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Geo-Environmental Drillilng Inc.**

Drilling Method: **CME 75 Truckmount w/ HSA**

Borehole: **BH/MW19-4**

Monitoring Well: **Installed**

Sheet 4 of 4

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
19						SS-19		2 4 5 7	100		N	⊕ 11 △	
	158.47 19.81	**SILT**, grey, wet, trace gravel, trace sand, compact				SS-20		4 6 8 10	92		N	⊕ 9.6 △	
20													
21	156.94 21.34	**CLAYEY SILT**, grey, moist to wet, trace gravel, very stiff				SS-21		4 6 10 15	100		N	⊕ △ 17.2	
22	156.33 21.95	**End of Borehole @ 21.95 m** Water Level @ 5.606 m bgs (el. 172.674) on 21 Mar. 2019											Groundwater Analyzed for: PHCs, VOCs
23													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-6** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-5A**

Monitoring Well: **Installed**

Sheet 1 of 1

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation: 178.20m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	178.10 0.10	**ASPHALT** - 100 mm -Borehole Augered to 4 m - Lithology assumed as BH19-5B											
	177.90 0.30	**SAND AND GRAVEL (FILL)**, brown, dry											
		SILT (NATIVE), brown, moist, trace clay											
	177.44 0.76	**CLAYEY SILT**, dark brown to brown, moist -trace orange-brown oxidation from 0.76 to 1.52 m											
1		-grey mottling from 1.52 to 2.29 m -trace gravel begins @ 1.52 m			▽								
2		-oxidation from 2.29 to 3.05 m											
3		-becomes wet @ 3.05 m											
	174.39 3.81	**SILT**, brown, moist, trace gravel, oxidation											
4	174.20 4.00	**End of Borehole @ 4.00 m** Water Level @ 1.565 m bgs (el. 176.634) on 21 Mar. 2019											Groundwater analyzed for: Metals, PAHs, PHCs, VOCs
5													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-6** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-5B**

Monitoring Well: **Installed**

Sheet 1 of 2

Ground Surface Elevation: 178.10 m

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	178.00	**ASPHALT** - 100 mm				SS-1			100		N		Analyzed for: Metals
	0.10	**SAND AND GRAVEL (FILL)**, brown, dry											
	177.80												
	0.30	**SILT (NATIVE)**, brown, moist, trace clay											
	177.34												
	0.76	**CLAYEY SILT**, dark brown to brown, moist				SS-2			100		N		Analyzed for: PAHs
1		-trace orange-brown oxidation from 0.76 to 1.52 m											
		-grey mottling from 1.52 to 2.29 m				SS-3			100		N		
		-trace gravel begins @ 1.52 m											
2		-oxidation from 2.29 to 3.05 m				SS-4			100		N		
3		-becomes wet @ 3.05 m				SS-5			100		N		Analyzed for: Metals, PAHs, PHCs, VOCs
	174.29												
	3.81	**SILT**, brown, moist, trace gravel				SS-6			100		N		Analyzed for: PHCs, VOCs
4		-oxidation from 3.81 to 4.57 m											
						SS-7			100		N		
5													
	172.77												
	5.33	**SANDY SILT**, brown, moist				SS-8			100		N		
		-becomes grey @ 5.79 m											

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-6** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-5B**

Monitoring Well: **Installed**

Sheet 2 of 2

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	172.00												
	6.10	**SILT**, grey, moist to wet				SS-9			100		N	⊕	
7						SS-10			100		N	⊕	
	170.48												
	7.62	**End of Borehole @ 7.62 m**											Groundwater analyzed for: PHCs, VOCs
		Water Level @ 1.584 m bgs (el. 176.520) on 21 Mar. 2019											
8													
9													
10													
11													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-7** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-6**

Monitoring Well: **Installed**

Sheet 1 of 1

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation: 178.90m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	178.83 0.08	**ASPHALT** - 75 mm				SS-1			80		N	⊕	Analyzed for: Metals
	178.60 0.30	**SAND AND GRAVEL (FILL)**, dry, crushed red brick present											
		SILT (NATIVE), brown to grey, moist -trace gravel from 0.3 to 0.76 m											
1		-becomes dark brown, trace grey mottling @ 0.76 m				SS-2			80		N	⊕	Analyzed for: PAHs
	177.38 1.52	**SILTY CLAY**, dark brown, moist to wet				SS-3			90		N	⊕	Analyzed for: PHCs, VOCs
2		-becomes brown, trace gravel, some grey mottling @ 2.29 m			▽	SS-4			90		N	⊕	Analyzed for: Metals, PAHs
3	175.85 3.05	**SANDY SILT**, brown, moist, trace gravel, trace oxidation				SS-5			100		N	⊕	Analyzed for: PHCs, VOCs
4						SS-6			100		N	⊕	
	174.33 4.57	**End of Borehole @ 4.57 m** Water Level @ 2.459 m bgs (el. 176.441) on 21 Mar. 2019											Groundwater analyzed for: PHCs, VOCs
5													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-7** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-7**

Monitoring Well: **Installed**

Sheet 1 of 2

Ground Surface Elevation: 178.80m

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	178.70	**ASPHALT** - 100 mm				SS-1			90		N		Analyzed for: Metals
	0.10	**SANDY GRAVELLY SILT (FILL)**, brown, dry											
	178.04												
	0.76	**CLAYEY SILT (FILL)**, dark brown to brown, moist, trace gravel				SS-2			90		N		Analyzed for: PAHs
1					▽								
		-crushed red brick from 1.52 to 1.83 m				SS-3			100		N		
	176.97												
	1.83	**CLAYEY SILT (NATIVE)**, dark brown to brown, moist, trace gravel											
2		-orange-brown oxidation from 2.29 to 3.05 m				SS-4			100		N		Analyzed for: Metals, PAHs
3						SS-5			100		N		
	174.99												
	3.81	**SILT**, brown, moist, trace gravel -oxidation from 3.81 to 5.49 m				SS-6					N		
4													
						SS-7			100		N		Analyzed for: PHCs, VOCs
5													
						SS-8					N		
		-becomes light grey to grey @ 5.49 m											

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-7** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-7**

Monitoring Well: **Installed**

Sheet 2 of 2

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
		-wet from 6.1 to 6.25 m				SS-9			100		N		Analyzed for: PHCs, VOCs
7						SS-10					N		
						SS-11					N		
8													
						SS-12					N		
9	169.66												
	9.14	**End of Borehole @ 9.14 m** Water Level @ 1.092 m bgs (el. 177.703) on 21 Mar. 2019											Groundwater Analyzed for: Metals, PAHs, PHCs, VOCs
10													
11													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-7** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-8**

Monitoring Well: **Installed**

Sheet 1 of 2

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation: 178.73m)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	178.66	**ASPHALT** - 75 mm				SS-1			80		N		Analyzed for: Metals
	0.08 178.43	**SAND AND GRAVEL (FILL)**, dry											
	0.30	**SILT (NATIVE)**, dark brown, moist, trace gravel, trace black staining											
	177.97												
1	0.76	**SANDY SILT**, brown, moist, trace oxidation				SS-2					N		Analyzed for: PAHs
	177.21				▽								
	1.52	**SILT**, brown, moist to wet, trace gravel -grey mottling from 1.52 to 3.05 m -some orange-brown oxidation from 1.52 to 5.33 m				SS-3					N		
2													
						SS-4					N		Analyzed for: Metals, PAHs
3						SS-5					N		Analyzed for: PHCs, VOCs
						SS-6					N		
4													
						SS-7					N		Analyzed for: PHCs, VOCs
5													
		-becomes grey @ 5.33 m				SS-8					N		
		-gravel layer from 5.79 to 5.94 m											

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-7** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH/MW19-8**

Monitoring Well: **Installed**

Sheet 2 of 2

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
7						SS-9					N		
						SS-10					N		
	171.11 7.62	**End of Borehole @ 7.62 m** Water Level @ 1.555 m bgs (el. 177.179) on 21 Mar. 2019											Groundwater analyzed for: Metals, PAHs, PHCs, VOCs
8													
9													
10													
11													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-9**

Monitoring Well: **n/a**

Sheet 1 of 2

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	0.08	**ASPHALT** - 75 mm				SS-1			70		N		
	0.30	**SAND AND GRAVEL (FILL)**, brown, with black staining											
		SILT (NATIVE), black to dark brown, moist, trace gravel											
		-trace oxidation from 0.76 to 2.29 m				SS-2					N		
1													
						SS-3			70		N		
2													
						SS-4					N		
		-becomes light brown @ 2.67 m -wet from 2.67 to 3.05 m											
3		-some to trace oxidation staining from 3.05 to 6.86 m				SS-5			90		N		
						SS-6					N		
4													
		-wet from 4.57 to 5.11 m				SS-7			100		N		Analyses: PHCs, VOCs
5													
						SS-8					N		
		-wet from 5.56 to 6.1 m											

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-9**

Monitoring Well: **n/a**

Sheet 2 of 2

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
7		-becomes grey @ 6.86 m				SS-9			100		N		Analyses: PHCs, VOCs
						SS-10					N		
	7.62	**End of Borehole @ 7.62 m**											
8													
9													
10													
11													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-10**

Monitoring Well: **n/a**

Sheet 1 of 2

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
		Ground Surface Elevation:											
	0.00	**ASPHALT** - 100 mm				SS-1			90		N		
	0.10	**SAND AND GRAVEL (FILL)**, dry, some black staining											
	0.30	**SILT (NATIVE)**, brown, moist, trace gravel											
		-becomes grey, loose @ 0.76 m				SS-2					N		
1													
		-wet from 1.52 to 2.29 m				SS-3			90		N		
2													
		-becomes brown, some light orange-brown oxidation @ 2.29 m				SS-4					N		
3		-becomes wet @ 3.05 m				SS-5			100		N		
						SS-6					N		
4													
	4.57	**CLAYEY SILT**, brown, wet, trace oxidation				SS-7			100		N		3250 Analyses: PHCs, VOCs
5													
	5.33	**SILT**, brown, moist to wet, trace sand				SS-8					N		

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-10**

Monitoring Well: **n/a**

Sheet 2 of 2

Scale (m)	Elev. (m) Depth (m)	Description	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	6.02	-sand layers from 5.92 to 6.02 m **SANDY SILT**, brown, wet to moist				SS-9					N	⊕	Analyses: PHCs, VOCs
7		-becomes grey @ 6.86 m				SS-10					N	⊕	
	7.62	**End of Borehole @ 7.62 m**											
8													
9													
10													
11													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-11**

Monitoring Well: **n/a**

Sheet 1 of 2

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
		ASPHALT - 100 mm				SS-1			70		N		
	0.10	**SAND AND GRAVEL (FILL)**, black											
	0.30	**SILT (FILL)**, brown, moist, trace gravel											
						SS-2					N		
1													
		-white ash layer @ 1.52 m				SS-3			90		N		
	1.68	**SILT (NATIVE)**, brown, moist -trace gravel and grey mottling from 1.68 to 2.29 m											
2													
		-some to trace orange-brown oxidation from 2.29 to 5.33 m				SS-4					N		
3													
		-becomes wet @ 3.05 m				SS-5					N		
						SS-6					N		
4													
		-trace gravel @ 4.57 m				SS-7					N		Analyses: PHCs, VOCs
5													
		-becomes grey @ 5.33 m				SS-8					N		

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-11**

Monitoring Well: **n/a**

Sheet 2 of 2

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
7						SS-9					N		Analyses: PHCs, VOCs
						SS-10					N		
	7.62	**End of Borehole @ 7.62 m**											
8													
9													
10													
11													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-12**

Monitoring Well: **n/a**

Sheet 1 of 2

Scale (m)	Elev. (m) Depth (m)	Description (Ground Surface Elevation:)	Symbol	Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
	0.08	**ASPHALT** - 75 mm **SAND AND GRAVEL (FILL)**				SS-1			80		N		
	0.30	**SILT (NATIVE)**, brown with some orange, moist											
		-becomes dark brown @ 0.76 m				SS-2					N		
1													
	1.52	**CLAYEY SILT**, dark brown to brown, moist to wet, trace gravel				SS-3			60		N		
2													
						SS-4					N		Analyses: PHCs, VOCs
3													
	3.05	**SILT**, brown, wet, trace gravel -trace to some orange-brown oxidation from 3.05 to 5.33 m				SS-5			100		N		
						SS-6					N		Analyses: PHCs, VOCs
4													
						SS-7			100		N		
5													
		-becomes grey @ 5.33 m				SS-8					N		

Continued

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Project: **Sheppard Pharmacy GP Inc.** Contract No: **102934-000**

Boring date: **2019-3-8** Supervised by: **H. Saeed**

Borehole Location: **3005 Sheppard Ave East, 1800 Pharmacy Ave**

Driller: **Strata Drilling Group**

Drilling Method: **Geoprobe 7822DT - Direct Push**

Borehole: **BH19-12**

Monitoring Well: **n/a**

Sheet 2 of 2

Scale (m)	Stratigraphy: Elev. (m) Depth (m)	Description	Symbol	Samples: Well Details	Water Level	Sample Type and Number	Condition	Blows/ 300mm	% Recovery	RQD	Odour	Headspace TOV (ppm) 100 200 300 400 / Headspace TOV (%LEL) 20 40 60 80 / Water Content (%) 20 40 60 80	Remarks and Sample Analyses
7						SS-9					N		
						SS-10					N		
	7.62	**End of Borehole @ 7.62 m**											
8													
9													
10													
11													

ODOUR:
N - None
T - Trace
M - Moderate
S - Strong
VS- Very Strong

Prepared by: **J. Grift**

Checked by: **B.H.Cooke**

Date: **19-3-26**

ARCADIS

Arcadis Canada Inc.

121 Granton Drive, Suite 12, Richmond Hill, Ontario L4B 3N4

Tel 905 764 9380

www.arcadis.com