April 12, 2022

Diamond Point Development, LLC
880 Marietta Highway, Suite 630-243
Roswell, GA 30075

Attn: Mr. Jason and Aaron Sommer

RE: Diamond Point Development Storage Facility: Geotechnical Services
1998 South Road, Poughkeepsie, New York
LaBella Project Number: CZ82133.00

Dear Mr. Sommer:

LaBella Associates, D.P.C., formerly Chazen, A LaBella Company (Chazen), has completed the geotechnical engineering services for the above referenced project. The study was performed in general accordance with LaBella's "Proposal for 4-Story Climate Controlled Storage Facility – Former OSHO Restaurant" dated October 7, 2021.

Our report presents the results of the geotechnical subsurface investigation and provides geotechnical recommendations relative to the planned 4-story climate-controlled storage facility located at 1998 South Road in the City of Poughkeepsie, Dutchess County, New York hereinafter referred to as the "project site".

Additionally, we have provided construction considerations such as site preparation, earthwork and excavations, fill and backfill material and placement criteria, and control of water.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, please contact us.

Respectfully submitted,
LABELLA ASSOCIATES, D.P.C.

Thomas M. Diver, EIT
Geotechnical Engineer

Mathew A. Korn, P.E.
Geotechnical Engineering, Regional Leader

GEOTECHNICAL SUBSURFACE INVESTIGATION AND REPORT

DIAMOND POINT DEVELOPMENT STORAGE FACILITY
CITY OF POUGHKEEPSIE, DUTCHESS COUNTY, NEW YORK

Prepared for:
Diamond Point Development, LLC
880 Marietta Highway, Suite 630-243
Roswell, GA 30075

Prepared by:
LaBella Associates, D.P.C.
21 Fox Street
Poughkeepsie, New York 12601

LaBella Project No.: CZ82133.00

April 12, 2022

LaBella
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NOTE

This report is written using **U.S. Customary Units** unless otherwise noted.

The professional services provided in this project include only the specific geotechnical aspects of the subsurface conditions at the site. The presence or implications of possible surface or subsurface contaminants from any source are outside the terms of reference for this geotechnical study and have not been investigated or addressed herein. Coal seam hazard evaluation, fire and gas hazard evaluation, site subsidence hazard evaluation, wetland impact study, septic field hazard or impact evaluation, slope stability and landslide hazard analysis, are beyond the scope of work for this project.

The subsurface soil and bedrock profile and design parameters provided in this report are estimated based on the results of the test explorations as indicated on our test boring logs, which include our visual classification of the recovered soil samples, and/or generally published soil and rock property correlations. Actual subsurface conditions beyond the test explorations and below the depths explored may vary, as well as subsurface conditions encountered in the field during and/or as a result of construction activity. The recommendations contained within this report are based on the subsurface conditions encountered and the site plan prepared by Chazen titled "Site Plan" dated November 22, 2021. If subsurface conditions or the arrangement of the planned storage facility vary from those presented within this report or on the plan referenced, the geotechnical engineer shall be notified immediately to identify if the recommendations provided herein are still applicable.

Provided the accompanying geotechnical interpretive report is read in its entirety and the recommendations and construction considerations outlined in the report are incorporated in the design and during construction activities, the recommended foundation systems are suitable for the planned site development. Please contact LaBella with questions regarding the information provided herein.

This report was prepared by **LaBella Associates, D.P.C.**

Written by:

Thomas M. Diver, EIT
Geotechnical Engineer

Reviewed and approved by:

Mathew A. Korn, P.E.
Geotechnical Engineer, Regional Leader

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APPENDICIES

1.0 INTRODUCTION

LaBella Associates, D.P.C. (LaBella) is pleased to present this report for the subsurface exploration and geotechnical engineering evaluation for the planned 4-story climate-controlled storage facility located at 1998 South Road in the City of Poughkeepsie, Dutchess County, New York. For this investigation, a total of nine (9) test borings were advanced at the locations depicted on **Figure 1 – Exploration Location Plan** within **Appendix A.**

The proposed project site is a developed parcel that contains an existing 2-story structure with an access drive and parking lot. The project site is bound by South Road to the west, the Chestnut Plaza to the north, a wooded area to the east, and a residence to the south. Topographically, the project site is level to nearly level. Existing conditions are depicted in **Figure 1.** Elevations noted herein are based on a topographic survey completed by Automated Construction Enhanced Solutions, Inc., dated November 7, 2021, referencing an assumed vertical datum.

LaBella's Scope of Services included advancing test explorations, preparing subsurface exploration logs, a location plan, and this report that contains geotechnical recommendations for the redevelopment of the site.

2.0 SUBSURFACE EXPLORATIONS

This section summarizes the results of the subsurface explorations performed at the project site on March 28, 2022, in support of the interpretations made herein.

Explorations were witnessed by a LaBella representative to advise the operator regarding location and depth, to record subsurface conditions and to modify the subsurface exploration, as necessary. Soil samples collected during the subsurface explorations were visually classified in the field in accordance with the Unified Soil Classification System (USCS) and ASTM D 2488. Summary logs detailing the observed conditions within each test exploration are included within **Appendix B - Exploration Logs.** Excavated and as-drilled locations are documented on **Figure 1.**

LaBella conducted subsurface explorations to characterize the in-situ conditions and to collect representative soil samples. Samples were used for visual classification as a basis for determining design criteria cited in this report.

2.1 Test Boring Explorations

Nine (9) test boring explorations designated B1 through B9 were performed at the project site on March 28, 2022. Test boring explorations were performed by Northeast Specialized Drilling, Inc. utilizing a CME 55 truck rig capable of advancing a 3¼-inch internal diameter (I.D.) hollow stem auger. Test borings were advanced to depths ranging from 1.1-feet (B1) to 13.1-feet (B4) below existing site grades.

During soil sample collection, a 2-inch split spoon sampler was driven approximately 2-feet and the number of blows required to drive the sampler every 6-inches were recorded in accordance with ASTM D 1586 to measure the resistance of the soil penetration of the sampler.

2.2 Subsurface Stratigraphy

Subsurface explorations indicate at least two distinct strata are present within the depth of explorations at the project site underlying the asphalt pavement. The observed stratum working downward from existing grade is generally Loamy Till overlying Bedrock. Each stratum is described in greater detail below using the percentage descriptions per ASTM D 2488.

Loamy Till: A stratum of Loamy Till was encountered within all test explorations underlying a thin layer of asphalt, subbase material, or topsoil. This stratum was typically classified as predominantly coarse-grained or fine-grained. Each sub-stratum is further described below.

- Predominantly coarse-grained was visually classified as Poorly Graded Sand with Gravel (SP), Silty Sand (SM), Clayey Sand (SC), and Clayey Sand with Gravel (SC). This sub-stratum typically consists of moist to wet, tan to brown, loose to medium dense sand, with a little to a trace percentage of silt, a little to no percentage of clay, and a little to a trace percentage of gravel.
- Predominantly fine-grained was visually classified as Silt (ML), Silt with Sand (ML), and Lean Clay with Sand (CL). This sub-stratum typically consists of moist to wet, tan to brown, medium stiff to stiff silt or clay, with a little to a few percentage of sand, and a trace to no percentage of gravel.

Bedrock (Dolostone): Bedrock was encountered underlying the Loamy Till within all test explorations. Bedrock refusal was encountered at depths ranging from 1.1-feet (B1) to 13.1-feet (B4). According to a review of the Geologic Map of New York, bedrock at the project site is mapped as Wappinger Group Dolostone.

2.3 Groundwater Conditions

Groundwater was not observed within any of the test explorations.

3.0 SEISMIC CONSIDERATIONS

Soils are judged as not susceptible to liquefaction when examined under the following conditions: USGS published mean peak ground acceleration (0.151g), a maximum earthquake magnitude of 5.0, site recorded standard blow count values, percentage of fines in the underlying soils, and depth to bedrock.

The soils across the project site have been characterized for seismic conditions in accordance with ASCE/SEI 7-16, “Minimum Design Loads and Associated Criteria for Buildings and Other Structures”, using the acceptable standard penetration resistance method. Based on the subsurface conditions observed, and our analysis and interpretation, LaBella calculated the project site as a Site Class C, with an S_S of 0.209g and S_1 of 0.055g.

4.0 GEOTECHNICAL RECOMMENDATIONS

This section presents our geotechnical recommendations for foundation design and construction of the proposed 4-story climate-controlled storage facility based on the subsurface investigation. We have provided our recommendations in accordance with the related provisions of the 2020 Building Code of New York State (BCNYS).

At the time of this report, LaBella understands that the 25,000 square foot (±) 4-story storage facility will have a first finished floor elevation (FFE) of 202.5-feet (±).

4.1.1 Shallow Foundation

Based on the observed subsurface conditions and proposed location of the structure, shallow reinforced concrete foundations consisting of continuous strip footings are a suitable foundation system to support the proposed 4-story storage facility. If necessary, isolated spread footing foundations are recommended to support interior column loads.

Based on proposed FFE, two different materials (Loamy Till and Bedrock) will be present at the planned bearing surface of the storage facility. To minimize potential for differential settlement when bearing foundations on dissimilar materials, we recommend over-excavation of 12-inches of the onsite bedrock and bearing all foundations on a minimum of 12-inches of Stone Fill. The observed shallow bedrock (north) will provide a global stability factor of safety greater than 1.5. LaBella recommends an allowable bearing capacity of 4.0 kips per square foot (ksf) when bearing foundations on 12-inches of Stone Fill.

Where applicable to provide adequate frost protection, the bottom of all exterior concrete footing foundations should be located a minimum of 4.0-feet below the lowest adjacent ground surface exposed to freezing. Additionally, the subgrade must be protected from freezing during construction. Foundations not exposed to freezing temperatures during construction (temporary condition) and located beneath continuously heated interior spaces should bear at least 18-inches below the top of the soil supported slab (final condition). We recommend that installed continuous strip footing foundations and isolated spread footing foundations have minimum lateral dimensions of at least 2-feet. Foundation elements must be constructed in accordance with 2020 BCNYS Sections 1807-1809.

Care should be taken not to disturb soils at the bearing surface or within the zone of influence of the foundations. The “zone of influence” is defined as a line drawn outward and downward from the lower edge of the footing at a 1H:1V slope. Exposed soil subgrades should be lightly compacted (proof rolled) prior to placement of foundation elements using appropriate construction equipment in large, accessible excavations and hand-guided compaction equipment in smaller excavations where access is limited. All unsuitable soils (i.e. soil that is observed to pump or weave during proof-rolling or soil containing material such as organics, cobbles/boulders, elongated or irregularly shaped particles, frozen material, etc.) and disturbed soils should be over excavated up to 12-inches and replaced with Granular Fill or Stone Fill. We recommend contacting LaBella if on-site conditions require removal of additional depth.

For practical construction purposes, it is recommended that selective demolition within the building footprint is cleared and grubbed and general grading to the approximate finished floor subgrade elevation occurs prior to excavation for foundation subgrades as outlined in Section 4.3 of this report.

Total settlements for statically loaded footings founded on Stone Fill over proof rolled, lightly disturbed, in-situ soils or bedrock and designed using the recommended allowable bearing capacity are expected to be less than 0.5-inches and differential settlements (non-uniform settlement) are anticipated to be less than 0.25-inches.

4.1.2 Building Ground Floor Slab

While preparing the slab subgrade, we recommend utilizing a modulus of subgrade reaction (k) of 150 pci and an allowable bearing capacity of 2.0 ksf for the soil supported slab. At least 12-inches of well graded gravel or crushed stone (stone fill) should be placed over the prepared subgrade for the slab to bear on.

For a moisture sensitive slab, and in accordance with 2020 BCNYS Section 1805, a damp proofing material (vapor barrier) should be installed.

In accordance with 2020 BCNYS, Section 1907 and to account for ACI allowable construction tolerances, the minimum slab on grade thickness should be 4-inches. A thicker slab may be required to support warehouse loads. Additionally, the design and construction of the slab should consider potential differential shrinkage between the top and bottom surfaces of the slab that could result in curling. A coefficient of friction of 0.20 is recommended for use between the slab and vapor barrier and 0.40 should be used for concrete cast directly against the Stone Fill.

4.1.3 Grading and Drainage

As shown on the "Grading, Drainage, and Utility Plan" prepared by Chazen and dated November 22, 2021, a detention practice is planned for the top of the slope, north of the planned storage facility. Based on our professional opinion for the short length of slope and shallow depth to bedrock, a detention only practice will achieve a global stability factor of safety greater than 1.5. Provisions to prevent erosion and infiltration are recommended.

4.1.4 Pavement Recommendation

We recommend use of a flexible pavement system incorporating an asphalt surface, binder and subbase course for paved areas founded on in-situ soils after removal of all loose, disturbed or unsuitable soils. In order to develop the pavement section recommendation, we made the following preliminary design/loading assumptions pertaining to the anticipated traffic at the project site:

1. Daily vehicular traffic equal to the following:
    a. 2 trips/week with a 3-axle, 6-tire garbage truck
    b. 1 trip/month with a 3-axle, 10 tire fire truck.
    c. Minor loading from cars and light weight trucks/SUV were ignored.
2. A design life of 15-years.
3. A subgrade California Bearing Ratio (CBR) value of 15.

Table 1: Standard Duty Pavement Section

Pavement Course	Min Thickness (inches)	Material
Top	1.5	12.5 F2 Top
Binder	2.5	19 F9 Binder
Sub-base	10	Type 2 Subbase

In addition, we recommend use of a non-woven, separation geotextile fabric such as Mirafi 140N, located between prepared subgrade and subbase course. The properly prepared pavement subgrade should be sloped towards the pavement edges to prevent water from ponding below the pavement.

4.2 Utilities

In general, utility trenches and established trench invert elevations should be located outside the "zone of influence" of foundation elements. Trench excavation widths should extend a minimum of 12-inches beyond the outer edges of the utility elements to be installed. Exposed soil subgrades should be lightly

compacted (proof rolled) and filled with placed and compacted pipe bedding material extending 6-inches (minimum) below and above each utility.

When utilities are in trenches below slabs and/or pavements, LaBella recommends trenches are backfilled with a Granular Fill above the pipe bedding up to the exposed subgrade. In landscaped areas, utility trenches, above this point, may be backfilled with compacted Common Fill. Installation of visible markers at the surface and an underground trace line are recommended along the utility line to facilitate location of the utility in the future.

4.3 Site Preparation

After demolition of the existing structure, foundations in their entirety, selective demolition of pavement areas, and completion of general regrading and rock removal activities at the project site, the area should be restored to an acceptable baseline condition. We recommend proof rolling lightly disturbed natural soils left in place after excavation activities are complete. However, if during foundation preparation, subgrade materials are determined to be unsatisfactory (i.e. pumping, weaving, frozen, becoming saturated, organics or cobbles/boulders present) by the Special Inspector, the area should be over excavated by up to 12-inches and backfilled with placed and compacted Granular Fill to achieve a proper bearing area as previously indicated.

4.4 Temporary Excavations

We anticipate that excavation of the on-site soils can be accomplished using conventional earthwork equipment and techniques (i.e. backhoes, scrapers, excavators, or dozers) based on the physical characteristics, relative density of the strata observed and the anticipated excavation limits.

Localized excavation of bedrock will be necessary to achieve uniform bearing and frost depth foundation elevations. Based on the type of bedrock (dolostone), removal activities may not be achievable by ripping and hoe ramming alone. Predrilling and/or localized blasting may be required to remove areas of unfractured (fresh) bedrock.

Generally, all temporary cut slope excavations should not be left open or unbraced for extended periods of time. Temporary cuts should be sloped as required for stability in accordance with OSHA regulations and protected from erosion. OSHA requires each type of material be benched at the following slope for temporary excavations:

- Stable Rock
- Type “A” – 3/4 Horizontal: 1 Vertical (3/4H: 1V),
- Type “B” – 1 Horizontal: 1 Vertical (1H: 1V), and
- Type “C” – 1-1/2 Horizontal: 1 Vertical (1-1/2H: 1V).

Based on the subsurface explorations, overburden soil is to be considered OSHA Type “B” for fine-grained, OHSA Type “C” for coarse-grained, and bedrock is to be considered “Stable Rock”. However, this should be verified for each excavation by an OSHA competent person.

4.5 Control of Water

Since groundwater was not observed within the test explorations, groundwater seepage into open excavations is not anticipated. However, temporary dewatering measures (e.g., sumps, barriers) should be readily available during construction to remove surface water and precipitation if needed in open excavations.

Surface water must be controlled during construction and earthwork operations by using temporary swales, ditches or other means necessary. All surfaces shall be restored to vegetated conditions upon completion of construction.

5.0 FILL MATERIALS

Fill materials shall be free of unsuitable material such as organics, construction debris, cobbles/boulders, frozen material, etc. Fill areas shall be cleared of all vegetation, roots, and other organic materials prior to placement of fill. Stockpiled soils may require installation of run-off protection between drainage channels and the stockpile.

We recommend compaction consist of at least 4 systematic passes using a vibratory roller. In confined areas, hand guided vibratory equipment shall be used to compact the soil to the specified criteria. If soil weaving or other disturbance is noticed during compaction, vibratory compaction should be discontinued. Heavy compaction equipment shall not be used within 3-feet of foundation elements. Compaction shall meet the requirements stated below or as approved by a qualified engineer.

5.1 On-Site Borrow Material

Based on LaBella's visual classification, the on-site soils are not recommended for reuse as Pipe Bedding Material because of the high fines-content. On-site soils may be reused as Common Fill if screened to remove any 4-inch or greater particles, any deleterious materials and debris, and meeting the gradation requirements noted for same.

5.2 Common Fill

Common Fill similar to NYSDOT Select Fill should consist of inorganic, sand based, granular soils, free of debris and other deleterious material that meet the following gradation:

Sieve Size	Percent Passing by Weight
4-inch	100
No. 40	0-70
No. 200	0-15

Common Fill used for site grading and landscaping should be placed in lifts not exceeding 9-inches loose, measured and compacted to 90% of the maximum dry density as determined by ASTM D 1557. All fill should be placed to promote positive drainage away from structures.

5.3 Granular Fill

Granular Fill similar to NYSDOT Select Granular Fill should consist of inorganic, granular soils, free of debris and other deleterious material that meet the following gradation:

Sieve Size	Percent Passing by Weight
3-inch	100
¼-inch	30 to 100
No. 40	0-50
No. 200	0-10

Granular Fill should be placed in lifts not exceeding 12-inches loose measure and compacted to 95% of the maximum dry density as determined by ASTM D 1557. Granular Fill shall be utilized within 2-feet of the bottom of the ground floor slab and within the zone of influence of footings.

5.4 Stone Fill

Stone Fill with not more than 10-percent material passing the number 4 sieve, such as a ¾-inch crushed stone, is recommended for prepared subgrades for footings and ground floor slabs. Stone Fill should be placed in loose lifts not to exceed 12-inches in thickness for heavy compaction equipment and 8-inches for lighter compaction equipment.

When Stone Fill is used as a drainage medium, it should be uniformly graded. A non-woven, geotextile meeting AASHTO M288 Survivability Class 3, such as a Mirafi 140N or equivalent, should be placed between the Stone Fill and adjacent soils to prevent the migration of fines into the stone void space.

5.5 Pipe Bedding Material

Pipe Bedding Material should be a clean, granular, bedding fill meeting the following gradation and be placed in lifts not exceeding 8-inches loose, measured and compacted to 95% of maximum dry density as defined by ASTM D 1557:

Sieve Size	Percent Passing by Weight
¼-inch	100
No. 60	0-35
No. 100	0-10

6.0 CLOSING

LaBella has prepared this report for the exclusive use by Diamond Point Development, LLC and their design team. LaBella's recommendations for the planned 4-story climate-controlled storage facility are based upon our understanding of the proposed construction and the information obtained from the subsurface exploration. Variations in the subsurface conditions may occur between test exploration locations or there may be changes in the planned construction during the design phase. As this may be the case, changes to our recommendations may be warranted.

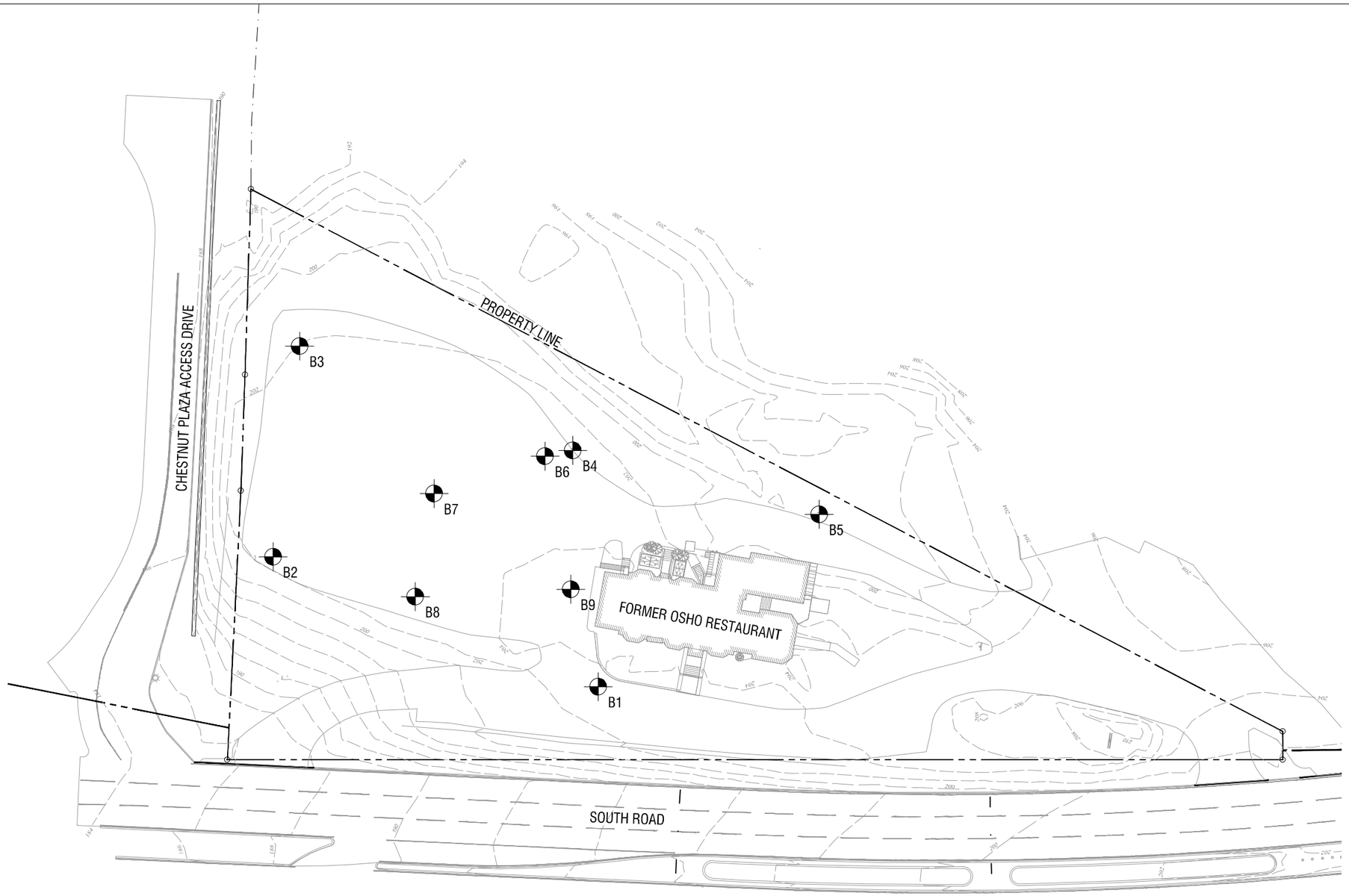
Generally accepted soil mechanics and geotechnical engineering practices were used to develop the recommendations stated in this report. Our services were conducted in a manner that is in accordance with generally accepted geotechnical engineering practice. The geotechnical engineer of record should review the final plans and specifications to evaluate their consistency with LaBella's recommendations. Prospective bidders should understand that this report was prepared for design purposes only and may not contain sufficient information to prepare an accurate bid. We recommend that LaBella be retained to monitor and observe the bearing grades during the construction.

7.0 DISPOSITION OF SAMPLES

LaBella will hold all soil samples for 60-days after the date of this report. If the Client desires that these samples be retained for a longer period of time, the Client shall notify LaBella in writing and make arrangements to obtain the samples from LaBella prior to the expiration of the 60-day time period; otherwise the samples will be properly disposed by LaBella.

APPENDIX A

FIGURES



NOTES

1. TOPOGRAPHIC INFORMATION SHOWN HEREON WAS COMPILED FROM A FIELD SURVEY COMPLETED BY AUTOMATED CONSTRUCTION ENHANCED SOLUTIONS, INC DATED NOVEMBER 7, 2021, REFERENCING AN ASSUMED VERTICAL DATUM.
2. TEST BORING LOCATIONS SHOWN HEREON WERE COMPLETED BY LABELLA ON MARCH 28, 2022.

LEGEND

B1 TEST BORING LOCATION

1 / FIG1 EXPLORATION LOCATION PLAN

SCALE: 1" = 60'

N

VERSION 21.1
4/12/2022 9:54:52 AM

LaBella Powered by partnership
4 British American Boulevard
Latham, NY 12110
518-273-0055
labellapc.com

ISSUED FOR: GEOTECHNICAL REPORT

DRAWING NAME: **EXPLORATION LOCATION PLAN**

DRAWN BY:	DATE:	PROJECT NO.:
TD	04/01/22	CZ82133.00

PROJECT NAME: **DIAMOND POINT DEVELOPMENT STORAGE FACILITY**
1998 SOUTH ROAD, CITY OF POUGHKEEPSIE, DUTCHESS COUNTY, NEW YORK

DRAWING NUMBER: **FIG1**

APPENDIX B

EXPLORATION LOGS

INTERPRETATION OF SUBSURFACE LOGS

The Exploration Logs present observations and the results of tests performed in the field by the Driller, Technician, Geologists, and Geotechnical Engineers as noted. Soil/Rock classifications are made visually and modified accordingly based on laboratory results. The classification of soils or soil like material is subject to limitations imposed by the size of the sampler, the size of the sample and it's degree of disturbance and moisture.

The following defines some of the terms utilized in the preparation of the Subsurface Logs.

SOIL CLASSIFICATIONS

Soil classifications are visual descriptions on the basis of the Unified Soil Classification ASTM D-2488. The soil density or consistency is based on the penetration resistance determined by ASTM D 1586. Soil Moisture of the recovered materials is described as DRY, MOIST, WET or SATURATED.

SIZE DESCRIPTION		RELATIVE DENSITY/CONSISTENCY (BASIS ASTM D1586)			
Soil Type	Particle Size	Granular Soil		Cohesive Soil	
Boulder	>12"	Density	Blows/FT	Consistency	Blows/FT
Cobble	3"- 12"	Very Loose	< 4	Very Soft	< 2
Gravel-Coarse	3" – ¾"	Loose	5 – 10	Soft	2 - 5
Gravel-Fine	¾" - #4	Medium Dense	11 – 30	Medium Stiff	6 – 10
Sand-Coarse	#4 - #10	Dense	31- 50	Stiff	10 – 20
Sand-Medium	#10 - #40	Very Dense	50+	Very Stiff	20 – 30
Sand-Fine	#40 - #200			Hard	>30
Silt/NonPlastic	< #200				
Clay/Plastic	< #200				

SOIL STRUCTURE		RELATIVE PROPORTION OF SOIL TYPES	
Structure	Description	Description	% of Sample by Weight
Layer	6" Thick or Greater	Mostly	50 – 100
Seam	6" Thick or Less	Some	30 – 45
Parting	Less than ¼" thick	Little	15 – 25
Varved	Uniform horizontal partings or seams	Few	5 – 10
		Trace	Less than 5

Additional Notes:

1. Utilized c: coarse, m: medium, and f: fine when describing the size of sand or gravel.
2. WOH – weight of hammer.
3. WOR – weight of rods.
4. bgs – below ground surface
5. NA – Not Available
6. ▼ – Phreatic Surface, if observed
7. HSG – Hydrologic Soil Group

Refusal:

1. Split-spoon refusal is considered 50 blows over six inches.
2. Auger and Casing refusal occurs if the driller is unable to advance the boring.
3. Roller bit refusal occurs if the bit is worn and needs to be replaced or the bedrock is a dense very hard material.

ROCK CLASSIFICATIONS

Rock Classifications are visual descriptions on the basis of the Driller's, Technician's, Geologist's or Geotechnical Engineer's observations of the coming activity and the recovered samples applying the following classifications.

	CLASSIFICATION TERM	DESCRIPTION
Hardness	Very Hard	Unable to scratch with a knife
	Hard	Difficulty scratching with a knife
	Medium Hard	Able to groove 1/16" with a knife
	Soft	Easily grooved with a knife
	Very Soft	Easily scratched with a fingernail
Weathering	Fresh	No visible signs of rock weathering
	Slightly Weathered	Fresh rock with discoloration and staining at joints
	Moderately Weathered	Less than ½ of rock is disintegrated or decomposed
	Highly Weathered	More than ½ of rock is disintegrated or decomposed
	Completely Weathered	All rock material decomposed to soil, structure intact
Texture	Amorphous	Too small to be seen with naked eye
	Fine Grained	Barely seen with naked eye to 1/8"
	Coarse Grained	1/8" to 1/4"
	Very Coarse Grained	Greater than 1/4"
Attitude	Horizontal	0 – 5°
	Shallow	6 – 20°
	Moderate Dipping	21 – 45°
	Steep Dipping	46 – 85°
	Vertical	86 – 90°

Visual observation of the fracture joints should be described as either clean, stained or filled (clay, mineral vein or other) and noted as to whether they are rough, irregular or smooth.

Core sample RECOVERY (REC) is expressed as percent of recovered of total sampled. The ROCK QUALITY DESIGNATION (RQD) is the total length of core sample pieces exceeding 4 in. in length divided by the total interval cored for N size cored.

GENERAL

- Soil and Rock classifications are made visually on samples recovered. The presence of Gravel, Cobbles and Boulders will influence sample recovery classification density/consistency determination.
- Groundwater, if encountered, was measured and its depth recorded at the time and under the conditions as noted.
- Topsoil or pavements, if present, were measured and recorded at the time and under the conditions as noted.
- Stratifications Lines are approximate boundaries between soil types. These transitions may be gradual or distinct and are approximated.

TEST BORING LOG

LaBella Powered by partnership.
4 British American Blvd.
Latham, NY 12110
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B1**
Total Depth: 1.1 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 203

Northing: See Figure
Easting:
Latitude: 41.62614
Longitude: -73.91691

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 1.1 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	9	11			2" Asphalt over 6" Subbase	
1	202		50/.4			SM	Silty Sand (SM): Mostly Sand, little Silt, trace Gravel, tan, moist	Auger Refusal
							Boring Terminated at 1.1-feet on Bedrock surface	
2	201							
3	200							
4	199							
5	198							
6	197							
7	196							
8	195							
9	194							
10	193							
11	192							
12	191							
13	190							
14	189							
15	188							
16	187							
17	186							
18	185							
19	184							
20	183							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	1.1

	Sample	Core
Type	SS	
Int Diam.	3.25	
Weight	140 lb	
Fall	30"	

TEST BORING LOG

LaBella Powered by partnership.
4 British American Blvd.
Latham, NY 12110
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B2**
Total Depth: 2.1 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 202

Northing: See Figure
Easting:
Latitude: 41.62666
Longitude: -73.91661

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 2.1 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	3	10			2.5" Asphalt	
1	201		28				2" Silty Sand (SM): Mostly Sand, little Silt, trace Gravel, tan, moist	
			50/.2				Weathered bedrock	SS Refusal
2	200							Auger Refusal
							Boring Terminated at 2.1-feet bgs on Bedrock surface	
3	199							
4	198							
5	197							
6	196							
7	195							
8	194							
9	193							
10	192							
11	191							
12	190							
13	189							
14	188							
15	187							
16	186							
17	185							
18	184							
19	183							
20	182							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	2.1

	Sample	Core
Type	SS	
Int Diam.	3.25	
Weight	140 lb	
Fall	30"	

TEST BORING LOG

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Latham, NY 12110
Phn: (518) 273-0055
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PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B3**
Total Depth: 4.2 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 202

Northing: See Figure
Easting:
Latitude: 41.62652
Longitude: -73.91619

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 3.8 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	4	18			2" Asphalt	
1	201		4			SC	Clayey Sand w/ Gravel (SC): Mostly Sand, little Clay, little Gravel, few Silt, brown, moist (Loamy Till)	
			5					
2	200		2					
3	199							
								Hard Augering at 3.8-feet
4	198						Weathered Bedrock	Auger Refusal
							Boring Terminated at 4.2-feet bgs on bedrock surface	
5	197							
6	196							
7	195							
8	194							
9	193							
10	192							
11	191							
12	190							
13	189							
14	188							
15	187							
16	186							
17	185							
18	184							
19	183							
20	182							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	4.2

	Sample	Core
Type	SS	
Int Diam.	3.25	
Weight	140 lb	
Fall	30"	

TEST BORING LOG

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Latham, NY 12110
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B4**
Total Depth: 13.1 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 202

Northing: See Figure
Easting:
Latitude: 41.62612
Longitude: -73.91653

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 13.1 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	4	18			2" Asphalt	
1	201		6			ML	Silt (ML): Mostly Silt, few Sand, trace Gravel, brown, moist (Loamy Till)	
			8					
2	200		9					
3	199							
4	198							
5	197							
		SS-2	6	0		CL	Lean Clay w/ Sand (CL): Mostly Clay, little Sand, brown, moist	
6	196		3					
			3					
7	195		4					
8	194							
9	193							
10	192							
		SS-3	2	20		ML	Silt (ML): Mostly Silt, little Clay, few Sand, tan, wet	
11	191		3					
			4					
12	190		3					
13	189							Auger Refusal
							Boring Terminated at 13.1-feet bgs on Bedrock surface	
14	188							
15	187							
16	186							
17	185							
18	184							
19	183							
20	182							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	13.1
		Sample	Core
Type		SS	
Int Diam.		3.25	
Weight		140 lb	
Fall		30"	

TEST BORING LOG

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Latham, NY 12110
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B5**
Total Depth: 11.3 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 199

Northing: See Figure
Easting:
Latitude: 41.62596
Longitude: -73.91665

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 10.5 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
		SS-1	9	18			4" Subbase	
1	198		13			SP	Poorly Graded Sand w/ Gravel (SP): Mostly Sand, little Gravel, trace Silt, brown, moist (Loamy Till)	
			14					
2	197		10					
3	196							
4	195							
5	194							
		SS-2	3	0		ML	Silt w/ Sand (ML): Mostly Silt, little Sand, few Clay, tan, wet	
6	193		4					
			4					
7	192		3					
8	191							
9	190							
10	189							
		SS-3	20	20		SC	Clayey Sand (SC): Mostly Sand, little Clay, few Silt, few Gravel, brown, wet	
11	188		50/5				Weathered bedrock	Auger Refusal
12	187						Boring Terminated at 11.3-feet bgs on Bedrock surface	
13	186							
14	185							
15	184							
16	183							
17	182							
18	181							
19	180							
20	179							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	11.3
		Sample	Core
Type		SS	
Int Diam.		3.25	
Weight		140 lb	
Fall		30"	

TEST BORING LOG

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PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B6**
Total Depth: 2.4 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 202

Northing: See Figure
Easting:
Latitude: 41.62622
Longitude: -73.91652

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 2.4 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
							2" Asphalt	
1	201					ML	Silt (ML): Mostly Silt, few Sand, trace Gravel, brown, moist (Loamy Till)	
2	200							
3	199						Boring Terminated at 2.4-feet bgs on Bedrock surface	
4	198							
5	197							
6	196							
7	195							
8	194							
9	193							
10	192							
11	191							
12	190							
13	189							
14	188							
15	187							
16	186							
17	185							
18	184							
19	183							
20	182							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push
SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.
ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	2.4

	Sample	Core
Type	SS	
Int Diam.	3.25	
Weight	140 lb	
Fall	30"	

TEST BORING LOG

LaBella Powered by partnership.
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Latham, NY 12110
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B7**
Total Depth: 3.6 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 203

Northing: See Figure
Easting:
Latitude: 41.62634
Longitude: -73.91659

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 3.6 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
							2" Asphalt	
1	202					ML	Silt (ML): Mostly Silt, few Sand, trace Gravel, brown, moist (Loamy Till)	
2	201							
3	200							
4	199						Boring Terminated at 3.6-feet bgs on Bedrock surface	
5	198							
6	197							
7	196							
8	195							
9	194							
10	193							
11	192							
12	191							
13	190							
14	189							
15	188							
16	187							
17	186							
18	185							
19	184							
20	183							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	3.6

	Sample	Core
Type	SS	
Int Diam.	3.25	
Weight	140 lb	
Fall	30"	

TEST BORING LOG

LaBella Powered by partnership.
4 British American Blvd.
Latham, NY 12110
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B8**
Total Depth: 2.1 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 203

Northing: See Figure
Easting:
Latitude: 41.62638
Longitude: -73.91676

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 2.1 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
							2" Asphalt	
1	202					ML	Silt (ML): Mostly Silt, few Sand, trace Gravel, brown, moist (Loamy Till)	
2	201						Boring Terminated at 2.1-feet bgs on Bedrock surface	
3	200							
4	199							
5	198							
6	197							
7	196							
8	195							
9	194							
10	193							
11	192							
12	191							
13	190							
14	189							
15	188							
16	187							
17	186							
18	185							
19	184							
20	183							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method: HA 0 to 2.1

	Sample	Core
Type	SS	
Int Diam.	3.25	
Weight	140 lb	
Fall	30"	

TEST BORING LOG

LaBella Powered by partnership.
4 British American Blvd.
Latham, NY 12110
Phn: (518) 273-0055
Fax: (518) 273-8391

PROJECT: Diamond Point Development Storage Facility
LOCATION: 1998 South Road, Poughkeepsie, New York
CLIENT: Diamond Point Development, LLC
PROJECT NO.: 82133.00

Test Boring No.: **B9**
Total Depth: 1.7 ft.

Contractor: Northeast Specialized Drilling
Drill Rig: CME 55 Truck Rig
Driller: Marc Cheney
Inspector: Joshua Blake

Start Date: 28-Mar-2022
Finish Date: 28-Mar-2022
El. Datum: ASSUMED
G.S. Elevation: 204

Northing: See Figure
Easting:
Latitude: 41.62621
Longitude: -73.91666

Borehole Dia.: 3.5 in.
Water Depth: N/A ft.
Bedrock Depth: 1.7 ft.
Sample Hammer: Automatic

Depth (Ft)	Elevation (Ft)	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum Descriptions:	Field Notes, Comments:
							2" Asphalt	
1	203					ML	Silt (ML): Mostly Silt, few Sand, trace Gravel, brown, moist (Loamy Till)	
2	202						Boring Terminated at 1.7-feet bgs on Bedrock surface	
3	201							
4	200							
5	199							
6	198							
7	197							
8	196							
9	195							
10	194							
11	193							
12	192							
13	191							
14	190							
15	189							
16	188							
17	187							
18	186							
19	185							
20	184							

METHODS: **HA**- Hollow Stem Auger, **RWH**- Rotary Wash, **SSA**- Solid Stem Auger, **DC**-Diamond Core, **DP**-Direct Push

SAMPLE TYPES: **SS-Split Spoon, RC-Bedrock Core, GS-Geoprobe Sleeve, ST-Shelby Tube**

STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.

NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.

3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.

ADDITIONAL NOTES:

DRILLING INFORMATION

Method:	HA	0 to	1.7

	Sample	Core
Type	SS	
Int Diam.	3.25	
Weight	140 lb	
Fall	30"	