AllRock
Consulting Ltd

Geotechnical Investigation Report

64 Jamie Avenue, Ottawa, Ontario

Prepared For:

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P.O Box 296
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Date: September 15, 2025
AllRock File: 25014

AllRock Consulting Ltd.
174 Colonnade Road #35
Ottawa, ON K2E 7J5

Version 1.0

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Geotechnical Investigation Report

Proposed Parking Garage – 64 Jamie Avenue

Project No.: 25014

September 15, 2025

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QUALITY CONTROL

Version No.	Date	Comments
1.0	March 21, 2025	Original Version
2.0	July 25, 2025	Updates based on City of Ottawa comments
3.0	August 6, 2025	Updates based on City of Ottawa comments
4.0	September 15, 2025	Updates based on City of Ottawa comments

QUALITY MANAGEMENT

Issue/Revision	Version No. 1	Version No. 2	Version No. 3	Version No. 4
Remarks	Issued for Draft	Issued for Final	Issued for Final	Issued for Final
Date	March 21, 2025	July 24, 2025	August 6, 2025	September 15, 2025
Prepared By:	Jeremy Milsom, G.I.T	Jeremy Milsom, G.I.T	Jeremy Milsom, G.I.T	Jeremy Milsom, G.I.T
Signature:				
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Project No.	25014	25014	25014	25014
Authorized By:	Scott Allen, P.Eng	Scott Allen, P.Eng	Scott Allen, P.Eng	Scott Allen, P.Eng
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1. INTRODUCTION

This report presents the results of a geotechnical investigation carried out for the proposed single storey building at 64 Jamie Avenue in Ottawa, Ontario.

The purpose of the investigation was to identify the general subsurface conditions at the site by means of a limited number of boreholes and, based on the factual information obtained, to provide engineering guidelines on the geotechnical design aspects of the project, including construction considerations that could influence design decisions.

2. BACKGROUND

2.1 Project Description

It is understood that the proposed development includes the following aspects:

- A single storey building consisting of slab on grade construction (i.e. no basement)
- No grade raises are required throughout the subject footprint
- No landscaping features that will affect geotechnical aspects will be implemented at the property

2.2 Previous Reports

AllRock notes no previous investigations have been provided for review.

3. SUBSURFACE INVESTIGATION

3.1 Geotechnical Investigation

The field work for this investigation was carried out on the 26th of February 2025. At that time, three (3) boreholes, numbered BH1-25 to BH3-25, were advanced to depth of 8 meters below existing grade.

The borehole locations were selected and positioned on-site by AllRock. The field work was observed throughout by a member of our engineering staff who directed the drilling operations and logged the samples.

Following completion of the boreholes, the soil samples were returned to our laboratory for examination by a geotechnical / materials engineer. Selected samples were submitted for moisture content and grain size distribution testing.

The approximate locations of the boreholes are shown on the Borehole Location Plan, Figure 1. The results of the boreholes are provided on the Record of Boreholes Sheets in Appendix A. The results of the laboratory testing results are provided on the Record of Boreholes Sheets in Appendix B.

3.2 Methodology

Materials and soil description have been made with reference to the following documents:

- Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System) – ASTM D2487-06
- Standard Practice for the Description and Identification of Soils (Visual-Manual Procedure) – ASTM D2488-06

4. SUBSURFACE CONDITIONS

4.1 General

As previously indicated, the soil and groundwater conditions identified in the boreholes are given on the Record of Borehole sheets in Appendix A. The logs indicate the subsurface conditions at the specific test locations only. Boundaries between zones on the logs are often not distinct but rather are transitional and have been interpreted. The precision with which subsurface conditions are indicated depends on the method of exploration, the frequency and recovery of samples, the method of sampling, and the uniformity of the subsurface conditions. Subsurface conditions at other than the borehole locations may vary from the conditions encountered in the boreholes.

The soil descriptions in this report are based on commonly accepted methods of classification and identification employed in geotechnical practice. Classification and identification of soil involves judgement and AllRock does not guarantee descriptions as exact but infers accuracy to the extent that is common in current geotechnical practice.

The groundwater conditions described in this report refer only to those observed at the place and time of observation noted in the report. It is noted that groundwater conditions can vary seasonally or as a result of construction activities in the area.

4.2 Subsurface Conditions

The following presents an overview of the subsurface conditions encountered in the borehole investigation

4.2.1 Asphalt Pavement

As all the boreholes were advanced in an existing parking lot, a layer of asphalt was encountered at all locations. The asphalt was found to have a thickness of approximately 150 millimeters.

4.2.2 Sub-Base Course

A sub-base course was encountered at all locations below the asphalt and extended to a depth of approximately 0.6 meters

4.2.3 Silty Sand

A silty sand layer was encountered all locations below the sub-base, and can be described as a brown, medium grained, and medium dense silty sand. The layer extended to the termination depth of the borehole at 8 meters.

Standard penetration tests carried out in the native silty sand gave N values ranging from 0 to 10 blows per 0.3 metres of penetration, which reflects a firm to very stiff relative consistency.

4.2.4 Gradation Analysis and Moisture Content

Table 1.1 Gradation Analysis and Moisture Content

Location	Sample Number	Sample Depth (ft)	Test Type	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Moisture Content (%)
BH3-25	SS3	7.5 – 9.5	Grain	0.0	71.2	28.8		5.5
BH2-25	SS4	10 - 12	Grain	0.0	72.5	27.5		5.2

Laboratory grain size analysis of the submitted soil samples indicated that the material consists of approximately 0% gravel, 70% sand, and 30% silt and clay fractions, classifying the soil as a predominantly sandy material with a significant fines content. The natural moisture content of the sample was measured at 5.5%, which is consistent with the expected range for soils of this type under typical site conditions.

4.2.5 Groundwater Level

A return visit to site was conducted on March 20th, 2025, to measure groundwater levels. The measured depth below ground surface was 6.5 meters.

5. RECOMMENDATIONS AND GUIDELINES

5.1 General

The information in the following sections is provided for the guidance of the design engineers and is intended for the design of this project only. Contractors bidding on or undertaking the works should examine the factual results of the investigation, satisfy themselves as to the adequacy of the information for construction, and make their own interpretation of the factual data as it affects their construction techniques, schedule, safety, and equipment capabilities. The professional services retained for this project include only the geotechnical aspects of the subsurface conditions.

The National Building Code of Canada 2020 Guidelines (hereafter NBCC 2020), and the 5th edition of the Canadian Foundation Engineering Manual, 2023 (hereafter CFEM 2023) were

considered for these recommendations. Based on the collected information from the test pits excavated as part of this investigation, the geotechnical recommendations are presented in the following sections.
The recommendations and guidelines provided in this report pertain to the proposed site development. It is required to that geotechnical personnel (AllRock) confirm the soil conditions and recommendations at the time of construction.

5.2 Proposed Site Development

5.2.1 Excavation

The excavation for the proposed development will be carried out through existing asphalt, sub-base and silty sand layers. The sides of the excavation should be sloped in accordance with the requirements in Ontario Regulation 213/91 under the Occupational Health and Safety Act. According to the act, soils at this site can be classified as Type 3. That is, open cut excavations within overburden deposits should be carried out with side slopes of 1 horizontal to 1 vertical, or flatter. Where excavation side slopes cannot be accommodated due to space constraints, a shoring system may be required. Additional guidelines for the design and selection of a suitable shoring system could be provided as the design progresses.

In the event that a granular pad is necessary below the foundations, the excavations should be sized to accommodate a pad of imported granular material which extends at least 0.6 metres horizontally beyond the edge of the footings and down and out from this point at 1 horizontal to 1 vertical, or flatter.

Depending on construction methodology, it may be necessary to the lower the groundwater level in the native deposits to about 0.3 metres below the base of the excavation. Below the groundwater level, sloughing of the sandy overburden soils into the excavation should be anticipated, along with disturbance to the soils in the bottom of the excavation. Sloughing of the excavation side slopes below the groundwater level could be reduced, where necessary, by a shoring system installed along the sides of the excavation to below the level of the excavation in combination with pumping from within the excavation.

5.2.2 Grade Raises

It is understood that any grade raises are not required for the proposed development, as such, recommendations related to grade raise restrictions are not required.

5.2.3 Groundwater and Pumping Management

Groundwater inflow, if any, from the overburden deposits should be controlled by pumping from filtered sumps within the excavation. It is not expected that short term pumping during excavation will have a significant effect on nearby structures and services. It is anticipated that groundwater inflow from the overburden deposits into the excavations could be handled from within the excavations.

It is noted that groundwater levels and surface water flows can increase during wet periods of the year such as the early spring or following periods of precipitation.

The groundwater handling should be carried out in accordance with provincial and local regulations. Suitable detention and filtration will be required before discharging water. The contractor should be required to submit an excavation and groundwater management plan for review.

5.2.4 Subgrade Preparation and Placement of Engineered Fill

Any existing asphalt and sub-base course should be removed from below the proposed structures.

Imported granular material (engineered fill) should be used to raise the grade in areas where the proposed founding level is above the level of the native soil, or where sub-excavation of material is required below proposed founding level. The engineered fill should consist of granular material meeting Ontario Provincial Standard Specifications (OPSS) requirements for Granular B Type II and should be compacted in maximum 200-millimetre-thick lifts to at least 99 percent of the standard Proctor maximum dry density. To allow spread of load beneath the footings, the engineered fill should extend horizontally at least 0.6 metres beyond the footings and then down and out from the edges of the footings at 1 horizontal to 1 vertical, or flatter. The excavations should be sized to accommodate this fill placement.

It is noted that engineered fill in excess of 1 metre thick can be expected to experience post-construction settlement in the order of 0.5 to 1 precent of the height of the soil placed (depending on the composition of the engineered fill). It is anticipated that if engineered soil is sourced from the native onsite soils, it may take 2 to 4 months for the majority of post-construction settlement to occur; however, if imported granular fill as such as that meeting the (OPSS) requirements for Granular B Type II, settlement will likely occur within 1 to 2 weeks of placement.

5.2.5 Footing Design

In general, the native silty sand is considered suitable to support the proposed structures founded on spread footings. The existing asphalt and sub-base course are not considered suitable for the support of the proposed development and should be removed from the proposed development areas.

For preliminary design purposes, footings founded on the native sand and gravel or on a pad of compacted engineered fill above native sand and gravel should be sized using a geotechnical reaction at Serviceability Limit State (SLS) of 90 kilopascals and a factored geotechnical resistance at Ultimate Limit State (ULS) of 135 kilopascals.

The post construction total and differential settlement of footings should be less than 25 and 15 millimetres respectively, provided that all loose or disturbed soil is removed from the bearing surface and provided that any engineered fill material is compacted to the required density.

From a geotechnical perspective the proposed footings for the addition should be founded at the same elevation as the existing footings.

5.2.6 Frost Protection of Foundations

All exterior footings for heated buildings that consist of slab on grade construction or included basement should be provided with at least 1.5 metres of earth cover for frost protection purposes. Isolated, unheated and/or exterior pier footings adjacent to surfaces which are cleaned of snow cover during the winter months should be provided with a minimum of 1.8 metres of earth cover. Alternatively, the required frost protection could be provided by means of a combination of earth cover and extruded polystyrene insulation. Further details regarding the insulation of foundations could be provided at the detailed design stage, if necessary.

5.2.7 Concrete Slab Support (only required for slab-on-grade)

Based on the results of the investigation, the area in the vicinity of the proposed structure is generally underlain by asphalt, sub-base and native overburden deposits. The asphalt and sub-base should be removed from the slab on grade areas. The grade below the concrete slabs on grade could be raised, where necessary, with granular material meeting OPSS Specification book requirements for Granular B. The use of Granular B material is preferred under wet conditions. The granular base for the proposed slab on grade should consist of at least 150 millimeters of Granular A.

All imported granular materials placed below the proposed floor slab should be compacted in maximum 200-millimetre thick lifts to at least 99 percent of the standard Proctor maximum dry density value.

Proper moisture protection with a vapour retarder should be used for any slab on grade where the floor will be covered by moisture sensitive flooring material or where moisture sensitive equipment, products or environments will exist. The “Guide for Concrete Floor and Slab Construction”, ACI 302.1R-04 should be considered for the design and construction of vapour retarders below the floor slab.

Underfloor drainage is not considered necessary provided that the floor slab level is above the finished exterior ground surface level.

Thermal protection of the concrete slab on grade is required in areas that will remain unheated during the winter period. The type of insulation used below the slabs will depend on the stresses imposed on the insulation. The stress on the insulation should not exceed about 35 percent of the

insulation's quoted compressive strength due to the time dependent creep characteristics of this material. Further comments could be provided as the design progresses.

5.2.8 Foundation Drainage

A return visit to site was conducted on March 20th, 2025, to measure groundwater levels. The measured depth below ground surface was 6.5 meters. While some fluctuations of groundwater levels can be expected due to heavy precipitation events or seasonal changes, perimeter foundation drainage is not considered necessary for slab on grade structures at this site, provided that the floor slab level is above the finished exterior ground surface level.

5.2.9 Seismic Site Classification

According to Table 4.1.8.4.A of the Ontario Building Code, 2012, Site Class D (stiff soils) should be used for the seismic design of the structures bearing on native soils or on engineered fill material over native soils.

In our opinion the soils at this site are not considered to be liquefiable or collapsible under seismic loads.

5.3 Site Services

5.3.1 Excavation

Based on the investigation, the excavations for the services within the site will be carried out through asphalt, sub-base course and silty sand.

The sides of the excavations within overburden soils should be sloped in accordance with the requirements in Ontario Regulation 213/91 under the Occupational Health and Safety Act. According to the Act, the soils at this site can be classified as Type 3 soils. Therefore, for design purposes, allowance should be made for 1 horizontal to 1 vertical, or flatter, excavation slopes within the native soils at this site. As an alternative to sloping the excavations, all services installations could be carried out within a tightly fitting, braced steel trench box, which is specifically designed for this purpose.

The groundwater inflow should be controlled throughout the excavation and pipe laying operations by pumping from sumps within the excavation.

5.3.2 Groundwater Pumping

Possible groundwater inflow from the overburden deposits into the excavations could be controlled by pumping from filtered sumps within the excavations. It is not expected that short term pumping during excavation will have any significant affect on nearby structures and services.

The groundwater handling should be carried out in accordance with provincial and local regulations. To reduce the groundwater pumping requirements, we suggest that the excavation be planned for the dry period of the year (i.e., June to September).

Suitable detention and filtration will be required before discharging water. The contractor should be required to submit an excavation and groundwater management plan for review.

5.3.3 Pipe Bedding and Cover

The bedding for the sanitary sewers, storm sewers and watermains should be in accordance with OPSD 802.010 and 802.031 for flexible and rigid pipes, respectively. The pipe bedding should consist of at least 150 millimetres of well graded crushed stone meeting OPSS requirements for Granular A. OPSS documents allow recycled asphaltic concrete and concrete to be used in Granular A and Granular B Type II material.

Since the source of recycled material cannot be determined, it is suggested that any granular materials used in the service trenches be composed of virgin (i.e., not recycled) material only.
Allowance should be made for subexcavation of any existing fill, organic deposits, or disturbed material encountered at subgrade level.

Allowance should be made to place a subbedding layer composed of 150 to 300 millimetres of OPSS Granular B Type II in areas where wet silty sand is encountered at the pipe subgrade level to reduce the potential for disturbance.

Cover material, from pipe spring line to at least 300 millimetres above the top of the pipe, should consist of granular material, such as OPSS Granular A.
The use of clear crushed stone should not be permitted for the installation of site services, since it could exacerbate groundwater lowering of the overburden materials due to “French Drain” effects.
The subbedding, bedding and cover materials should be compacted in maximum 200-millimetre-thick lifts to at least 98 percent of the standard Proctor maximum dry density using suitable vibratory compaction equipment.

5.4 Pavement Design Recommendations

5.4.1 Pavement Structure

The following minimum asphaltic concrete and granular thicknesses, could be used for parking lot construction:

5.4.2 Light Duty Pave Areas (cars and small passenger trucks)

- 60 millimetres of hot mix asphaltic concrete (60 millimetres of Superpave 12.5 (Traffic Level B) over
- 150 millimetres of OPSS Granular A base over
  - 300 millimetres of OPSS Granular B, Type II subbase

5.4.3 Heavy Duty Paved Areas (fire route, heavy trucks, trailers etc.)

- 100 millimetres of hot mix asphaltic concrete (50 millimetres of Superpave 12.5 (Traffic Level B) over 50 millimetres of Superpave 19.0 (Traffic Level B) over
- 150 millimetres of OPSS Granular A base over
- 400 millimetres of OPSS Granular B, Type II subbase or

The above pavement structure assumes that any trench backfill for private services is adequately compacted, and that the fire laneway and parking lot subgrade surfaces are prepared as described in this report. If the subgrade surfaces become disturbed or wetted due to construction operations or precipitation, the granular subbase thickness given above may not be adequate and it may be necessary to increase the thickness of the subbase and/or to incorporate a woven geotextile separator between the subgrade surfaces and the granular subbase material. The adequacy of the design pavement thickness should be assessed by geotechnical personnel at the time of construction.

If the granular pavement materials are to be used by construction traffic, it may be necessary to increase the thickness of the granular subbase layer, install a woven geotextile separator between the roadway subgrade surface and the granular subbase material, or a combination of both, to prevent pumping and disturbance to the subbase material. The contractor should be made responsible for their construction access.

5.4.4 Asphalt Cement Type

Performance grade PG 58-34 asphalt cement should be specified for Superpave asphaltic concrete mixes.

5.4.5 Subgrade Preparation

In preparation for parking lot construction at this site, topsoil and any soft, wet, or deleterious materials should be removed from the proposed parking areas.

Prior to placing granular material for the parking lot, the exposed subgrade should be proof rolled using a large (10-ton) roller and approved by geotechnical personnel.

Any soft areas should be sub-excavated and replaced with suitable (dry) earth borrow or well shattered and graded rock fill material that is frost compatible with the materials exposed on the sides of the area of sub-excavation.
Similarly, should it be necessary to raise the parking lot grades at this site, material which meets OPSS specifications for Select Subgrade Material, earth borrow, or well shattered and graded rock fill material may be used.

The select subgrade material or earth borrow should be placed in maximum 300-millimetre-thick lifts and compacted to at least 95 percent of the standard Proctor maximum dry density value

using vibratory compaction equipment. Rock fill should also be placed in thin lifts and suitably compacted either with a large drum roller, the haulage and spreading equipment, or a combination of both.

Truck traffic should be avoided on the native soil subgrade and the trench backfill within the roadways especially under wet conditions.

5.4.6 Pavement Drainage

Adequate drainage of the pavement granular materials and subgrade is important for the long-term performance of the pavement at this site. The existing grades at the site should be maintained provided that they provide drainage ditches and/or catch basins to promote drainage of the pavement granular materials. Existing catch basins should already be equipped with minimum 3-metre-long stub drains extending in two directions at the subgrade level.

5.4.7 Granular Material Compaction

The granular base and subbase materials should be compacted in maximum 300-millimetre-thick lifts to at least 99 percent of the standard Proctor maximum dry density value.

6. ADDITIONAL CONSIDERATIONS

6.1 Effects of Construction Induced Vibration

Some of the construction operations (such as excavation, granular material compaction, etc.) will cause ground vibration on and off on the site. The vibrations will attenuate with distance from the source but may be felt at nearby structures. Assuming that any excavating is carried out in accordance with the guidelines in this report, the magnitude of the vibrations will be much less than that required to cause damage to the nearby structures or services in good condition but may be felt at the nearby structures.

6.2 Excess Soil Management Plan

This report does not constitute an excess soil management plan. The disposal requirements for excess soil from the site have not been assessed.

6.3 Design Review and Construction Observation

It is recommended that the final design drawings be reviewed by the geotechnical engineer to ensure that the guidelines provided in this report have been interpreted as intended.

The engagement of the services of the geotechnical consultant during construction is recommended to confirm that the subsurface conditions throughout the proposed excavations do not materially differ from those given in the report and that the construction activities do not adversely affect the intent of the design.

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The subgrade surfaces for the proposed structures should be inspected by experienced geotechnical personnel to ensure that suitable materials have been reached and properly prepared. The placing and compaction of earth fill and imported granular materials should be inspected to ensure that the materials used conform to the grading and compaction specifications.

6.4 Tree Planting Recommendations

Tree planting should be planned to avoid conflicts with foundations, buried services, and paved areas. Trees should generally be located at least 3 m from building foundations and retaining structures, and 1.5–2 m from underground utilities or hard surfaces. Where closer planting is necessary, root barriers or other mitigation measures should be implemented. Planting pits should use suitable topsoil, and surface grades should direct drainage away from structures. Species with less aggressive root systems are recommended near constrained areas.

7. CLOSURE

We trust this report provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact our office.

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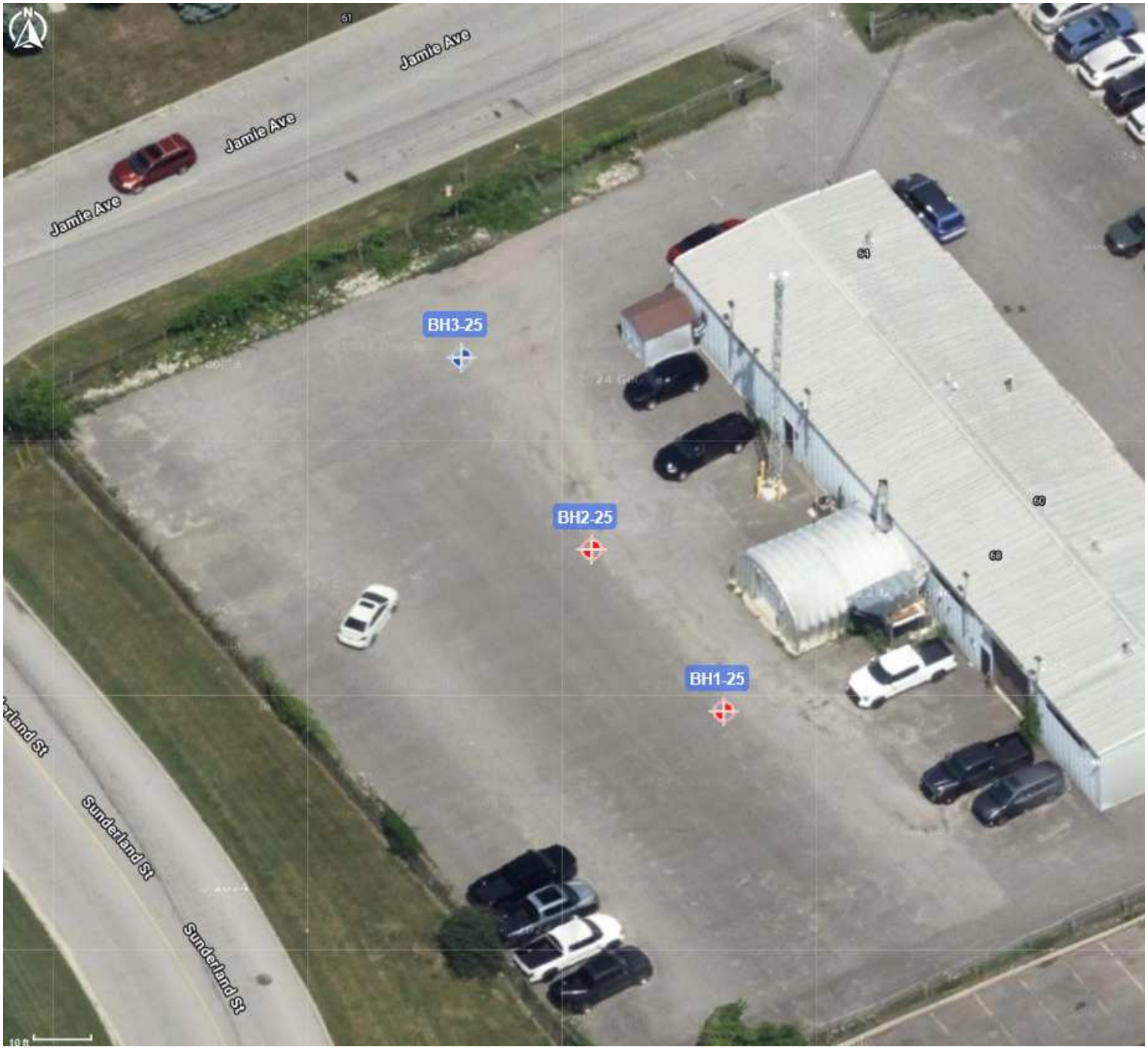

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174 Colonnade Road #35
Ottawa, Ontario K2E 7J5

Borehole Plan

Client No:	Job No: 25014

Client: Pritec

Project: 64 Jamie Ave

Address: 64 Jamie Avenue, Ottawa, ON, Canada

Legend:

- Borehole Locations
- Groundwater Monitoring Well Locations

Image Source: Google Maps		Viewed: 2025-03-13	
Drawn by: JM	Checked By: Greg Davidson	Date: 2025-03-13	Figure: 1

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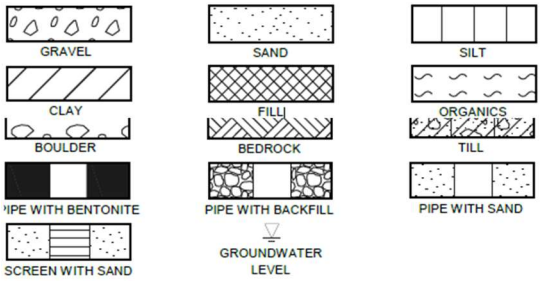
Appendix A

Record of Borehole Sheets

LIST OF ABBREVIATIONS AND TERMINOLOGY FOR LOGS

SAMPLE TYPES	
AS	Auger sample
BS	Block sample
CS	Chunk sample
DD	Diamond drilling
GS	Grab sample
MS	Manual sample
RC	Rock core
SC	Soil core
SS	Split spoon sampler – note size
ST	Slotted tube
TO	Thin-walled, open – note size (Shelby tube)
TP	Thin-walled, piston – note size (Shelby tube)
WS	Wash sample

SOIL TESTS	
w	Water content
PL, w_p	Plastic limit
LL, w_L	Liquid limit
C	Consolidation (oedometer test)
D_R	Relative density
DS	Direct shear test
GS	Specific gravity
M	Sieve analysis for particle size
MH	Combined sieve and hydrometer analysis
MPC	Modified proctor compaction test
SPC	Standard Proctor compaction rest
OC	Organic content test
UC	Unconfined compression test
γ	Unit Weight



PENITRATION RESISTANCE

Standard Penetration Resistance SPT (N):

The number of blows by a 63.5 kg (140 lb) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) split-spoon sampler for a distance of 300 mm (12 in.). Values reported are as recorded in the field and are uncorrected.

Dynamic Penetration:

The number of blows by a 63.5 kg (140 lb) hammer dropped 760 mm (30 in.) to drive a 50 mm (2 in.) diameter 60° cone attached to 'A' size drill rods for a distance of 300 mm (12 in.).

WH: Sampler advanced by static weight of hammer and drill rods

WR: Sampler advanced by static weight of drill rods

PH: Sampler advanced by hydraulic pressure from drill rig

PM: Sampler advanced by manual pressure.

Cohesionless Soil (Density)		Cohesive Soil (Consistency)	
SPT 'N'	**Description**	**Cu, kPa**	**Description**
0-4	Very loose	0-12	Very soft
4-10	Loose	12-25	Soft
10-30	Compact	25-50	Firm
30-50	Dense	50-100	Stiff
>50	Very Dense	100-200	Very Stiff
		>200	Hard

Percentage by Mass (%)	Description
>35	Noun and main fraction (i.e. sand)
>20 to 35	Adjective (i.e. silty)
>10 to 20	Some
0 to 10	Trace

Grain Size (mm)	Description
200 to 1000	**Boulder**
80 to 200	**Cobble**
5 to 80	**Gravel**
0.01 to 5	**Sand** Fine (0.08-0.4) Medium (0.4-2) Coarse (2-5)
0.01 to 0.08	**Silt and Clay**

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Geotechnical Log - Borehole

BH1-25

UTM	**: 18T**	**Drill Rig**	**: Truckmount Drill Rig**	**Job Number**	**: 25014**
Latitude	**: 45.33526**	**Driller Supplier**	**: Downing Drilling**	**Client**	**: Pritec**
Longitude	**: -75.71768**	**Logged By**	**: Jeremy Milsom**	**Project**	**: 64 Jamie Ave**
Ground Elevation	**: 88.3 (m)**	**Reviewed By**	**: Greg Davidson**	**Location**	**: 64 Jamie Avenue, Ottawa, ON, Canada**
Total Depth	**: 8 m BGL**	**Date**	**: 26/02/2025**	**Loc Comment**	**:**

Samples		Blow Counts	Graphic Log	Elevation / Depth (m)	Material Description
SPT Sample	Grab Sample				
				88.15	Pavement ASPHALT
				0.15	
	GS1				Unnatural Fill Sub Base Course
				86.3	
				0.61	Brown, medium grained, slightly moist, silty sand
SS1		9,11,9,7 (N=20) R = 60			
SS2		5,5,4,10 (N=9) R = 70			
SS3		5,9,9,13 (N=18) R = 60			
SS4		9,9,5,6 (N=14) R = 24			
SS5		3,5,5,4 (N=10) R = 60			
SS6		6,8,5,6 (N=13) R = 60			
SS7		2,7,7,11 (N=14) R = 24			
SS8		5,11,12,10 (N=23) R = 24			
SS9		5,10,13,12 (N=23) R = 60			**BH1-25 Terminated at 8m**

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Geotechnical Log - Borehole

BH2-25

UTM	**: 18T**	**Drill Rig**	**: Truckmount Drill Rig**	**Job Number**	**: 25014**
Latitude	**: 45.33537**	**Driller Supplier**	**: Downing Drilling**	**Client**	**: Pritec**
Longitude	**: -75.71776**	**Logged By**	**: Jeremy Milsom**	**Project**	**: 64 Jamie Ave**
Ground Elevation	**: 87.88 (m)**	**Reviewed By**	**: Greg Davidon**	**Location**	**: 64 Jamie Avenue, Ottawa, ON, Canada**
Total Depth	**: 8 m BGL**	**Date**	**: 26/02/2025**	**Loc Comment**	**:**

Samples		Blow Counts	Graphic Log	Elevation / Depth (m)	Material Description
SPT Sample	Grab Sample				
				87.73	
				0.15	Pavement ASPHALT
					Unnatural Fill Sub Base Course
	GS1			85.9	
				0.61	Brown, medium grained, slightly moist, silty sand
SS1		22,16,7,9 (N=23) R = 70			
SS2		6,7,10,10 (N=17) R = 60			
SS3		5,7,9,9 (N=16) R = 70			
SS4		5,5,11,10 (N=16) R = 60			
SS5		3,6,12,8 (N=18) R = 70			
SS6		5,8,14,13 (N=22) R = 40			
SS7		9,9,15,16 (N=24) R = 70			
SS8		12,13,14,16 (N=27) R = 60			
SS9		7,13,17,16 (N=30) R = 24			
					BH2-25 Terminated at 8 m

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Phone:

Geotechnical Log - Borehole

BH3-25

UTM	: 18T	**Drill Rig**	: Truckmount Drill Rig	**Job Number**	: 25014
Latitude	: 45.33550	**Driller Supplier**	: Downing Drilling	**Client**	: Pritec
Longitude	: -75.71785	**Logged By**	: Jeremy Milsom	**Project**	: 64 Jamie Ave
Ground Elevation	: 87.77 (m)	**Reviewed By**	: Greg Davidson	**Location**	: 64 Jamie Avenue, Ottawa, ON, Canada
Total Depth	: 8 ft BGL	**Date**	: 26/02/2025	**Loc Comment**	:

Samples		Blow Counts	Graphic Log	Elevation / Depth (ft)	Material Description	Well Diagram	Water
				87.62			
	GS1			0.15	Asphalt		
				87.01	Unnatural Fill Sub Base Course		
				0.61	Brown, medium grained, slightly moist, silty sand		
SS1		15,9,7,11 (N=16) R = 60					
SS2		8,12,12,16 (N=24) R = 60					
SS3		7,9,11,13 (N=20) R = 70					
SS4		7,13,13,13 (N=26) R = 60					
SS5		5,8,5,5 (N=13) R = 60					
SS6		5,9,16,16 (N=25) R = 60					
SS7		9,12,12,14 (N=24) R = 60					
SS8		11,16,16,16 (N=32) R = 60					
SS9		9,10,13,12 (N=23) R = 60					Standing
					BH3-25 Terminated at 25ft		

Method

- **EX** excavator
- **BH** backhoe bucket
- **NE** natural exposure
- **EE** existing xcavation
- **RP** ripper

Water

- complete water less
- Water inflow
- water level
- Level during drilling
- **P** partial water loss
- **N** none encountered

USC Classification

GW	well graded gravels	**SW**	well graded sands
GP	poorly graded gravels	**SP**	poorly graded sands
GM	silty gravel	**SM**	silty sands
GC	clayey gravel	**SC**	clayey sands
ML	inorg silts low plastic	**CL**	inorg clay low plastic
MH	inorg clay high plastic	**CI**	inorg clay med plastic
OL	org silts low plastic	**CH**	inorg clay high plastic
OH	org sills high plastic	**Pt**	peat of high org soils

Consistency

VS	Very soft
S	Soft
F	Firm
St	Stiff
VSt	Very stiff
H	Hard

Density

VL	Very loose
L	Loose
MD	Medium dense
D	Dense
VD	Very dense

Moisture

D	Dry
M	Moist
W	Wet
PL	plastic limit
LL	liquid limit

Soil Samples

B	bulk
D	disturbed
U(63)	U(63) push tube
U(50)	U(50) push tube
WS	water

In Situ Testing

PP	pen penetrometer
VS	vane shear
DCP	dynamic cone penetrometer

Laboratory Results

UC	undrained unconsol cohesion
UF	undrained unconsol friction angle
MC	moisture content
DD	dry density
LL	liquid limit
PL	plastic limit
LS	linear shrinkage
CC	undrained console cohesion
CF	undrained console friction angle
FH	falling head permeability
CH	constan head permeablity
CBR	californian bearing ratio

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Appendix B

Laboratory Testing Results

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Ottawa, On, K2E7J5

SOIL MOISTURE CONTENT REPORT

Prject Information	
Project Name:	64 Jamie Avenue
Project No.:	25014
Client:	Pritec Management
Sampled By:	J.Milsom
Date Sampled:	February 26, 2025
Sample Description:	Soil Samples
Tested By:	J.Milsom
Date Tested:	March 26, 2025
Reviewed By:	G. Davidson
Date Reviewed:	March 26, 2025

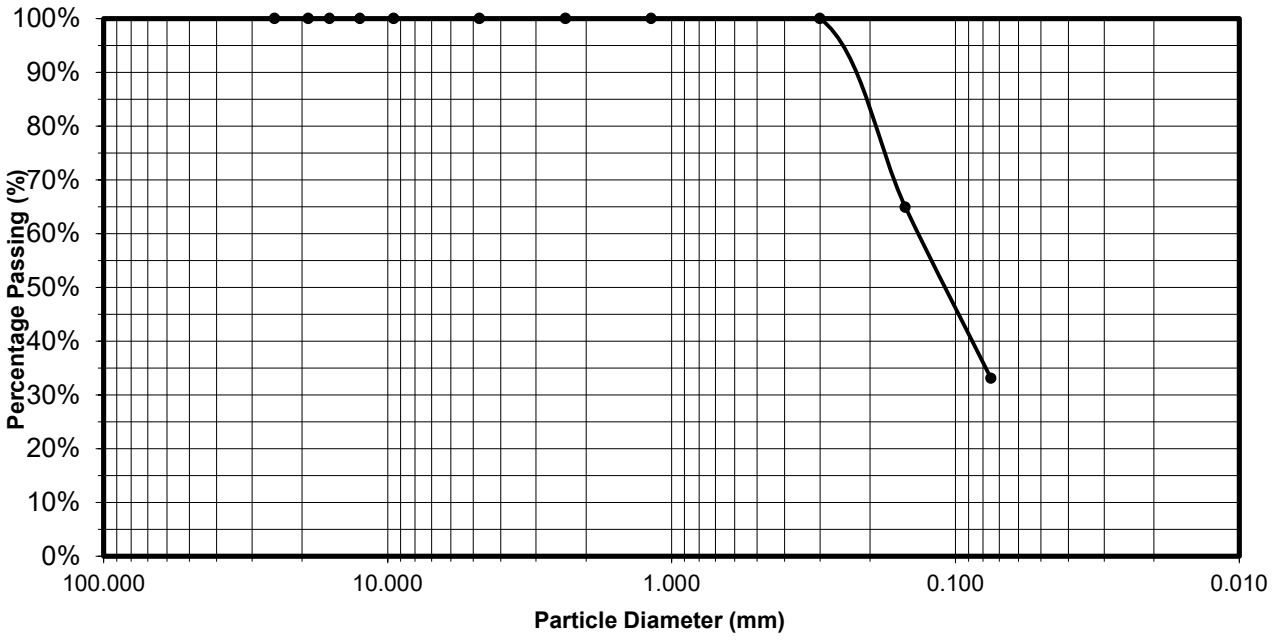
Soil Moisture Content		
Sample	Sample Depth	Moisture Content (%)
BH2 - SS4	10'-12'	5.2

SIEVE ANALYSIS OF AGGREGATES
LS-602

AllRock Consulting Ltd
35-174 Colonnade Rd. South
Ottawa, On, K2E7J5

Project:	25014	**Project Number**	25014
Client:	Pritec Management	**Sample Classification:**	Silty Sand
Sample No.	BH2 - SS4	**Sample Depth**	10'-12'
Date Sampled	February 26, 2025	**Date Tested:**	March 26, 2025
Material Spec:			

Sieve Sizes					Remarks
#	mm	Lower Limit	Upper Limit	Tested Sample	
1"	25			100.0%	More Information Available Upon Request.
3/4"	19			100.0%	
5/8"	16.00			100.0%	
1/2"	12.50			100.0%	Sampled By:
3/8"	9.50			100.0%	J.Milsom
#4	4.75			100.0%	Tested By:
#8	2.36			100.0%	J.Milsom
#16	1.18			100.0%	Approved By
#50	0.3			100.0%	G. Davidson
#100	0.15			64.9%	Moisture Content
#200	0.075			33.1%	5.2



AllRock Consulting Ltd
35-174 Colonnade Rd. South
Ottawa, On, K2E7J5

SOIL MOISTURE CONTENT REPORT

Prject Information	
Project Name:	64 Jamie Avenue
Project No.:	25014
Client:	Pritec Management
Sampled By:	J.Milsom
Date Sampled:	February 26, 2025
Sample Description:	Soil Samples
Tested By:	J.Milsom
Date Tested:	March 26, 2025
Reviewed By:	G. Davidson
Date Reviewed:	March 26, 2025

Soil Moisture Content		
Sample	Sample Depth	Moisture Content (%)
BH3 - SS3	7.5 - 9.5'	5.50

SIEVE ANALYSIS OF AGGREGATES
LS-602

AllRock Consulting Ltd
35-174 Colonnade Rd. South
Ottawa, On, K2E7J5

Project:	25014	**Project Number**	25014
Client:	Pritec Management	**Sample Classification:**	Silty Sand
Sample No.	SS3	**Sample Depth**	7.5' - 9.5'
Date Sampled	February 26, 2025	**Date Tested:**	March 26, 2025
Material Spec:			

Sieve Sizes					Remarks
#	mm	Lower Limit	Upper Limit	Tested Sample	
1"	25			100.0%	More Information Available Upon Request.
3/4"	19			100.0%	
5/8"	16.00			100.0%	
1/2"	12.50			100.0%	Sampled By:
3/8"	9.50			100.0%	J.Milsom
#4	4.75			100.0%	Tested By:
#8	2.36			100.0%	J.Milsom
#16	1.18			100.0%	Approved By
#50	0.3			100.0%	G. Davidson
#100	0.15			62.6%	Moisture Content
#200	0.075			28.8%	5.5