

Proposed DAN8 Distribution Facility

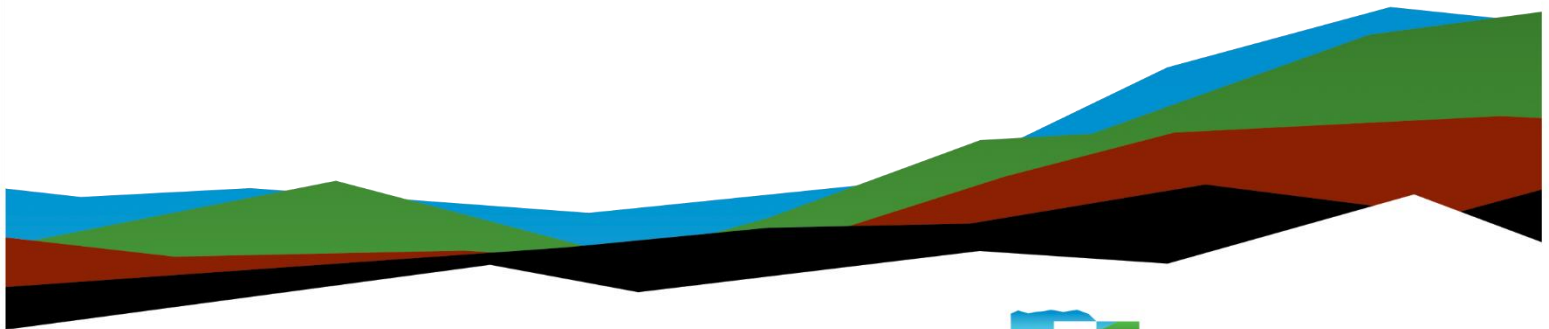
Geotechnical Engineering Report

Schoharie, New York

August 4, 2025 | Terracon Project No. JB255039

Prepared for:

McFarland Johnson
60 Railroad Place, Suite 402
Saratoga Springs, NY 12866



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- Facilities
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August 4, 2025

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Attn: Steve Boisvert, P.E.
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Re: Geotechnical Engineering Report
Proposed DAN8 Distribution Facility
232 State Route 30A
Schoharie, New York
Terracon Project No. JB255039

Dear Mr. Boisvert:

We have completed the Geotechnical Engineering services for the above referenced project in general accordance with Terracon proposal no. PJB255039, which was authorized by way of the professional services agreement between McFarland Johnson and Terracon entered into on or about June 18, 2025. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs and pavements for the proposed project.

We appreciate the opportunity to be of service to you. If you have any questions concerning this report or if we may be of further service, please contact us at your convenience.

Sincerely,
Terracon Consultants – NY, Inc.

John S. Hutchison, P.E.
Sr. Geotechnical Engineer

Joseph Robichaud, Jr., P.E.
Principal / Operations Manager

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Supporting Information

Note: This report was originally delivered in a web-based format. **Blue Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the  logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

Refer to each individual Attachment for a listing of contents.

Introduction

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed DAN8 distribution facility to be located at 232 State Route 30A in Schoharie, New York. The purpose of these services was to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Seismic site classification per NYSBC
- Site preparation and earthwork
- Bulk cut and fill considerations
- Dewatering considerations
- Foundation design and construction
- Floor slab design and construction
- Lateral earth pressure
- Pavement design and construction
- Frost considerations

The geotechnical engineering Scope of Services for this project included the advancement of 27 test borings to depths ranging from 4.0 to 40.8 feet below existing site grades, limited laboratory testing of recovered soil samples, an engineering evaluation of the conditions encountered and preparation of this report.

Figures showing the site and test boring locations are included as the attached [Site Location](#) and [Exploration Plan](#), respectively.

Site Conditions

Existing conditions at the site are summarized in the following table.

Item	Description
Parcel Information	The project is located at 232 NYS Route 30A in the town of Schoharie, New York, and is roughly 48 acres in size. Approximate geographic coordinates: 42.7062° N, 74.3080° W. See Site Location .

Item	Description
Existing Improvements	The site is currently undeveloped. Review of available aerial imagery and historic topographic maps indicate some limited land disturbance activities about the western limits of the site in the past.
Current Ground Cover	Generally grassy open field with brush, along with a few hedgerows and limited wooded areas.
Existing Topography	Site specific topography is indicated on the plans provided for our use. Overall, site grades slope downward from northeast to southwest between the elevations of about 730 and 620 feet.

Project Description

Our understanding of the project is summarized as follows.

Item	Description
Information Provided	<p>As furnished in a March 5, 2025 email request for proposal from McFarland Johnson and associated correspondence, including:</p> <ul style="list-style-type: none"> ■ Grading Plan, sheets C-201 and C-202 by McFarland Johnson dated 6/25/2025. ■ Colorized cut/fill map, unattributed and undated. ■ Concept Plan by McFarland Johnson dated 6/16/2025. ■ Concept Plan by Kimley-Horn last revised 2/18/2025. <p>Terracon's preliminary geotechnical report which was completed in 2023 for a similar project on this site was also referenced in the preparation of this report.</p>
Project Description	The project entails construction of a new distribution facility with associated paved parking and access ways, stormwater management features, a water storage tank and a smaller service center outbuilding in addition to the main distribution warehouse.

Item	Description
Proposed Structure(s)	Structures associated with the project include a ±225,345 ft ² distribution warehouse, a 5,000 ft ² service center building and a 1,745 ft ² vehicle inspection building. We assume that the distribution warehouse will be a single-story, high-bay, slab-on-grade structure (non-basement) with loading docks, and that the service center and vehicle inspection buildings will be ordinary single-story, slab-on-grade structures with no basements. In addition to the buildings, an above ground water storage tank is planned (42' in diameter, height and capacity unknown).
Building Construction	Not provided; we anticipate that the main warehouse building will be constructed of pre-cast, tilt-up concrete panels or insulated metal cladding with steel framing, and will supported upon cast-in-place concrete foundations with its floor slab bearing on grade. The service center and vehicle inspection buildings are anticipated to be masonry, light gauge metal or wood framed structures, supported on cast-in-place concrete foundations with floor slabs bearing on grade.
Finished Floor Elevation	Finished floor elevation for the warehouse building is indicated at elevation 644.35 feet. It appears the service center building will have a finish floor elevation of about 673 feet, and the vehicle inspection building will have a finish floor elevation of about 641 feet. The water storage tank is shown in an enclosed pad at about elevation 639 feet, with retaining walls on three sides elevating the area above surrounding grades.
Maximum Loads	<p>Anticipated structural loads were not provided. In the absence of information provided by the design team, we have used the following loads in estimating settlement based on our experience with similar projects:</p> <ul style="list-style-type: none"> ■ Columns: 250 kips ■ Walls: 5 kips per linear foot (klf) ■ Slabs: 250 pounds per square foot (psf) <p>We are aware of no specific racking system loads or other such special operational requirements.</p>

Item	Description
Grading/Slopes	Proposed site grading indicates that substantial cuts and fills, ranging up to 38 and 23 feet or so, respectively, will be required in association with the proposed construction. Within the proposed distribution warehouse footprint, cuts up to approximately 25 feet and fills up to approximately 15 feet will be required. The plans further indicate cuts of about 23 to 29 feet at the service center building, and about 13 feet of fill at the vehicle inspection building, along with about 15 feet of fill at the location of the water storage tank.
Below-Grade Structures	No below grade structures are indicated.
Free-Standing Retaining Walls	Segmental block retaining walls are indicated at the margins of paved areas, primarily along the north, east and south sides of the site. Those along the north and east sides are cut walls with exposed wall heights ranging between about 2 and 28 feet. The plans indicate the south side wall will retain up to about 5 feet of fill, with exception of the water storage tank pad where its sides will retain upwards of about 9 feet of fill. Loading dock walls at the warehouse building will also retain earth.
Pavements	New pavements are planned about the perimeter of the new warehouse building and elsewhere across the site. We have provided recommendations for both flexible (asphalt) and rigid (concrete) pavement sections. The assumed pavement design period is 20 years.
Building Code	2020 Building Code of NYS.

If any of the above information is incorrect, please let us know so we can review the conclusions and recommendations provided in this report for applicability to the actual design and update the report as appropriate.

As the design of the project progresses and site grading plans and building loads are fully developed, we should be retained to assess this site specific information relative to the recommendations contained herein.

Subsurface Characterization

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of

our geotechnical analysis and evaluation of the site. Conditions observed at each exploration point are indicated on the individual subsurface logs. The subsurface logs can be found in the [Exploration Results](#) attachment to this report, together with the results of whatever laboratory testing was performed, and the GeoModel can be found in the [Figures](#) section.

Subsurface Profile

The following model layers were identified within the subsurface profile. For more detail concerning the model layers with their respective depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Near Surface Soils	Clayey silt with lesser amounts of sand, gravel. Organics occasionally noted.
2	Glacial Till	Typically silt and fine sand with embedded coarser sands, gravel, rock fragments. Cobbles and boulders frequent.

Surface Materials and Fill Soils

Topsoil between about 1 and 8 inches in thickness was present at the ground surface at the test boring locations. Note that topsoil thickness as indicated on the subsurface logs should be regarded as a rough approximation only; contractors are advised to make their own estimates or determination of existing topsoil thickness for bidding purposes.

No soils readily identifiable as fill were identified in any significant quantity at the locations investigated.

Native Soils

Beneath the topsoil, soils to a depth of about 2 to 4 feet were found to consist of clayey silt with lesser amounts of sand and gravel. These upper soils were relatively soft/loose in consistency/composition and may possibly represent tilled/reworked soils from former agricultural usage. Organics were occasionally noted therein.

Below this, glacial till soils prevailed through the depths explored. The till was typically comprised of silt and fine sand (sometimes clayey) with embedded coarser sands, gravel and rock fragments, and cobbles and boulders were frequent therein. The relative density of the till was judged to be medium dense to very dense on the basis of

measured SPT N-values. Note also that penetration resistance of the till was for the most part uncommonly hard as reported by the driller.

It should be understood that rock fragments were encountered near the terminal depths of test borings B-4 and I-2 from the 2023 preliminary investigation, at depths of 24.5 and 12.5 feet below existing grade (approximately elevation 660.2 and 644.5 feet, respectively). The currently planned finish grade at the B-4 location is about elevation 652 feet, and the currently planned finish grade at the I-2 location is about elevation 658 feet. That said, test boring NB-20 from the current investigation was performed about 50 feet north of B-4, and no bedrock was encountered at the NB-20 location within the depths explored, 40.8 feet (approximately 647.2 terminal elevation).

The rock fragments recovered in the 2023 borings may have resulted from encountering cobbles/boulders, or as indicated on the logs for those borings, may possibly be an indication of bedrock. No rock coring was performed to confirm one way or another as this was outside of the requested scope of services at the time of that investigation. For informational purposes, bedrock in the site locale is mapped as graywacke of the Schenectady Formation on the Geologic Map of New York (NYS Education Department, 1970).

Groundwater Conditions

As indicated on the subsurface logs, measurable groundwater was encountered in about one-quarter of the boreholes (7 of 27 locations), and in general, it appears that groundwater was relatively scarce within the depths explored at the time of investigation. That said, wet soil seams were occasionally noted in the glacial till deposit, which is otherwise mostly non-water bearing, and we believe the true water table exists at a depth in the range of roughly 10 to 20 feet below existing site grades, or about where the glacial till soils tended to become prevalingly gray in color.

Water may also have a tendency to at times become perched in the near surface soils atop the relatively impermeable glacial till soils below, as evidenced in the spring of 2023, when the upper soils were rather wet at the time of our investigation (April), and as also possibly evidenced by the shallow groundwater measurements at some of the test borings completed for this study.

Groundwater conditions, and the extent of any perched water, should be expected to vary with seasonal fluctuations in precipitation and runoff. Additionally, grade adjustments on and around the site, as well as surrounding drainage improvements, may affect the water table. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

Infiltration Testing

Infiltration tests were performed adjacent to test borings NI-1, NI-2, NI-3, NI-6 and NI-7, and were numbered correspondingly. The tests were conducted in general accord with the procedures outlined in Appendix D of the NYS Stormwater Management Design Manual. Results of this testing are presented for your use in the [Exploration Results](#) section of this report and summarized in the table below.

Infiltration Test No.	Test Depth (ft) ¹	Soil Classification at Test Depth	Observed Infiltration Rate (in/hr)
NI-1	2.5	Dense glacial till	nil
NI-2	4.0	Dense glacial till	nil
NI-3	2.0	Medium dense glacial till	nil
NI-6	8.0	Dense glacial till	nil
NI-7	8.0	Dense glacial till	nil

1. Below existing ground surface.

The limited permeability observed at the infiltration test locations is in keeping with what might be expected with the dense glacial till soils present across the site. The results of two infiltration tests completed for the 2023 investigation were similar.

Seismic Site Class

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Assignment of Site Class is required to determine the Seismic Design Category for a structure. The Site Class is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC).

Seismic Site Classification

In our estimation, the seismic Site Class is C in the site's current state. However, because the site will be fundamentally altered through the bulk cuts and fills required in association with the proposed construction, we recommend that seismic Site Class D be assumed for design purposes. Subsurface explorations at this site were extended to a maximum depth of 40.8 feet through the current investigation (51.3 feet was the limit explored in the 2023 investigation). The site properties below the boring depth to 100

feet were estimated based on our experience and knowledge of geologic conditions in the site locale. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth, if desired.

Geotechnical Overview

General

From a geotechnical perspective, the project site is considered suitable for the planned construction using conventional shallow spread foundations to support the building(s) along with standard slab-on-grade design.

The most significant factors which will impact on planning for site design and construction include the bulk cut and fill work required to level the sloping site, control of groundwater, and possibly borrow soil import or rock excavation which may become necessary. Required grade cuts will be primarily within the glacial till overburden soils and possibly graywacke (sandstone) bedrock in places, both of which can be reused as site fill and backfill when following the guideline recommendations presented subsequently provided the limitations associated with their reuse are fully understood. Based on the conditions disclosed by our investigation, we offer the following general conclusions.

- New foundations and floor slabs may be supported on undisturbed native soils, or on Structural Fill which is placed over the native soils after the removal of whatever existing fill, remains of former structures or otherwise unsuitable materials that may be found.
- If materials encountered during construction are similar in composition to the soils revealed by the test borings, consideration may be given to support of new pavements over whatever existing fill that may be found provided the subgrade surfaces are proof-rolled and stabilized as may be required. It should be understood the proof-rolling will lessen, but not eliminate, the possibility that settlement of pavements constructed over existing fills may occur over time and require periodic maintenance.
- The soils excavated onsite should generally be suitable for reuse as general fill and backfill once cleansed of any oversize particles, unsuitable debris or organics, subject to the approval of the Geotechnical Engineer and based upon the conditions encountered at the time of construction. However, it should be understood that these soils will for the most part be silty/clayey in composition and will therefore require a greater degree of expertise and care to satisfactorily place and compact as compared with a more granular (i.e., sandy/gravelly) fill

material. It should also be understood that culling of cobbles and boulders from onsite borrow material will lessen the amount of reusable material, perhaps substantially.

- The test borings identified the presence of groundwater which was apparent in discrete, intermittent sandy/gravelly seams or layers in the glacial till soils, particularly where the till soils are gray in color. Cognizant of the hillside site location, it is possible the wet seams or layers exist under a somewhat confined (artesian) condition. There is a possibility that springs may be encountered during deep cut operations which will require placement of an appropriate drainage medium (temporary or permanent) to divert the spring water and provide a stable base for construction. The extent to which such measures will be necessary is unknown. Dewatering is a means and methods consideration for the contractor.
- Finally, the plans indicate the use of segmental block retaining walls to accommodate the proposed site grading. While segmental block retaining walls may be suitable to retain new fills where the wall is constructed from the bottom-up, they are poorly suited for retaining walls planned in the cut portions of the site. Consideration should be given to implementation of a wall type that allows top-down construction in cut portions of the site, such as soldier pile and lagging, or a soil nail wall system. Soldier pile and lagging walls in excess of 15 feet in height will likely require bracing or grouted tiebacks. Sheet piles are likely not feasible due to the dense glacial till with frequent cobbles/boulders.

The following sections of this report provide more detailed recommendations to assist in planning for the geotechnical aspects of the project. We should be provided with the opportunity to review plans and specifications prior to their release for bidding to confirm that our recommendations were properly understood and implemented, and to allow us to refine our recommendations, if warranted, based upon the final design.

The **General Comments** section provides an understanding of the report limitations.

Earthwork

Earthwork is anticipated to include clearing and grubbing, bulk cuts and fills, stabilization of subgrade surfaces as necessary, foundation excavation and associated site fill and backfill.

The following sections provide recommendations for use in the preparation of specifications for the work. The recommendations include critical quality criteria as necessary to render the site in the state considered suitable in our geotechnical engineering evaluation for foundations, floor slabs and pavements.

Construction site safety is the sole responsibility of the contractor, who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety or the contractor's activities; such responsibility is neither implied nor shall it be inferred.

Site Preparation

If possible, site preparation should be planned during a seasonal dry period to limit the adverse impacts of perched groundwater and soft subgrade conditions on construction. The contractor should take precautions to maintain the subgrades in a relatively dry and firm condition. This may include routine sloping of subgrade surfaces to promote runoff away from the site, installation of interceptor trenches or drainage swales if necessary to divert surface runoff or perched groundwater away from the site, and restricting construction equipment from travelling directly over subgrade soils when they are wet.

Site preparation should begin with clearing and stripping of all topsoil and surficial organic matter from the building pad and pavement areas. Whatever existing fill, remains of former structures or otherwise unsuitable materials that may be found should be removed from beneath new foundations. The Geotechnical Engineer should observe the excavations to confirm that all unsatisfactory materials are removed.

Prior to placing new fills to raise site grades, and/or after cuts are made to the plan subgrade elevations, the subgrades should be proof-rolled using a steel drum roller with a static weight of at least 10 tons. The roller should operate in its static mode, unless requested otherwise by the Geotechnical Engineer observing the work, and travel at a speed not exceeding three feet per second (two miles per hour). The roller should complete at least two passes over all subgrade surfaces in opposing directions. The method of proof-rolling may be modified by the Geotechnical Engineer based upon the conditions revealed at the time of construction.

Soft areas identified by the proof-rolling should be investigated to determine the cause and stabilized accordingly. These investigations may include the excavation of test pits. If existing fills are found and determined by to be unsuitable by the Geotechnical Engineer, they should be removed and replaced as deemed necessary.

Bulk Cut and Fill Considerations

Due to the appreciable amount of cut and fill required to level the site, economic site development will be dependent on the reuse of cut soils as subgrade fill in the building pad and parking areas. The glacial till encountered across the site, where excavated to achieve planned grades, may be reused as a source of structural and general fill provided the limitations associated with its reuse as borrow material are understood.

These soils have a substantial quantity of fine-textured sand and silt (along with a lesser amount clay) and will thus have a very narrow moisture content within which they will be satisfactorily compactable. The soils will likely require moisture modification and possibly amendment with lime or kiln dust to bring and maintain their moisture content within a range necessary to achieve specified compaction. Should site development proceed during seasonally wet periods, it will likely be difficult to adequately dry the cut soils and the use of an imported granular fill may become necessary. Additionally, culling of cobbles and boulders from cut to fill material will likely impact on the volume of what is reusable.

It should be understood the glacial till material at this site is uncommonly dense and the level of effort required to excavate the material will therefore be considerable. Additionally, the contractor should be aware that a combination of equipment types, including smooth and sheepsfoot drum rollers, disk harrows, rakes, etc. may be required to render the borrow material in a suitable matrix for reuse, and to achieve the recommended moisture content and compaction of the soil materials at this site.

We caution that only earthwork contractors that can demonstrate satisfactory completion of comparable scale projects at sites with similar soil conditions should be considered for this work.

Note that bedrock was possibly encountered at two of the 2023 test boring locations within the depths explored, this possibly an indication that some rock excavation may be necessary to establish proposed grades. While it may be possible to remove limited quantities of rock using a large track-mounted excavator equipped with ripper teeth, controlled blasting may be necessary for economical mass removal.

Controlled blasting, if necessary, should be performed by a NYS licensed contractor in a manner that limits the maximum peak particle velocity (PPV) to less than 2 inches per second (ips) at the property limits and less than 1½ ips at the nearest adjacent residence or at levels required by the local utility company. In addition, the peak airblast overpressure must also be limited to less than 0.014 psi at the nearest adjacent occupied structure.

Where excavated bedrock is placed as fill to raise site grades, it will likely be necessary to crush and process the material to render it suitable for reuse. The material should be screened as necessary to exclude particles larger than four (4) inches and processed such that it is suitably dense graded.

The following general guidelines may be assumed for preliminary planning purposes:

Cuts in the overburden soils should not exceed 1V on 2H in inclination. Embankment slopes constructed of the cut soil or bedrock materials should be graded no steeper than 1V on 2.5H. Bedrock, if present, may be cut as steep as 1V on 1.5H and be globally stable, however, the rock surface may weather and ravel to the slope toe over time. For

these reasons the toe of rock cut slopes should be separated from paved surfaces or other features to create a rock ravel/fall collection ditch. All soil slopes should be thickly vegetated soon after grading or otherwise protected from erosion.

During construction, any excavated rock faces should be cleaned of all loose rock and soil, and thoroughly examined for any unfavorable bed and joint orientations which could create unstable rock masses. Should such unfavorable conditions be found, they should be remediated as appropriate. Where excavations intercept the rock/overburden interface, we recommend the overburden be stripped back from the rock face between about five to ten feet to allow construction of a swale to collect runoff and direct it away from the rock face. Runoff should not be allowed to traverse either the filled or excavated slopes at this site at any time.

Finally, even well compacted bulk fills consolidate over time and the effects this will have on the building will be dependent upon the site grades selected and the depths of the fills to be placed. For example, well compacted fill 20 feet in depth may consolidate causing settlements on the order of one-quarter ($1/4$) inch in three to four years and three-quarters ($3/4$) inch settlement in 15 to 20 years. This would be in addition to the estimated foundation and slab settlements presented subsequently herein.

Groundwater Considerations

The test borings identified the presence of groundwater which was apparent in discrete, intermittent sandy/gravelly seams or layers in the glacial till soils, particularly where the till soils are gray in color. Cognizant of the hillside site location, it is possible the wet seams or layers exist under a somewhat confined (artesian) condition. During wet periods water will also likely be found perched near or at the ground surface in some areas of the site.

As previously noted, the subgrade soils will soften and be easily disturbed by construction equipment traffic when wet due to their high silt content. Construction during seasonally wet periods would therefore require building of temporary haul roads, dewatering through cutoff trenches, and possibly undercutting and replacement of saturated surficial soils with imported granular fill to establish a stable working base.

There is a possibility that springs may be encountered during deep cut operations which will require placement of an appropriate drainage medium (temporary or permanent) to divert the spring water and provide a stable base for construction. The extent to which such measures will be necessary is unknown. Chronic seepage of cut slopes may warrant installation of pavement and/or floor slab underdrains in the eastern (cut) portion of the site. It may also be necessary to undercut saturated subgrade soils in localized areas to establish a stable working base for construction. Design of permanent cut slopes will also be affected by groundwater, and stone slope protection or other measures will likely be required in some areas to limit sloughing and improve drainage/stability.

Perched water, which may be found seasonally in the upper few feet of soil, should be diverted from the construction areas through swales and/or interceptor trenches, or otherwise removed as necessary. Perched groundwater may also be intercepted by the cuts planned at this site, requiring the construction of fabric lined and stone filled drainage trenches upon the overburden slopes. Swales should be provided along the toe of all excavated slopes to collect and dispose of such waters.

It may be useful to complete some deep test pits in advance of construction to reveal groundwater conditions in more detail and to help plan dewatering efforts. Dewatering is a means and methods consideration for the contractor.

Fill Material Types

For preliminary planning purposes, it may be assumed that the excavated onsite soil materials and bedrock (if any) may in general be reused as fill and backfill beneath building and pavement areas (within the limitations and under the parameters described herein). The suitability for reuse of the materials should be confirmed by the Geotechnical Engineer at the time of construction based upon the conditions encountered. Onsite soils may require moisture conditioning or amendment with lime, kiln dust or Portland Cement to facilitate their compaction.

All grade increases for support of foundations, parking areas, and roadways at the site should be made using Structural Fill. Structural Fill should consist of either offsite borrow or excavated onsite soil and/or crushed bedrock materials processed as necessary. The Structural Fill material, whether excavated, processed or imported, should be sound and durable, and also free of deleterious materials such as organics, pyritic rock, shale, or contaminants of a chemical, mineral, or biological nature. Particles larger than 8 inches should be excluded from onsite borrow material placed as Structural Fill. Imported Structural Fill should meet the following gradation: 100 percent finer than the 4" sieve, between 30 and 70 percent finer than the no. 4 sieve, and less than 15 percent finer than the no. 200 sieve.

Fill Compaction Requirements

New Structural Fill placed to raise site grades or for foundation backfill should be placed in uniform loose layers no more than about one-foot thick where heavy vibratory compaction equipment is used. Thinner lifts should be used where hand operated equipment is required for compaction. Each lift should be compacted to no less than 95 percent of the material's maximum dry density as determined by the Modified Proctor Compaction Test, ASTM D1557. In landscape areas, the compaction requirement may be relaxed to 90 percent of maximum dry density.

Additionally, new fill should have a moisture content within +/-2 percent of its optimum moisture content when placed and compacted.

Along fill slopes, the subgrade fill should be placed and compacted horizontally about 2 to 3 feet beyond the final slope surface, and then trimmed back to establish the final slope surface to ensure that adequate compaction is achieved there.

Grading and Drainage

All proposed grades should be configured to provide effective drainage away from the building(s) during and after construction, with such drainage maintained throughout their service life. Water retained next to buildings can result in soil movements greater than those outlined in this report, which may in turn lead to unsatisfactory differential floor slab and/or foundation displacements, cracked slabs and walls, or roof leaks.

Runoff should not be allowed to traverse site slopes, and all slopes should be thickly vegetated soon after grading or otherwise protected against erosion. Additionally, stabilized outlet conditions should be provided at all stormwater basin outfalls. The outfall area must be protected from erosion through use of riprap or other appropriate means.

Temporary Excavations

Excavations must be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P and its appendices, along with any state and local codes, as applicable. The contractor should be aware that slope height, slope inclination, and excavation depth should in no instance exceed OSHA regulations. Flatter slopes than those stipulated by the regulations or temporary shoring may be required depending upon the excavation depth, soil/groundwater conditions encountered and other external factors. OSHA regulations are strictly enforced and if they are not followed, the owner, contractor, and/or earthwork and utility subcontractor could be liable and subject to substantial penalties.

Excavations should be maintained free of groundwater, such that work proceeds in the dry. Additionally, surface water should be intercepted and diverted outside the limits of work to minimize runoff into excavations, and excavated subgrades should be shaped and sloped to shed precipitation to these drainage features. Dewatering is a means and methods consideration for the contractor.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of surface materials and any unsuitable fills, proof-rolling, and mitigation of any areas identified as

needing improvement through proof-rolling. Each lift of new Structural Fill should be satisfactorily placed and compacted prior to placement of additional lifts.

The monitoring should also include evaluation of foundation bearing grades and subgrades for floor slabs or pavements. If unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

It should be understood that subsurface conditions will be more fully known when the site is excavated. The continuation of the Geotechnical Engineer into the construction phase of the project will allow for validation of the subsurface conditions assumed to exist for this study and in the development of the design recommendations in this report, along with assessing any variations, providing interim recommendations as necessary and reviewing associated design changes.

Building Foundations

If the site has been prepared in accordance with the recommendations outlined previously in the **Earthwork** section and under the **Foundation Construction Considerations** below, the following parameters may be assumed in the design of conventional shallow spread foundations.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing Pressure ^{1, 2}	4,000 pounds per square foot (psf)
Required Bearing Stratum ³	Undisturbed native soils, or Structural Fill placed over the native soils after removal of topsoil or whatever unsuitable material that may be found.
Minimum Foundation Dimensions	Columns: 36 inches Continuous: 24 inches
Ultimate Coefficient of Sliding Friction ⁴	0.35 (concrete on native soils or onsite soils reused as Structural Fill) 0.45 (concrete on imported Structural Fill)
Minimum Embedment below Finished Grade ⁵	Exterior footings: 48 inches Interior footings in heated areas: 24 inches Interior footings in unheated areas: 48 inches

Item	Description
Estimated Total Settlement from Structural Loads ²	Less than about (1) inch
Estimated Differential Settlement ^{2, 6}	About 3/4 of total settlement

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2. Values provided are for maximum loads noted in **Project Description**, and are exclusive of settlement associated with placement of deep fills to raise site grades.
3. The bearing grades should be prepared per the recommendations presented below in the **Foundation Construction Considerations**.
4. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Should be disregarded for foundations subject to net uplift conditions.
5. Embedment necessary to minimize the effects of frost and/or seasonal water content variations. For sloping ground, maintain depth below the lowest adjacent exterior grade within 5 feet laterally of the structure. Interior footings in heated areas may be seated at the 24-inch depth if allowed by local building codes.
6. Differential settlements are noted for equivalent-loaded foundations and bearing elevation as measured over a span of 50 feet.

A standard perimeter foundation drain should be provided to collect and relieve water which enters the backfill soils after construction is complete. The drain should consist of nominal four-inch diameter perforated PVC or corrugated HDPE pipe set within ± 12 inches of clean crushed stone composed of ASTM C33 Blend 57 material. The stone should be enveloped with a non-woven synthetic filter fabric meeting the requirements of NYSDOT standard specifications table 737-01C for drainage geotextile. All drains should be provided with clean outs for their maintenance.

Foundation Construction Considerations

The foundations may be seated directly on undisturbed native soils, or on Structural Fill placed over the native soils after all topsoil is removed, along with any existing fill, remains of former structures or otherwise unsuitable materials that may be found. If over-excavation is required beneath the foundations to remove unsuitable material, the excavation should extend horizontally beyond each side of the foundation a distance equal to at least one-half the depth of the undercut below the final bearing grade elevation. Replacement material should meet the specification and compaction guidelines for Structural Fill as outlined herein.

Foundation bearing grades, where composed of soil, should be proof-compacted using a mechanical or large reversible plate tamper to densify the soils loosened by the excavation process unless otherwise directed by the Geotechnical Engineer observing the

grades. If groundwater seepage occurs, proof-compacting should be eliminated, and a minimum six-inch thick base of clean crushed stone placed over a geotextile fabric should be provided to establish a more uniform and stable base for construction and to assist in dewatering. The stone should be an ASTM C33 Blend 57 aggregate and the fabric a non-woven synthetic filter fabric meeting NYSDOT standard specifications section 737-01 for drainage geotextile. A protective layer of clean crushed stone may also be useful to protect the grades from precipitation and foot traffic.

Note that new foundations should be supported entirely on a uniform bearing material. Support on differing materials (e.g., partly on soil and partly on bedrock) should be avoided. Where proposed foundation bearing grades are comprised partly of native soil and partly of bedrock, the bedrock should be over-excavated a nominal 6 to 12 inches and replaced with a Structural Fill "cushion". This is intended to provide a more uniform bearing surface and limit the potential for differential settlement.

Where foundations are to bear entirely on bedrock, the rock surface may vary across the excavation area and may undulate with relatively abrupt changes in depth. Care should be taken to follow the surface contours of the rock, fully excavating excessively loose or weathered material. The finished bearing surface should be clean, reasonably level, free of unsuitable material, and recognizable as bedrock. Final bearing surfaces should not be sloped more than 1 vertical to 10 horizontal (1V:10H or flatter). Lean concrete with a minimum 28-day compressive strength (f'_c) of 2,000 psi may be used to level erratic or excessively sloping bedrock surfaces prior to foundation construction.

All final bearing grades should be relatively firm, stable, and free of loose soil, mud, water and frost. The Geotechnical Engineer should approve the condition of the foundation bearing grades immediately prior to placement of reinforcing steel and concrete.

Floor Slabs

Floor Slab Design Parameters

New interior floor slabs at the warehouse building should be constructed upon a minimum 12-inch thick subbase course which conforms to the requirements for NYSDOT Type 2 Subbase or ASTM C33 Blend 57 aggregate. A minimum 8-inch thick subbase course should be provided at the outbuildings. Consideration should be given to using a thicker subbase course in areas subject to heavier loads and/or use, or those exposed to freezing temperatures.

The use of a vapor retarder should be considered beneath concrete slabs on grade to be covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the

use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding its use and placement.

Floor slab subgrades should be prepared as outlined in the **Earthwork** section herein. Under these conditions, a modulus of subgrade reaction equal to 150 pounds per cubic inch (psi/in) may be assumed at the top of the stone base layer for slab design purposes.

Floor Slab Construction Considerations

Even with the base course recommended above, we caution that the subgrades may not support repeated heavy construction traffic or telehandlers without suffering rutting and weaving that may be especially severe during wet seasons. If the grades are to be repeatedly traversed by these types of equipment, they should be reinforced as necessary to support them. Areas which become disturbed should be excavated and stabilized accordingly.

The Geotechnical Engineer should approve the condition of floor slab subgrades immediately prior to placement of the subbase course. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

Water Tank Foundation

A maximum net allowable soil bearing pressure of 2,000 pounds per square foot (psf) may be assumed for the water tank foundation. We recommend the tank floor be constructed over a minimum 12 inch thick base layer of dense graded crushed stone (NYSDOT Type 2 Subbase).

The tank foundation should bear on suitable native soils, or on Structural Fill which is placed over the suitable soils after the removal of whatever unsuitable fill, debris or otherwise unsatisfactory materials that may be found. Note that it appears a mound of soil some 6 feet in height is currently present at the location of the proposed tank, and this mounded soil should be removed prior to raising site grades for the tank pad.

Continuous ring wall footings should be at least 18 inches in width and column/isolated footings, if any, should be at least 3 feet in width. Exterior foundations should be embedded a minimum of 48 inches below finished exterior grades for frost protection.

The retaining wall shown surrounding the tank pad should be designed to accommodate the surcharge load associated with the water tank. In the event that grades are configured to slope down from the tank pad in lieu of the retaining wall, the tank should be setback a minimum of 1/3 the overall slope height from adjoining descending slopes for preliminary

planning purposes. Slope stability analyses should be performed to verify that the tank and slope configurations are both internally and globally stable.

Evaluation of the foundation bearing grades by the Geotechnical Engineer at the time of construction is recommended to verify that foundations are constructed on suitable materials. Any water which enters foundation excavations should be promptly removed, together with any softened bearing grade materials. All final bearing grades should be firm, stable, and free of any loose soil, mud, water or frost.

Assuming the foundation is designed and constructed as recommended, total settlement of the tank is not expected to exceed one inch, and differential settlement is not expected to exceed $\frac{3}{4}$ -inch. Any such settlement is expected to occur as construction proceeds and proportionally as loads are applied. Such settlement would be in addition to that associated with chronic self-settlement associated with deep fills to raise site grades. Sheet piles are likely not feasible at this site due to the dense glacial till with frequent cobbles/boulders.

Earth Retaining Wall Design

As previously stated, the plans indicate the use of segmental block retaining walls to accommodate the proposed site grading. While segmental block retaining walls may be suitable to retain new fills where there is adequate room to allow for embedment of reinforcing elements (e.g. geogrid) and the wall is constructed from the bottom-up, they are typically poorly suited for retaining walls where deep grade cuts are planned. Consideration should be given to implementation of a wall type that allows top-down construction in cut portions of the site, such as soldier pile and lagging, or a soil nail wall system. Soldier pile and lagging walls in excess of 15 feet in height will likely require bracing or grouted tiebacks. Sheet piles are likely not feasible at this site due to the dense glacial till soils with frequent cobbles/boulders.

The recommendations below are applicable to retaining walls in fill portions of the site. Terracon will be pleased to provide recommended design parameters for walls in cut portions of the site once a particular type of wall is settled upon.

All permanent earth-retaining foundation walls or structures should be designed to resist the lateral pressures generated by earth backfill along with any temporary or permanent surcharge loads. Active earth pressures may be assumed for site walls that are free to deflect as the backfill is placed. At-rest earth pressures should be assumed for all building walls and site walls that are braced prior to backfilling or applying surcharge loads. The following design parameters are provided to assist in calculating lateral earth pressures, whichever apply, and to analyze the stability of unbraced walls by sliding and overturning.

- Soil angle of internal friction - 30 degrees
- Coefficient of At-Rest earth pressure (k_o) - 0.50
- Coefficient of Active earth pressure (k_a) - 0.33
- Coefficient of Passive earth pressure (k_p) - 3.0
- Total unit weight of compacted soil - 130 pcf
- Coefficient of sliding friction - 0.35 (concrete on native soils or onsite soils reused as Structural Fill)
0.45 (concrete on imported Structural Fill)

The recommended design parameters assume that backfill consists of imported Structural Fill as described in the **Earthwork** section herein (excavated onsite soils should not be reused for this purpose), idealized non-sloping conditions on each side of the wall, and that the backfill remains permanently well-drained. Water must not be allowed to collect against the wall unless the wall is designed to accommodate the added hydrostatic pressure. Drainage system recommendations are provided below.

All retaining walls should be designed by a New York State licensed professional engineer, and should be analyzed to ensure they are both internally and globally stable.

Subsurface Drainage for Earth Retaining Walls

Permanent earth retaining walls should be provided with a foundation level drain which may consist of a nominal 4-inch diameter perforated PVC or corrugated HDPE pipe embedded at the base of a minimum 12-inch wide column of clean crushed stone (e.g., ASTM C33 Blend 57 stone). The stone should be enveloped in an appropriate non-woven filter fabric (meeting NYSDOT standard specifications table 737-01C for drainage geotextile) to inhibit siltation. Backfill soils behind the crushed stone drainage layer should consist of imported Structural Fill. The drain line should be sloped to provide positive gravity drainage to daylight, a stormwater system, or to a sump pit and pump.

Pavements

Flexible Pavement Design

The pavement sections presented below were developed in general accord with AASHTO procedures using a reduced subgrade strength and local experience to account for frost, and to keep the anticipated pavement heave and cracking within generally tolerable limits. A subgrade resilient modulus (M_r) equal to 4,000 psi has been assumed for design purposes. Our design parameters assume the pavement subgrades will be prepared as

detailed in the **Earthwork** section of this report, and cognizant of the groundwater and fill placement considerations outlined therein.

Two conventional pavement sections were developed, a Light Duty section for automobile parking areas, and a Heavy Duty section for entrance drives or areas subject to day-to-day truck (tractor trailer) traffic. For design purposes, it has been assumed that the pavement design life is 20 years, and that daily equivalent single axle loads (ESALs) are equal to 1 for the Light Duty section and 100 for the Heavy Duty section. If the traffic loads vary from these, we should be provided the opportunity to refine the pavement sections accordingly.

Flexible Pavement Design				
Layer	Material Description	NYSDOT Item Number	Thickness (inches)	
			Light Duty	Heavy Duty
Top	Asphaltic Concrete	402.127303	1.5	1.5
Binder	Asphaltic Concrete	402.257903	2.0	4.0
Subbase	Crusher-Run Stone	Section 733.04, Type 2	8	18
Fabric	Stabilization Geotextile	Section 737-01, Table E	Single Ply	Single Ply

All materials should meet the requirements specified in the latest edition of the New York State Department of Transportation (NYSDOT) Standard Specifications for Construction and Materials.

Rigid concrete pavements, if any, should be provided with a minimum six-inch thick base of crusher-run stone (NYSDOT section 733-04, Type 2 material) in light service areas or a minimum 12-inch thick base layer of crusher-run stone in heavy service areas. A suitable stabilization geotextile should be provided between the subbase layer and the underlying prepared subgrade in either instance. The concrete pavements may be designed assuming a modulus of subgrade reaction equal to 150 pounds per cubic inch (psi/in) at the top of the stone base layer.

Temporary Construction Access Roadways

The recommended pavement sections are not intended to support heavy construction equipment loads which may require thicker sections. The contractor should construct temporary haul routes and construction roadways onsite as appropriate for the weather

conditions and the equipment in use, with consideration to the soil conditions encountered in specific areas. Construction traffic should not be routed across the recommended pavement sections unless augmented accordingly.

Pavement Drainage

Accumulation of water on pavement subgrades should be avoided by grading the subgrade to a slope of at least two percent, and/or by providing underdrains. Failure to provide adequate drainage will shorten pavement life.

Pavement Maintenance

All pavements require periodic care, and preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Adequate maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing).

Frost Considerations

Frost may penetrate beneath sidewalks and pavements and cause them to heave, and resulting displacements may be differential, particularly where sidewalks and pavements meet building doorways and along curbs. To limit heave and the creation of such uneven joints to generally tolerable magnitudes for most winters, a 16 inch thick base of ASTM C33 Blend 57 crushed stone should be placed beneath sensitive sidewalk or pavement areas, along with an underdrain to relieve any collected waters. The crushed stone should be separated from the surrounding soils with a non-woven synthetic filter fabric meeting the requirements of NYSDOT standard specifications table 737-01C for drainage geotextile.

General Comments

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the

absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include, either specifically or by implication, any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use of or reliance on the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety and cost estimating including excavation support and dewatering requirements/design are the responsibility of others.

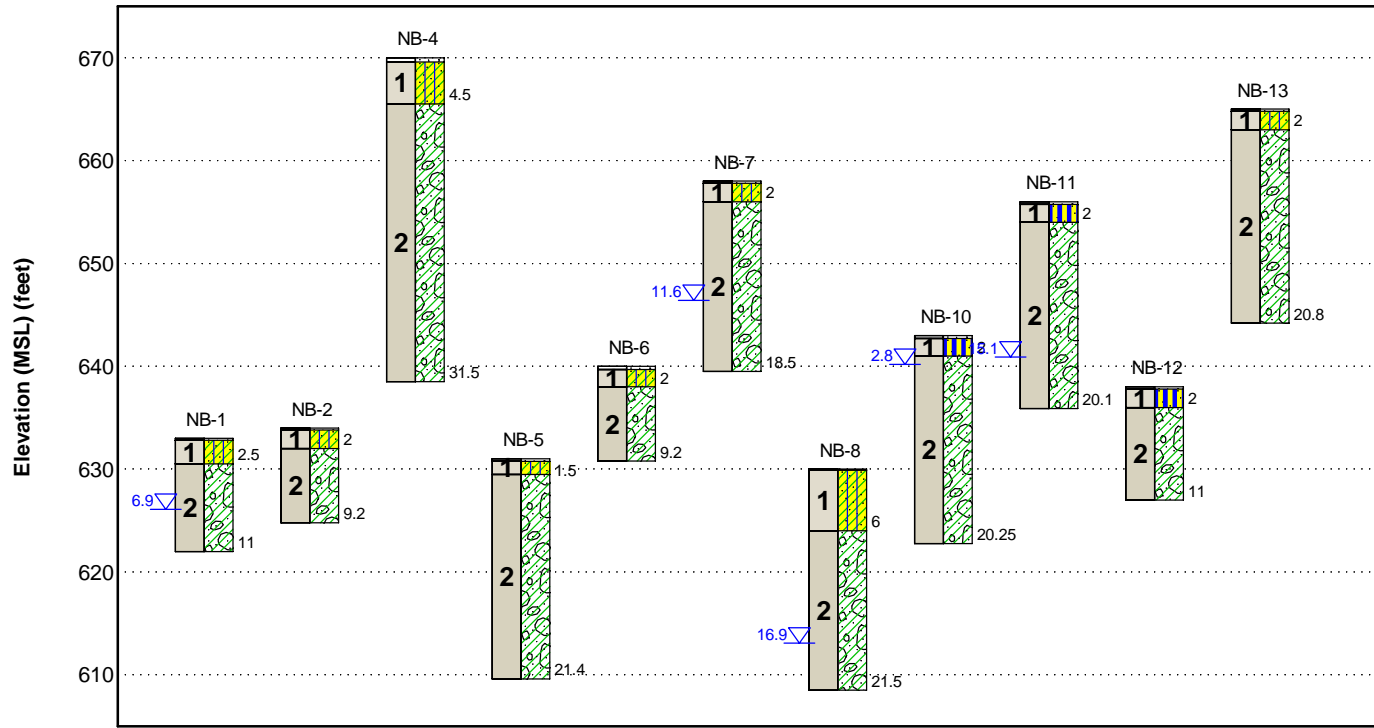
Construction and site development have the potential to affect adjacent properties. Such impacts can include damages due to vibration, modification of groundwater/surface water flow during construction, foundation movement due to undermining or subsidence from excavation, as well as noise or air quality concerns. Evaluation of these items on nearby properties are commonly associated with contractor means and methods and are not addressed in this report. The owner and contractor should consider performing a preconstruction/precondition survey of surrounding development. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

Figures

Contents:

GeoModel



GeoModel



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Near Surface Soils	Clayey silt with lesser amounts of sand, gravel. Organics occasionally noted.
2	Glacial Till	Typically silt and fine sand with embedded coarser sands, gravel, rock fragments. Cobbles and boulders frequent.

LEGEND

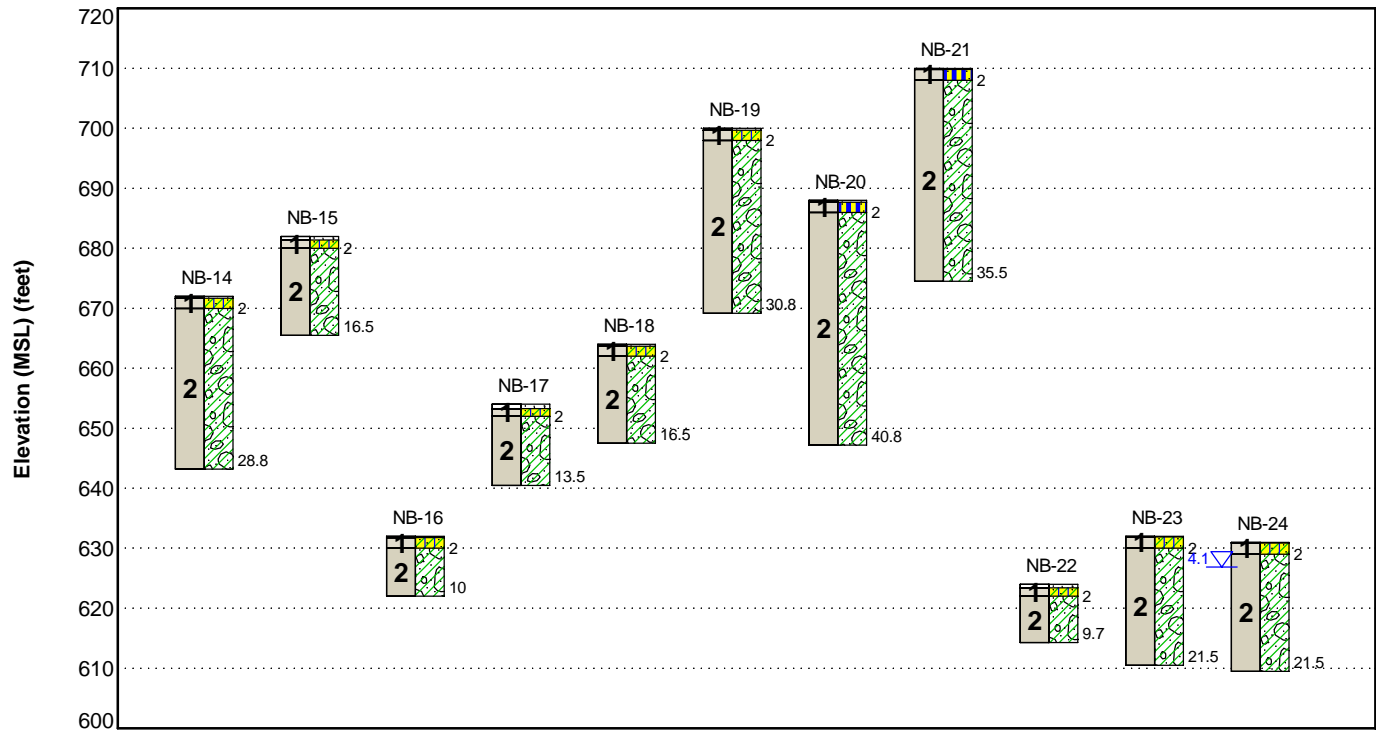
-  Topsoil
-  Sandy Silt
-  Sandy Silty Clay
-  Glacial Till

 First Water Observation

The groundwater levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

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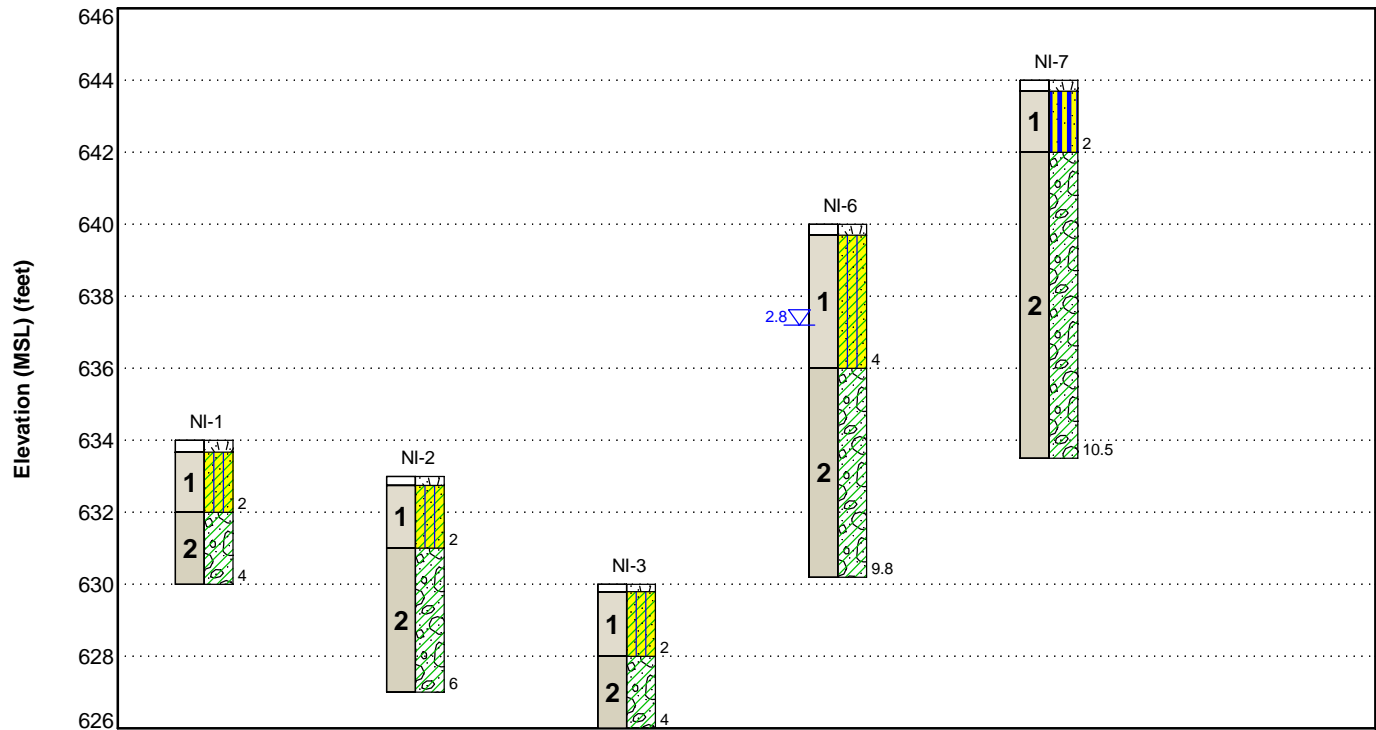
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Geotechnical Engineering Report

Proposed DAN8 Distribution Facility | Schoharie, New York

August 4, 2025 | Terracon Project No. JB255039



Attachments

DRAFT

Exploration and Testing Procedures

Field Exploration

Number of Borings	Approximate Boring Depth (feet)	Location
11	9.2 to 31.5	Planned building areas
16	4.0 to 40.8	Planned pavement and stormwater management areas

Boring Layout and Elevations: The test boring locations were selected and were established in the field by Terracon using a hand-held GPS unit, taped measurements and/or visual reference from existing site features within the limitations of access, existing structures and underground/overhead utilities.

Existing ground surface elevation at each borehole location was estimated based upon our interpolation between topographic contours shown on the site plans provided to us. If more precise locations and/or elevations are desired, the as-completed test locations should be surveyed.

Subsurface Exploration Procedures: The test borings were completed using a standard rotary drill rig equipped with hollow-stem augers and/or flush-joint casing. As the boreholes were advanced, the soils were sampled at intervals of five feet or less in accordance with the Standard Method for Penetration Test and Split-Barrel Sampling of Soils, ASTM D1586. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground using a 140-pound automatic hammer falling 30-inches per blow. The number of blows required to advance the sampling spoon between 6 and 18-inches of penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the corresponding test depths. Upon completion of drilling the boreholes were backfilled with auger cuttings, sand and/or concrete cylinders.

Our exploration team prepared field boring logs as part of the drilling operations. These field logs included descriptions of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. The sampling depths, penetration lengths, water level measurements and other information as applicable were recorded on the field boring logs.

The samples were placed in appropriate containers and taken to our laboratory for visual classification by a geotechnical engineer or geologist. The soils were described based on the material’s color, texture, plasticity, moisture condition, etc. Soil classifications are in general accordance with the Unified Soil Classification System (USCS) as summarized

herein. Final boring logs were prepared, and they represent the Geotechnical Engineer's interpretation based on the field logs and visual classifications, along with whatever laboratory testing was performed.

Laboratory Testing

Selected samples recovered from the test borings were submitted for laboratory testing as part of the subsurface investigation, to confirm the visual classifications and to provide quantitative index properties for use in the geotechnical evaluation. This testing was performed in general accordance with the following standard methods:

- ASTM D2216 - Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass (15 samples tested)
- ASTM D422 - Standard Test Method for Particle-Size Analysis of Soils (w/o hydrometer – 10 samples tested)
- ASTM D422 - Standard Test Method for Particle-Size Analysis of Soils (w/ hydrometer – 5 samples tested)
- ASTM D4318 - Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils (3 samples tested)

Site Location and Exploration Plans

Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

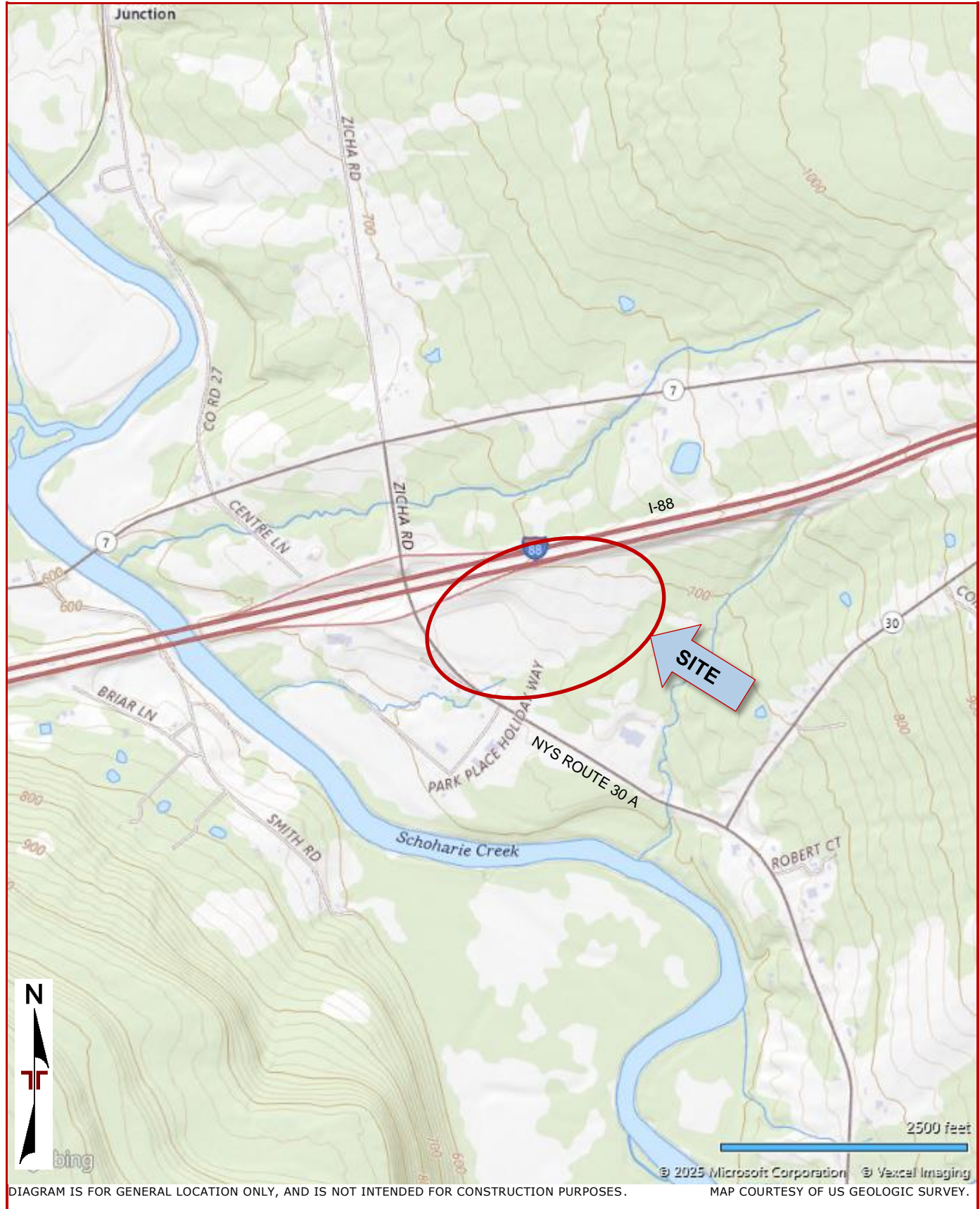
Geotechnical Engineering Report

Proposed DAN8 Distribution Facility | Schoharie, New York

August 2025 | Terracon Project No. JB255039



Site Location



Exploration Plan

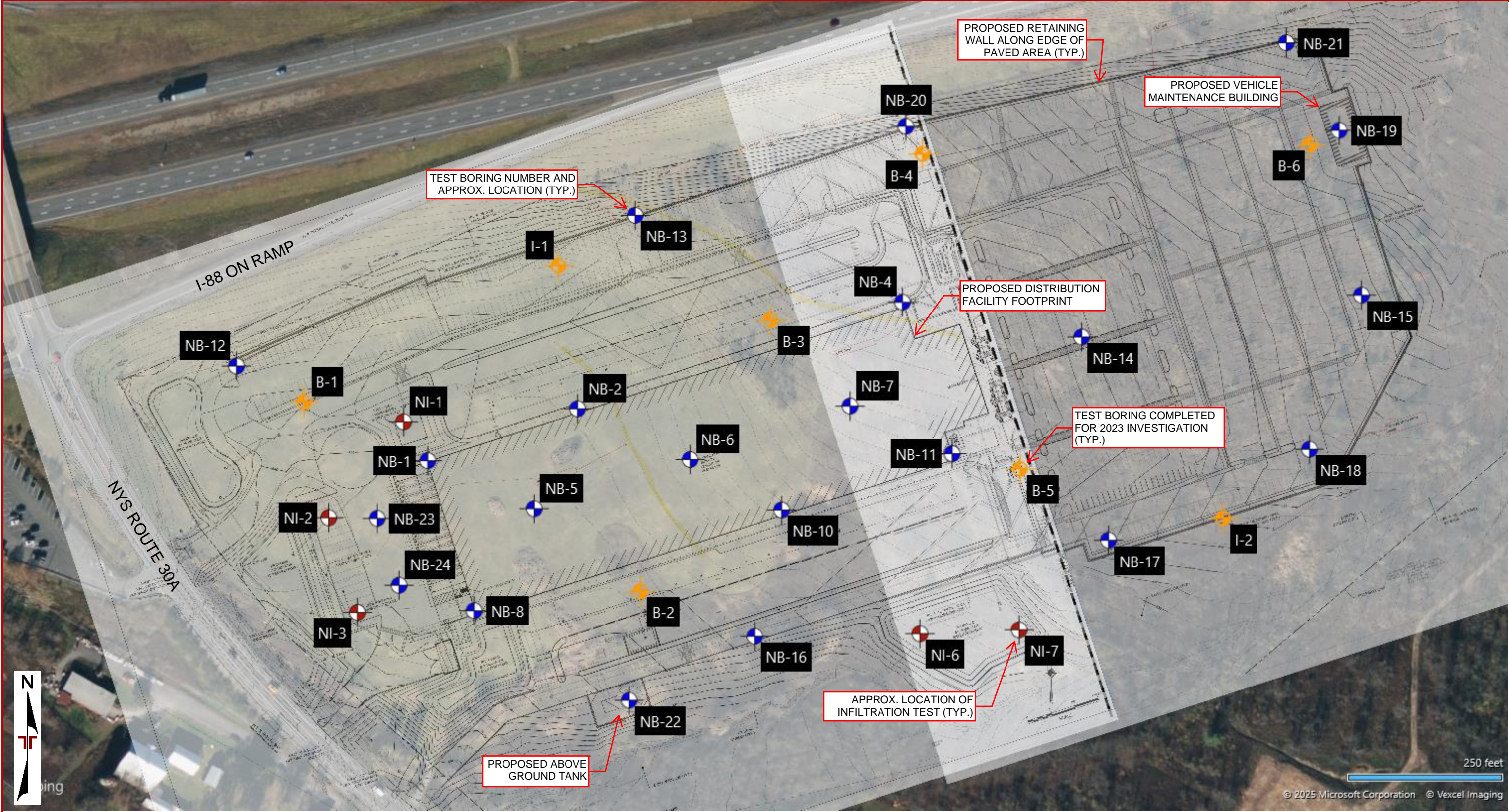


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

BASE MAP(S) FURNISHED BY CLIENT.

Exploration and Laboratory Results

Contents:

Current Boring Logs (NB-1, NB-2, NB-4 thru NB-8, NB-10 thru NB-24, NI-1 thru NI-3, NI-6 and NI-7 – 28 pages)


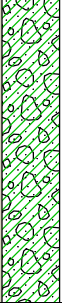

2023 Boring Logs (9 pages)


Infiltration Test Results (2 pages)

Laboratory Test Results (?? pages)



Note: All attachments are one page unless noted above.

Boring Log No. NB-1

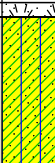
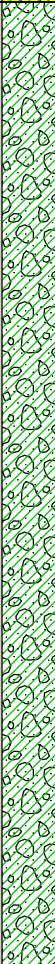
Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7058° Longitude: -74.3112° Depth (Ft.) Elevation: 633 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.2/2" TOPSOIL, Topsoil roughly 2" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, very stiff	632.8 630.5			12	1-4-18-50/1" N=22	
2		SILTY SAND WITH GRAVEL (SM), gray, medium dense to dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)	622			2 8	50/2" 33-50/3"	
		Boring Terminated at 11 Feet				19 5 18	18-26-23-23 N=49 14-12-15-28 N=27 20-21-20-20 N=41	

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations  At completion of drilling	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL Boring Started 07-02-2025 Boring Completed 07-02-2025
Notes Elevation Reference: Elevation was interpolated from a topographic site plan. Cobbles and Boulders noted while drilling from 1.6' to 11'	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	

Boring Log No. NB-2

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7060° Longitude: -74.3103° Depth (Ft.) Elevation: 634 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.2' 2" TOPSOIL, Topsoil roughly 2" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, stiff	633.8 632			22	1-2-9-9 N=11	
2		SILTY SAND WITH GRAVEL (SM), gray, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)				13	28-43-50/4"	
						5	50/4"	
						11	49-50/4"	
						8	48-50/2"	
		9.2' - gray cobble dust at 9' Boring Terminated at 9.2 Feet	624.8			1	50/2"	
See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.			Water Level Observations No free water observed			Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL Boring Started 07-03-2025 Boring Completed 07-03-2025		
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.			Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.					

Boring Log No. NB-4

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7065° Longitude: -74.3083° Depth (Ft.) Elevation: 670 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.4 - 5" TOPSOIL, Topsoil roughly 5" in thickness present at ground surface <u>CLAYEY SILT WITH SAND, GRAVEL (CL-ML)</u> , brown, medium stiff to very stiff - cobbles noted from 0' to 4.5'	669.6 4.5 665.5			17 1	2-3-4-13 N=7 6-10-10-11 N=20	
2		<u>SILTY SAND WITH GRAVEL (SM)</u> , brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 10 15 20 25 30 31.5 638.5			18 5 16 2 0 5 10	15-13-35-23 N=48 50/4" 23-48-50/4" 50/3" 50/1" 50/4" 9-12-20 N=32	
		Boring Terminated at 31.5 Feet						

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevation was interpolated from a topographic site plan.
Cobble noted at 4' boring advanced to 4.5' for sample 3

Water Level Observations
No free water observed

Advancement Method
2 1/4" ID HSA

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Drill Rig
CME 750X

Hammer Type
Automatic



Driller
C. Schindler

Logged by
DOL

Boring Started
07-11-2025



Boring Completed
07-11-2025

Boring Log No. NB-5

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7056° Longitude: -74.3105° Depth (Ft.) Elevation: 631 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' TOPSOIL, Topsoil roughly 3" in thickness present at ground surface 1.5' CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff	630.75 629.5			18	1-2-4-11 N=6	
2		SILTY SAND WITH GRAVEL (SM), brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 10 15 20			24 24 18	21-20-23-30 N=43 16-26-28-28 N=54 25-31-29-50/5" N=60	
		21.4 Boring Terminated at 21.4 Feet	609.6			6 10 12	16-50/1" 11-35-50/3" 20-28-50/5"	




See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-01-2025 Boring Completed 07-01-2025


Boring Log No. NB-6

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7058° Longitude: -74.3096° Depth (Ft.) Elevation: 640 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, very stiff	639.7 638			18	1-5-20-16 N=25	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 630.8			2 8 13 13	50/2" 36-50/4" 36-44-50/2" 41-57-50/2"	
		Boring Terminated at 9.2 Feet						

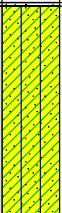
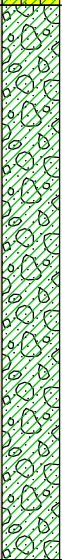
See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan. Cobbles and Boulders noted from 2.2' to 4.5'	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-03-2025 Boring Completed 07-03-2025

Boring Log No. NB-7

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7061° Longitude: -74.3086° Depth (Ft.) Elevation: 658 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.2' TOPSOIL, Topsoil roughly 2" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff	657.8 656			11	1-3-4-8 N=7	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)				18	8-10-17-25 N=27	
			5			16	7-10-10-12 N=20	
						24	20-19-23-25 N=42	
			10			17	23-50-50/4"	
			15			8	19-50/3"	
		18.5 Auger Refusal at 18.5 Feet	639.5					

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations  While drilling	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler
Notes Elevation Reference: Elevation was interpolated from a topographic site plan. Cobbles and Boulders noted from 4' to 5'. Boring advanced to 5' for sample 3	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Logged by DOL Boring Started 07-03-2025 Boring Completed 07-03-2025


Boring Log No. NB-8

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7051° Longitude: -74.3109° Depth (Ft.) Elevation: 630 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.1 1" TOPSOIL, Topsoil roughly 1" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, very stiff	629.9			17	1-3-12-6 N=15	
						12	17-14-11-48 N=25	
						4	8-9-10-9 N=19	
		6.0 - organics noted	624			17	12-19-50/5"	
2		SILTY SAND WITH GRAVEL (SM), brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray, cobble dust noted				18	22-40-50 N=90	
						1	50/1"	
						12	12-15-15 N=30	
		21.5 Boring Terminated at 21.5 Feet	608.5					

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevation was interpolated from a topographic site plan.
Cobbles and Boulders noted from 7' to 10'

Water Level Observations
 While drilling

Advancement Method
2 1/4" ID HSA

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Drill Rig
CME 750X

Hammer Type
Automatic


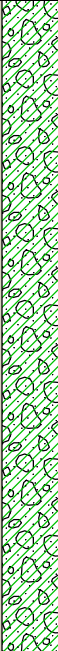

Driller
C. Schindler


Logged by
DOL

Boring Started
07-01-2025




Boring Completed
07-01-2025


Boring Log No. NB-10

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7056° Longitude: -74.3090° Depth (Ft.) Elevation: 643 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface SANDY SILT (ML), organics noted, brown, medium stiff	642.7 641			5	2-3-4-3 N=7	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 10 15 20			11 24 12	4-6-8-10 N=14 12-13-15-15 N=28 14-29-40-50/4" N=69	
		20.3 Boring Terminated at 20.3 Feet	622.75			2 2 4	50/3" 50/3" 50/3"	


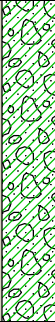
See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations  After 72 hours	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-03-2025 Boring Completed 07-07-2025

Boring Log No. NB-11

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7058° Longitude: -74.3080° Depth (Ft.) Elevation: 656 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' 3" TOPSOIL, Topsoil roughly 3" in thickness present at ground surface SANDY SILT (ML), brown, loose	655.75 654			11	2-3-5-5 N=8	
2		SILTY SAND WITH GRAVEL (SM), brown to gray, medium dense to dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - mottling noted - grades to gray	5 10 15 20			14 20 10 5	6-8-10-15 N=18 13-15-18-20 N=33 23-50/3"	
		20.1 Boring Terminated at 20.1 Feet	635.9			2	50/2"	
						1	50/1"	



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations  While drilling	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-07-2025 Boring Completed 07-07-2025

Boring Log No. NB-12

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7064° Longitude: -74.3072° Depth (Ft.) Elevation: 638 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.2' 2" TOPSOIL, Topsoil roughly 2" in thickness present at ground surface SANDY SILT (ML), organics noted, brown, medium stiff	637.8 636			10	1-3-3-2 N=6	
2		SILTY SAND WITH GRAVEL (SM), brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	627			12	2-6-35-50/5" N=41	
						18	34-43-41-50 N=84	
						20	45-40-48-50/2" N=88	
						16	44-39-40-39 N=79	
		Boring Terminated at 11 Feet						



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Logged by DOL Boring Started 07-02-2025 Boring Completed 07-02-2025

Boring Log No. NB-13

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7059° Longitude: -74.3058° Depth (Ft.) Elevation: 665 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.2' TOPSOIL, Topsoil roughly 2" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, stiff	664.8 663			18	3-4-7-11 N=11	
2		SILTY SAND WITH GRAVEL (SM), brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 10 15 20			18 20 8	8-13-22-21 N=35 32-40-45-48 N=85 50-50/4"	
		20.8 Boring Terminated at 20.8 Feet	644.2			14 16	36-49-50/4" 36-40-48 N=88	
							55-50/4"	

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan. Cobbles and Boulders noted from 6.9' to 10'	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-08-2025 Boring Completed 07-08-2025

Boring Log No. NB-14


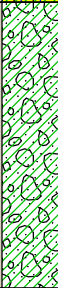
Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7050° Longitude: -74.3092° Depth (Ft.) Elevation: 672 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, stiff	671.7 670			17	2-3-6-12 N=9	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 10 15 20 25			14 18 17	15-16-19-11 N=35 10-12-10-34 N=22 30-30-29-25 N=59	
		28.8 Boring Terminated at 28.8 Feet	643.2			5 6 11 1	50/4" 40-50/2" 35-50/4" 50/1"	
						11	35-50/4"	

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Logged by DOL Boring Started 07-11-2025 Boring Completed 07-11-2025

30 Corporate Cir Ste 201
Albany, NY

<p>See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).</p> <p>See Supporting Information for explanation of symbols and abbreviations.</p>	<p>Water Level Observations</p> <p>No free water observed</p>	<p>Drill Rig</p> <p>CME 750X</p>
		<p>Hammer Type</p> <p>Automatic</p>
<p>Notes</p> <p>Elevation Reference: Elevation was interpolated from a topographic site plan.</p> <p>Cobbles and Boulders noted from 10.4' to 11.5'</p> <p>Boulder noted at 14.5</p>		<p>Driller</p> <p>C. Schindler</p>
	<p>Advancement Method</p> <p>2 1/4" ID HSA</p>	<p>Logged by</p> <p>DOL</p>
		<p>Boring Started</p> <p>07-14-2025</p>
	<p>Abandonment Method</p> <p>Boring backfilled with auger cuttings upon completion.</p>	<p>Boring Completed</p> <p>07-14-2025</p>

Boring Log No. NB-16

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7062° Longitude: -74.3123° Depth (Ft.) Elevation: 632 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.2' 2" TOPSOIL, Topsoil roughly 2" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff	631.8 630			10	2-3-4-4 N=7	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - mottling noted	622			16 18 23 1	5-5-7-8 N=12 8-14-18-20 N=32 21-28-31-45 N=59 39-43-39-45 N=82	
		Boring Terminated at 10 Feet	10					



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-07-2025 Boring Completed 07-07-2025

Boring Log No. NB-17

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7069° Longitude: -74.3099° Depth (Ft.) Elevation: 654 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
		0.7 8" TOPSOIL, Topsoil roughly 8" in thickness present at ground surface 653.3						
1		CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff 652				17	1-1-5-6 N=6	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - mottling noted				11	16-15-14-13 N=29	
						19	17-12-13-19 N=25	
						14	20-20-50/4"	
		13.5 640.5				5	50/4"	
		Auger Refusal at 13.5 Feet						


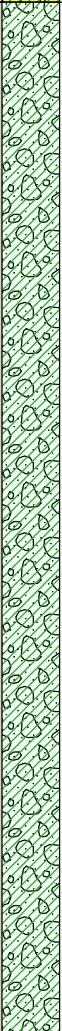
See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-14-2025 Boring Completed 07-14-2025

Boring Log No. NB-18

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7065° Longitude: -74.3055° Depth (Ft.) Elevation: 664 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff	663.7 2.0 662			11	2-2-4-6 N=6	
2		SILTY SAND WITH GRAVEL (SM), brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 10 15 16.5 647.5			12 24 23 4 16	7-30-27-50/3" N=57 20-16-20-21 N=36 20-30-34-50/4" N=64 50/3" 44-40-44 N=84	
		Boring Terminated at 16.5 Feet						

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL Boring Started 07-14-2025 Boring Completed 07-14-2025
Notes Elevation Reference: Elevation was interpolated from a topographic site plan. Cobbles and Boulders noted from 12' to 14'	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	

Boring Log No. NB-19

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7073° Longitude: -74.3057° Depth (Ft.) Elevation: 700 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.3 <u>4" TOPSOIL</u> , Topsoil roughly 4" in thickness present at ground surface <u>CLAYEY SILT WITH SAND, GRAVEL (CL-ML)</u> , brown, medium stiff	699.7 698			4	1-2-3-4 N=5	
2		<u>SILTY SAND WITH GRAVEL (SM)</u> , brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	669.2			14	15-20-19-10 N=39	
			5			16	4-25-40-15 N=65	
						11	34-50/4"	
			10			20	23-31-43 N=74	
			15			11	34-50/4"	
			20			12	22-35-50/2"	
			25			1	50/1"	
			30			11	35-50/4"	
		Boring Terminated at 30.8 Feet						

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevation was interpolated from a topographic site plan.

Water Level Observations
No free water observed

Advancement Method
2 1/4" ID HSA

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Drill Rig
CME 750X

Hammer Type
Automatic



Driller
C. Schindler

Logged by
DOL

Boring Started
07-10-2025

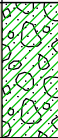
Boring Completed
07-11-2025

Boring Log No. NB-20

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7073° Longitude: -74.3083° Depth (Ft.) Elevation: 688 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3-2.0 TOPSOIL, Topsoil roughly 4" in thickness present at ground surface SANDY SILT (ML), brown, medium stiff, mottled, organics noted	687.7 686			12	2-2-4-10 N=6	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray	5 10 15 20 25 30 35			8 12 1 1 11 14 8 6 12	8-8-14-14 N=22 13-19-50/2" 50/2" 30-55-50/4" 49-50/4" 36-49-50/2" 46-50/4" 23-50/1" 39-48-34 N=82	

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA. 4" Casing set from 0' to 27.8'; 3 7/8" Tricone from 27.8' to 40' Abandonment Method Boring backfilled with auger cuttings upon completion.	Logged by DOL Boring Started 07-04-2025 Boring Completed 07-10-2025

Boring Log No. NB-20

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7073° Longitude: -74.3083° Depth (Ft.) Elevation: 688 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
2		<u>SILTY SAND WITH GRAVEL (SM)</u> , brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) <i>(continued)</i> 40.8 647.2	40			8	40-50/4"	
		Boring Terminated at 40.8 Feet						

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA. 4" Casing set from 0' to 27.8'; 3 7/8" Tricone from 27.8' to 40' Abandonment Method Boring backfilled with auger cuttings upon completion.	Logged by DOL Boring Started 07-04-2025 Boring Completed 07-10-2025


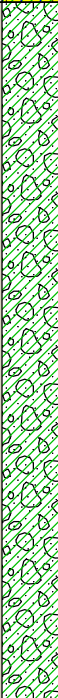
Model Layer	Graphic Log	Location: See Exploration Plan	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
		Latitude: 42.7077° Longitude: -74.3060°						
		Depth (Ft.) Elevation: 710 (Ft.) +/-						
1		0.2' TOPSOIL, Topsoil roughly 2" in thickness present at ground surface 2.0' SILTY SAND (ML), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)	709.8			12	2-2-2-4 N=4	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)	708			10	7-8-8-11 N=16	
			5			8	23-11-12-19 N=23	
						18	17-25-44-41 N=69	
			10			14	15-26-50/3"	
			15			16	27-48-50/4"	
			20			5	49-50/1"	
			25			11	34-50/4"	
			30			10	40-50/4"	
			35			17	30-50-48 N=98	
		Boring Terminated at 35.5 Feet	674.5					

Boring Log No. NB-22

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7048° Longitude: -74.3099° Depth (Ft.) Elevation: 624 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
		0.6 7" TOPSOIL, Topsoil roughly 7" in thickness present at ground surface 623.4						
1		CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff 622				12	2-3-4-7 N=7	
		2.0						
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - mottled brown/gray	5			13	6-8-12-12 N=20	
						18	10-15-12-17 N=27	
						12	17-19-50/4"	
		9.7 614.3				12	23-31-55-50/2" N=86	
		Boring Terminated at 9.7 Feet						


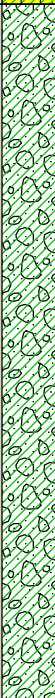

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-07-2025 Boring Completed 07-07-2025

Boring Log No. NB-23

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7056° Longitude: -74.3115° Depth (Ft.)Elevation: 632 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.1 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface 631.9 2.0 CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff, mottling noted 630				12	1-1-6-10 N=7	
2		SILTY SAND WITH GRAVEL (SM), brown, loose to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray 21.5 610.5	5 10 15 20			13 16 12 11 10 13	24-20-30-35 N=50 24-28-26-20 N=54 12-14-19-30 N=33 29-14-14 N=28 22-24-50/4" 20-23-21 N=44	
		Boring Terminated at 21.5 Feet						

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL Boring Started 07-01-2025 Boring Completed 07-01-2025
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	


Boring Log No. NB-24

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7053° Longitude: -74.3113° Depth (Ft.) Elevation: 631 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.1 1" TOPSOIL, Topsoil roughly 1" in thickness present at ground surface 630.9 2.0 CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff, organics noted 629				11	1-3-3-10 N=6	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to gray 21.5 609.5	5 10 15 20			18 16 24	7-5-7-12 N=12 12-12-13-14 N=25 15-15-39-28 N=54	
		Boring Terminated at 21.5 Feet				20	20-36-33 N=69	
						2	18-18-11 N=29	
						12	10-12-14 N=26	

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevation was interpolated from a topographic site plan.

Water Level Observations
 After sitting overnight.

Advancement Method
2 1/4" ID HSA

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Drill Rig
CME 750X

Hammer Type
Automatic



Driller
C. Schindler

Logged by
DOL

Boring Started
06-30-2025



Boring Completed
06-30-2025

Boring Log No. NI -1

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7060° Longitude: -74.3113° Depth (Ft.) Elevation: 634 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.3 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, stiff	633.67 632			19	2-3-7-20 N=10	
2		SILTY SAND WITH GRAVEL (SM), gray, very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)	630			18	48-47-62-65 N=109	
		Boring Terminated at 4 Feet						



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-08-2025 Boring Completed 07-08-2025

Boring Log No. NI -2

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7056° Longitude: -74.3118° Depth (Ft.) Elevation: 633 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' TOPSOIL, Topsoil roughly 3" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, stiff	632.75 631			16	2-4-5-7 N=9	
2		SILTY SAND WITH GRAVEL (SM), brown, dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)	627			24	23-28-18-30 N=46	
		6.0 Boring Terminated at 6 Feet				16	16-23-18-22 N=41	




See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-08-2025 Boring Completed 07-08-2025


Boring Log No. NI -3

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7051° Longitude: -74.3116° Depth (Ft.) Elevation: 630 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.2' TOPSOIL, Topsoil roughly 2" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, stiff	629.8 628			14	2-4-7-12 N=11	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)	626			16	11-11-11-11 N=22	
		Boring Terminated at 4 Feet						



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-08-2025 Boring Completed 07-08-2025

Boring Log No. NI -6

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7050° Longitude: -74.3082° Depth (Ft.) Elevation: 640 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface CLAYEY SILT WITH SAND, GRAVEL (CL-ML), brown, medium stiff to stiff, organics noted	639.7 4.0 636			8	2-2-2-4 N=4	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till)	630.2			5	5-4-7-10 N=11 10-10-13-15 N=23 13-17-28-27 N=45 65-43-49-50/4" N=92	
		Boring Terminated at 9.8 Feet						



See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations  Perched water at 2.8'	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-08-2025 Boring Completed 07-08-2025

Boring Log No. NI -7

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7051° Longitude: -74.3076° Depth (Ft.) Elevation: 644 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (')	Field Test Results	Water Content (%)
1		0.3' 4" TOPSOIL, Topsoil roughly 4" in thickness present at ground surface SANDY SILT (ML), brown, medium stiff, mottled, organics noted	643.7 642			7	1-1-3-5 N=4	
2		SILTY SAND WITH GRAVEL (SM), brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till) - grades to brown-gray	642 10.5 633.5			6 18 16 12	8-10-25-20 N=35 11-12-12-16 N=24 15-18-22-21 N=40 30-63-50/2"	
		Boring Terminated at 10.5 Feet				2	50/2"	

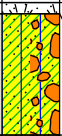
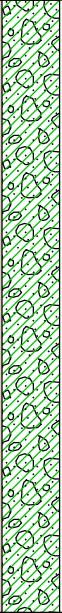
See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No free water observed	Drill Rig CME 750X Hammer Type Automatic Driller C. Schindler Logged by DOL
Notes Elevation Reference: Elevation was interpolated from a topographic site plan.	Advancement Method 2 1/4" ID HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 07-07-2025 Boring Completed 07-07-2025

Boring Log No. B-1

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7061° Longitude: -74.3119° Depth (Ft.) Elevation: 635 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery ()	Field Test Results	Water Content (%)
1		0.3' TOPSOIL , Topsoil roughly 4" in thickness present at ground surface. CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , brown, medium stiff	634.7			12	WH-2-3-4 N=5	
2		2.3' SILTY SAND WITH GRAVEL (SM) , brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till).	632.7			20	17-28-29-31 N=57	
						22	20-17-11-19 N=28	
						19	24-21-26-22 N=47	
						18	23-25-30-47 N=55	
		15.2' Spoon Refusal at 15.2 Feet	619.8			0	50/.2	

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations No measurable groundwater in augers upon completion of sampling.	Drill Rig Ackerman Renegade Hammer Type Automatic Driller C. Schindler Logged by JSH
Notes Elevation Reference: Elevations were interpolated from a topographic site plan. - WH indicates weight of hammer	Advancement Method 2-1/4" HSA Abandonment Method Boring backfilled with auger cuttings upon completion.	Boring Started 04-11-2023 Boring Completed 04-11-2023

Boring Log No. B-2

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7052° Longitude: -74.3099° Depth (Ft.) Elevation: 631 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.3' TOPSOIL , Topsoil roughly 4" in thickness present at ground surface. CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , brown, soft to hard	630.7			8	WH-2-50/.1	
						14	16-10-50/.2	
2		3.5' SILTY SAND WITH GRAVEL (SM) , brown, very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till). - grades gray	627.5	5		12	24-26-28-41 N=54	
						23	37-40-38-49 N=78	
				10		17	26-30-50/.4	
				15		17	32-50-50/.4	
		19.7' Auger Refusal at 19.7 Feet	611.3					

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were interpolated from a topographic site plan.
- WH indicates weight of hammer

Water Level Observations

No measurable groundwater in augers upon completion of sampling.

Drill Rig

Acker Renegade

Hammer Type
Automatic

Driller
C. Schindler

Logged by
JSH

Boring Started
04-14-2023

Boring Completed
04-14-2023

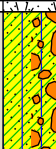

Advancement Method

2-1/4" HSA

Abandonment Method

Boring backfilled with auger cuttings upon completion.

Boring Log No. B-3

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7064° Longitude: -74.3091°	Depth (Ft.)	Elevation: 663 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery ()	Field Test Results	Water Content (%)
1		0.3 TOPSOIL , Topsoil roughly 4" in thickness present at ground surface.	662.7					12	WH-1-3-4 N=4	
		CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , brown, soft to hard						18	17-38-20-22 N=58	
2		4.0 SILTY SAND WITH GRAVEL (SM) , brown, very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till).	659		5			1	44-44-50/.2	
								10	35-50/.3	6.6
					10			2	50/.2	
					15			2	50/.2	
					20			18	20-35-50 N=85	
		21.5 Boring Terminated at 21.5 Feet	641.5							

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes
Elevation Reference: Elevations were interpolated from a topographic site plan.
- WH indicates weight of hammer

Water Level Observations
No measurable groundwater in augers upon completion of sampling.

Drill Rig
Acker Renegade

Hammer Type
Automatic

Driller
C. Schindler

Logged by
JSH

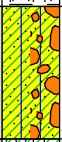


Boring Started
04-11-2023

Boring Completed
04-11-2023

Advancement Method
2-1/4" HSA

Abandonment Method
Boring backfilled with auger cuttings upon completion.

Boring Log No. B-4

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7058° Longitude: -74.3076° Depth (Ft.) Elevation: 685 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
		0.5 TOPSOIL , Topsoil roughly 6" in thickness present at ground surface. 684.5						
1		CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , brown, soft to stiff - mottling noted 4.0 681				12	WH-WH-1-8 N=1	
						20	4-5-7-12 N=12	
			5			4	12-14-12-20 N=26	
		SILTY SAND WITH GRAVEL (SM) , brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till). - grades silty sand				19	14-15-22-18 N=37	9.5
			10					
		- similar, clayey				13	20-50-50/.1	
2		- grades gray	15			8	40-50/.2	
			20					
						13	40-50-50/.1	
			25					
3		24.8 660.2 POSSIBLE BEDROCK , rock fragments in water return while advancing rollerbit between 24.8' and 26.0' indicates possible bedrock. 659 Boring Terminated at 26 Feet						

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were interpolated from a topographic site plan.
- WH indicates weight of hammer

Water Level Observations

Groundwater measurements not taken due to mud rotary drilling method employed.

Drill Rig

Acker Renegade

Hammer Type
Automatic

Driller
C. Schindler

Logged by
JSH

Boring Started
04-12-2023

Boring Completed
04-12-2023



Advancement Method

Mud rotary

Abandonment Method

Boring backfilled with drilling spoils, sand, and/or concrete cylinders upon completion.

Boring Log No. B-5

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7072° Longitude: -74.3058° Depth (Ft.) Elevation: 657 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.3' TOPSOIL , Topsoil roughly 3" in thickness present at ground surface. 2.0' CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , brown, very soft, mottling noted	656.7 655			12	WH-WH-1-4 N=1	
2		SILTY SAND WITH GRAVEL (SM) , brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till). - similar, clayey - grades gray - occasional wet seams noted	30.9 626.1			18 20 22 16 5 4 4 11	9-8-8-9 N=16 8-11-12-14 N=23 12-14-16-20 N=30 23-44-50/.3 50/.4 50/.4 50/.4 33-50/.4	
		Spoon Refusal at 30.9 Feet						

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were interpolated from a topographic site plan.
- WH indicates weight of hammer

Water Level Observations

Groundwater measurements not taken due to mud rotary drilling method employed.

Drill Rig

Acker Renegade

Hammer Type

Automatic

Driller

C. Schindler

Logged by

JSH

Boring Started

04-13-2023

Boring Completed

04-13-2023

Advancement Method

Mud rotary

Abandonment Method

Boring backfilled with drilling spoils, sand, and/or concrete cylinders upon completion.

Boring Log No. B-6

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7072° Longitude: -74.3082° Depth (Ft.) Elevation: 698 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
		0.4 TOPSOIL , Topsoil roughly 5" in thickness present at ground surface. 697.6						
1		2.0 CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , brown, soft, mottling noted 696				12	WH-1-1-2 N=2	
2		SILTY SAND WITH GRAVEL (SM) , brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till). - similar, w/ clustered rock fragments - clayey w/ wet seams - grades silty sand - rock fragments more prevalent - grades gray - occasional wet seams noted	5			12	7-8-7-8 N=15	
						16	12-26-50/.4	
						17	4-16-50/.4	
			10					
						18	16-27-36 N=63	10.4
			15					
						17	22-43-50/.4	
			20					
						11	17-50/.4	
			25					
						14	23-40-50/.2	
			30					
						15	38-50-50/.3	
			35					

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were interpolated from a topographic site plan.
- WH indicates weight of hammer

Water Level Observations

Groundwater measurements not taken due to mud rotary drilling method employed.

Drill Rig

Acker Renegade

Hammer Type

Automatic

Driller

C. Schindler

Logged by

JSH

Boring Started

04-12-2023

Boring Completed

04-13-2023


Advancement Method

Mud rotary

Abandonment Method


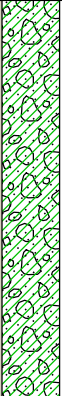
Boring backfilled with drilling spoils, sand, and/or concrete cylinders upon completion.

Boring Log No. B-6

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7072° Longitude: -74.3082° Depth (Ft.)Elevation: 698 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery ()	Field Test Results	Water Content (%)
2		SILTY SAND WITH GRAVEL (SM) , brown, medium dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till). <i>(continued)</i>	40		X	11	31-50/.4	
			45		X	18	26-44-45 N=89	9.0
			50		X	18	24-33-34 N=67	
		51.3Spoon Refusal at 51.3 Feet646.7			X	16	25-37-50/.3	

Notes See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any). See Supporting Information for explanation of symbols and abbreviations.	Water Level Observations Groundwater measurements not taken due to mud rotary drilling method employed.	Drill Rig Acker Renegade
	Advancement Method Mud rotary	Hammer Type Automatic
Notes Elevation Reference: Elevations were interpolated from a topographic site plan. - WH indicates weight of hammer	Abandonment Method Boring backfilled with drilling spoils, sand, and/or concrete cylinders upon completion.	Driller C. Schindler
		Logged by JSH
		Boring Started 04-12-2023
		Boring Completed 04-13-2023

Boring Log No. I-1

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7067° Longitude: -74.3104° Depth (Ft.) Elevation: 644 (Ft.) +/-	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
1		0.3' TOPSOIL , Topsoil roughly 3" in thickness present at ground surface. CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , brown, medium stiff	643.7 642			13	WH-2-3-11 N=5	
2		SILTY SAND WITH GRAVEL (SM) , brown, very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till). - grades gray	642 12.5 631.5			18 22 4	14-29-28-37 N=57 20-23-40-44 N=63 50/.3	
		Practical Auger Refusal at 12.5 Feet				14	20-35-50/.2	

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).
See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes

Elevation Reference: Elevations were interpolated from a topographic site plan.
- WH indicates weight of hammer
- 4" PVC infiltration test pipe set alongside test boring at depth of 12.5'

Water Level Observations

No measurable groundwater in augers upon completion of sampling.

Advancement Method

2-1/4" HSA

Abandonment Method

Boring backfilled with auger cuttings upon completion.

Drill Rig

Acker Renegade

Hammer Type
Automatic

Driller
C. Schindler

Logged by
JSH

Boring Started
04-11-2023

Boring Completed
04-11-2023

Model Layer	Graphic Log	Location: See Exploration Plan Latitude: 42.7056° Longitude: -74.3064°	Depth (Ft.)	Water Level Observations	Sample Type	Recovery (%)	Field Test Results	Water Content (%)
		Depth (Ft.) Elevation: 657 (Ft.) +/- 0.3 TOPSOIL , Topsoil roughly 3" in thickness present at ground surface. 656.7 CLAYEY SILT WITH SAND, GRAVEL (CL-ML) , reddish-brown, very soft to stiff				8	WH-WH-1-3 N=1	
1		4.0 653 SILTY SAND WITH GRAVEL (SM) , brown, dense to very dense, silt and fine sand with embedded coarser sands, gravel, rock fragments, frequent cobbles and boulders (glacial till).	5			19	3-6-8-10 N=14	
2		12.5 644.5 POSSIBLE BEDROCK , very dense, apparent sandstone fragments 644.4 Spoon Refusal at 12.6 Feet	10			20	21-24-12-20 N=36	
3						16	25-27-50/.3	
						5	50/.4	
						1	50/.1	

Notes

Elevation Reference: Elevations were interpolated from a topographic site plan.

- WH indicates weight of hammer
- 4" PVC infiltration test pipe set alongside test boring at depth of 12.0'

Drill Rig
Acker Renegade

Hammer Type
Automatic

Driller
C. Schindler

Logged by
JSH

Boring Started
04-14-2023

Boring Completed
04-14-2023



INFILTRATION TEST RESULTS					
Project: Proposed Distribution Warehouse			Project No.: JB255039		
Location: Schoharie, New York			Tester: C. Schindler		
Test Date: July 17, 2025			Weather: 85° F, trace precipitation		
Test Location	Test Depth (feet)	Trial No.	Water Drop (inches)	Elapsed Time (hours)	Infiltration Rate (inches/hour)
NI-1	2.5	1	0	1.0	0
		2	0	1.0	0
		3	0	1.0	0
		4	0	1.0	0
		NOTE: Rate of final trial: nil in/hr, Avg. of four trials: nil in/hr			
NI-2	4.0	1	0	1.0	0
		2	0	1.0	0
		3	0	1.0	0
		4	0	1.0	0
		NOTE: Rate of final trial: nil in/hr, Avg. of four trials: nil in/hr			
NI-3	2.0	1	0	1.0	0
		2	0	1.0	0
		3	0	1.0	0
		4	0	1.0	0
		NOTE: Rate of final trial: nil in/hr, Avg. of four trials: nil in/hr			

Notes:

1. Testing was conducted in general accord with the "Infiltration Testing Requirements" outlined in Appendix D of the New York State Stormwater Management Design Manual.
2. The infiltration test was located alongside a companion test boring numbered correspondingly.

Soil Classification at Test Depth:

Test Location NI-1: Dense glacial till

Test Location NI-2: Dense glacial till

Test Location NI-3: Medium dense glacial till

INFILTRATION TEST RESULTS					
Project: Proposed Distribution Warehouse			Project No.: JB255039		
Location: Schoharie, New York			Tester: C. Schindler		
Test Date: July 17, 2025			Weather: 85° F, trace precipitation		
Test Location	Test Depth (feet)	Trial No.	Water Drop (inches)	Elapsed Time (hours)	Infiltration Rate (inches/hour)
NI-6	8.0	1	0	1.0	0
		2	0	1.0	0
		3	0	1.0	0
		4	0	1.0	0
		NOTE: Rate of final trial: nil in/hr, Avg. of four trials: nil in/hr			
NI-7	8.0	1	0	1.0	0
		2	0	1.0	0
		3	0	1.0	0
		4	0	1.0	0
		NOTE: Rate of final trial: nil in/hr, Avg. of four trials: nil in/hr			

Notes:

1. Testing was conducted in general accord with the "Infiltration Testing Requirements" outlined in Appendix D of the New York State Stormwater Management Design Manual.
2. The infiltration test was located alongside a companion test boring numbered correspondingly.

Soil Classification at Test Depth:

Test Location NI-6: Dense glacial till

Test Location NI-7: Dense glacial till

Supporting Information






Contents:

General Notes

Unified Soil Classification System

Note: All attachments are one page unless noted above.

General Notes

Sampling	Water Level	Field Tests
 Standard Penetration Test	 Water Initially Encountered  Water Level After a Specified Period of Time  Water Level After a Specified Period of Time  Cave In Encountered Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	N Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer UC Unconfined Compressive Strength (PID) Photo-Ionization Detector (OVA) Organic Vapor Analyzer

Descriptive Soil Classification
Soil classification as noted on the soil boring logs is based Unified Soil Classification System. Where sufficient laboratory data exist to classify the soils consistent with ASTM D2487 "Classification of Soils for Engineering Purposes" this procedure is used. ASTM D2488 "Description and Identification of Soils (Visual-Manual Procedure)" is also used to classify the soils, particularly where insufficient laboratory data exist to classify the soils in accordance with ASTM D2487. In addition to USCS classification, coarse grained soils are classified on the basis of their in-place relative density, and fine-grained soils are classified on the basis of their consistency. See "Strength Terms" table below for details. The ASTM standards noted above are for reference to methodology in general. In some cases, variations to methods are applied as a result of local practice or professional judgment.

Location And Elevation Notes
Exploration point locations as shown on the Exploration Plan and as noted on the soil boring logs in the form of Latitude and Longitude are approximate. See Exploration and Testing Procedures in the report for the methods used to locate the exploration points for this project. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

Strength Terms				
Relative Density of Coarse-Grained Soils (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		Consistency of Fine-Grained Soils (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Relative Density	Standard Penetration or N-Value (Blows/Ft.)	Consistency	Unconfined Compressive Strength Qu (tsf)	Standard Penetration or N-Value (Blows/Ft.)
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

Relevance of Exploration and Laboratory Test Results
Exploration/field results and/or laboratory test data contained within this document are intended for application to the project as described in this document. Use of such exploration/field results and/or laboratory test data should not be used independently of this document.

Unified Soil Classification System

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification	
				Group Symbol	Group Name ^B
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	Cu ≥ 4 and 1 ≤ Cc ≤ 3 ^E	GW	Well-graded gravel ^F
			Cu < 4 and/or [Cc < 1 or Cc > 3.0] ^E	GP	Poorly graded gravel ^F
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}
			Fines classify as CL or CH	GC	Clayey gravel ^{F, G, H}
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	Cu ≥ 6 and 1 ≤ Cc ≤ 3 ^E	SW	Well-graded sand ^I
			Cu < 6 and/or [Cc < 1 or Cc > 3.0] ^E	SP	Poorly graded sand ^I
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G, H, I}
			Fines classify as CL or CH	SC	Clayey sand ^{G, H, I}
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	PI > 7 and plots above "A" line ^J	CL	Lean clay ^{K, L, M}
			PI < 4 or plots below "A" line ^J	ML	Silt ^{K, L, M}
		Organic:	$\frac{LL\ oven\ dried}{LL\ not\ dried} < 0.75$	OL	Organic clay ^{K, L, M, N} Organic silt ^{K, L, M, O}
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line	CH	Fat clay ^{K, L, M}
			PI plots below "A" line	MH	Elastic silt ^{K, L, M}
		Organic:	$\frac{LL\ oven\ dried}{LL\ not\ dried} < 0.75$	OH	Organic clay ^{K, L, M, P} Organic silt ^{K, L, M, Q}
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat
^A Based on the material passing the 3-inch (75-mm) sieve. ^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name. ^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay. ^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay. ^E $Cu = D_{60}/D_{10}$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ ^F If soil contains ≥ 15% sand, add "with sand" to group name. ^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM. ^H If fines are organic, add "with organic fines" to group name. ^I If soil contains ≥ 15% gravel, add "with gravel" to group name. ^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay. ^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant. ^L If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name. ^M If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name. ^N PI ≥ 4 and plots on or above "A" line. ^O PI < 4 or plots below "A" line. ^P PI plots on or above "A" line. ^Q PI plots below "A" line.					

