
GEOTECHNICAL ENGINEERING STUDY REPORT

PROPOSED COMMERCIAL CAMPUS AT FIELDS CORNER SOUTHEAST, PUTNAM COUNTY, NEW YORK

Prepared For:

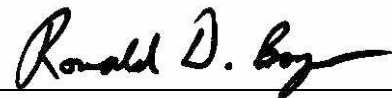
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INTRODUCTION

We have completed our geotechnical engineering study for the proposed commercial campus development in Southeast, Putnam County, New York. The purpose of the investigation was to: 1) research and review available site information; 2) obtain subsurface information by drilling borings and excavating test pits at accessible site areas; and 3) provide recommendations for site preparation, earthwork, foundation design, site retaining walls, and other geotechnical aspects of construction for the proposed development.

No environmental investigation or sampling was performed as part of this work.

REPORT DATUM

Elevations provided in this report are approximate and are based on the elevations provided in drawings entitled "Existing Conditions Map A through F – Commercial Campus at Fields Corner" dated 11/06/2017, last revised 1/04/2021, prepared by JMC Planning, Engineering, Landscaping, Architecture & Land Surveying, PLLC. Unless noted otherwise, elevations given herein are referenced to the above-referenced drawings, which refer to an unknown datum and to surveys prepared by Badey & Watson, Surveying and Engineering, P.C.

For the purposes of our evaluation, we have referenced the survey and elevations used in the previous geotechnical engineering report for the site prepared by SESI Consulting Engineers, and in the current project drawings prepared by JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC, which are discussed below. We understand that a new survey is being completed. Our recommendations provided herein should be reviewed against the latest survey and project drawings upon completion.

SITE DESCRIPTION

The site is located in the town of Southeast, New York, and is bound by:

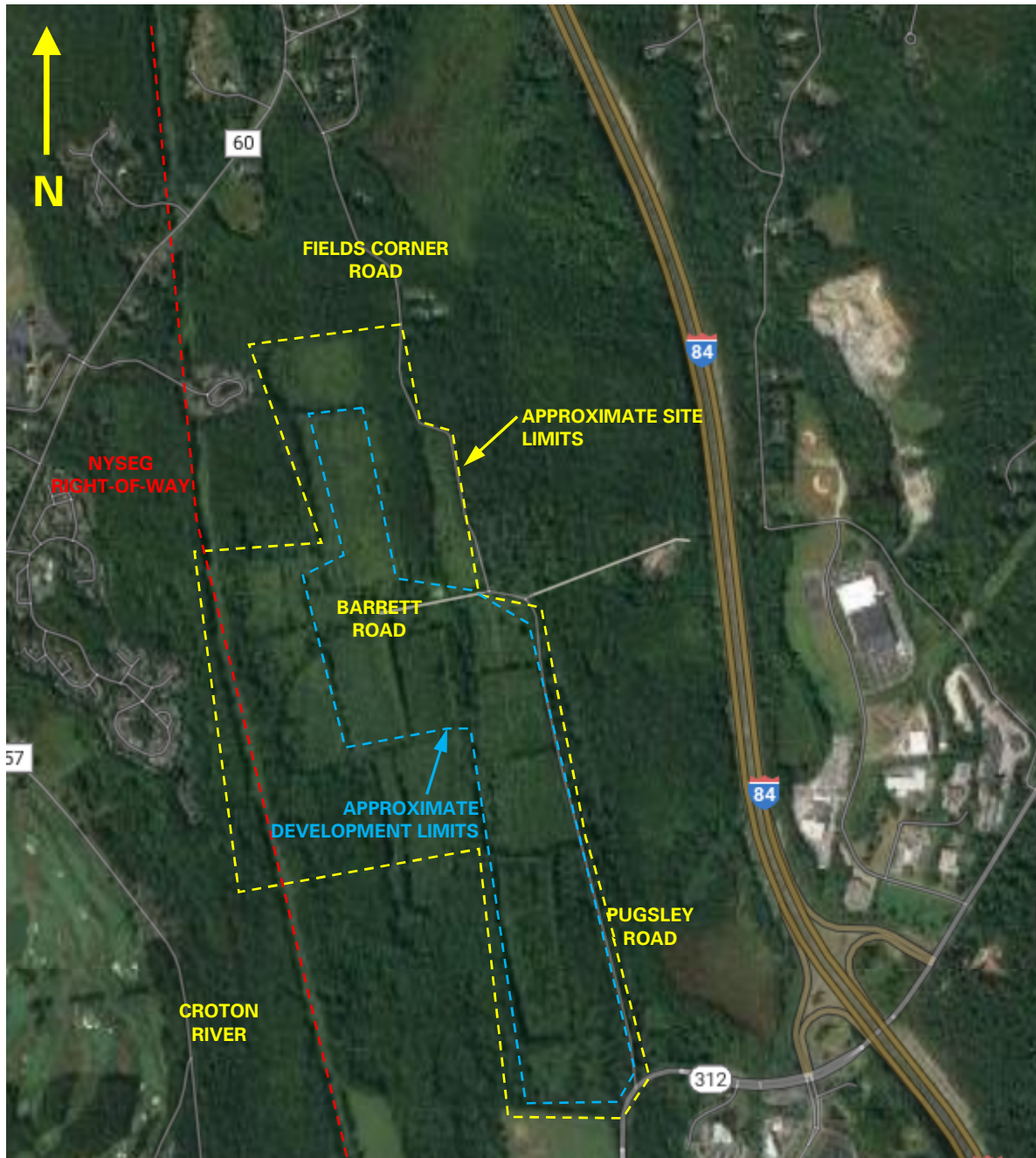
- Fields Corner Road, Pugsley Road and wetland areas and Route 84 beyond to the east.
- Route 312 and wooded areas to the south.
- Wooded areas and the Croton River beyond to the west.
- Wooded areas to the north.

An aerial photograph of the property is provided on the following page and a site location plan is provided as Figure 1.

The majority of the site is currently occupied by undeveloped, wooded or vegetated areas. A New York State Electric and Gas (NYSEG) right-of-way runs north to south through the western portion of the site. Barrett Road (unpaved) runs east to west through the center portion of the site. A stream with associated wetland areas runs north to south through the site. Portions of

the site are also designated as wetland areas. Several walking trails and rock walls are also located within the site.

Surface grades at the site vary significantly from elevation (el) 540 at the southern portion (near Route 312) to el 530 at the western portion to el 700 at the eastern portion and el 630 at the northern portion.



Aerial View of the Site (Google)

PROPOSED DEVELOPMENT

Based on the drawings titled "Overall Grading Plan" and "Grading Plan A through E", dated 11/6/2017 and last revised 2/1/2021, prepared by JMC Planning, Engineering, Landscape Architecture & Land Surveying, PLLC (JMC), the proposed development is to consist of the following:

- Proposed Warehouse A - Construction of an approximate 303,100 ft² warehouse building with a finished floor elevation (FFE) of el ±649. Fills up to approximately 5 feet and cuts up to approximately 20 feet are proposed to achieve final grades.
- Proposed Warehouse B - Construction of an approximate 630,000 ft² warehouse building with a finished floor elevation (FFE) of el ±672.5. Fills up to approximately 27 feet and cuts up to approximately 18 feet are proposed to achieve final grades.
- "Fill" and "cut" retaining walls will be required throughout the site. Proposed walls range in height from 3 feet to 10 feet. Tiered retaining walls consisting of 2 or 3-tiers of 10-foot-high walls are also proposed, to achieve grade changes of up to approximately 33 feet.
- Construction of an above-grade 300,000-gallon water tank at approximate el 664 and water treatment building at approximate el 663.5.
- Construction of on-site wastewater treatment systems (OWTS).
- Construction of five (5) infiltration basins (approximate 89,000 ft² combined bottom of basin footprint).
- Construction of five (5) detention basins (approximate 52,000 ft² combined bottom of basin footprint).
- Construction of new security booths.
- Construction of access drives and on-grade parking lots for cars and tractor-trailers.
- Construction of loading docks.

Based on the above-referenced grading plans prepared by JMC, fills up to approximately 28 feet and cuts up to approximately 22 feet are proposed to achieve final grades throughout the site.

At the time of this report, we have not been provided information regarding the anticipated structural loads for the proposed structures. Based on our experience, we have assumed typical column and floor loads associated with similar one-story warehouse structures for our analysis. Once it becomes available, we should review the final structural loading information for each building so that we may evaluate and modify, if necessary, the recommendations provided herein.

REVIEW OF AVAILABLE INFORMATION

We reviewed historic topographic maps, regional geologic information, and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the site vicinity. Pertinent information obtained from the above documents is summarized in the following paragraphs.

Site History

The 1892 historic United States Geological Survey (USGS) map indicates the southern portion of the site is located within historic marshland. The two streams are shown in the approximate same locations they exist today. A copy of the USGS map is provided as Figure 2.

Historic Google Earth aerial imagery shows small structures along Barrett Road and east of Pugsley Road and agricultural fields, between 1993 and 2004.

Regional Geology

According to the Surficial Geologic Map of New York, the surficial geology is till consisting of clay, silt-clay, boulder clay. A copy of the surficial geology map is provided as Figure 3A.

According to the Geologic Map of New York, the bedrock at the northern portion of the site consists of biotite-quartz-plagioclase gneiss. The bedrock at the southern portion of the site consists of amphibolite, pyroxenic amphibolite and hornblende gneiss. A thrust or reverse fault is also depicted to the northeast of the site. A copy of the geologic map is provided as Figure 3B.

According to the USGS Karst Map, carbonate rocks buried beneath less than 50 feet of glacially derived insoluble sediment are mapped approximately 1 mile to the southwest of the site. A copy of the USGS Karst Map is provided as Figure 4.

Flood Map

According to the flood insurance rate maps (Map No. 36079C0142E and 36079C0134E, effective date March 4, 2013) published by the Federal Emergency Management Agency (FEMA), the site lies within "Zone X – no shading", which is defined as "areas determined to be outside the 0.2% annual chance floodplain". Copies of the referenced flood insurance rate maps are provided as Figure 5.

PREVIOUS GEOTECHNICAL REPORT BY OTHERS (SESI)

We reviewed the Geotechnical Investigation Report prepared by SESI Consulting Engineers (SESI) dated 12 June 2018 and last revised 26 June 2020. Copies of the SESI logs and locations plans are provided as Attachment A and the key findings from this report are summarized below:

- Several investigations consisting of drilling twenty-nine (29) borings, excavating one hundred forty-four (144) test pits and performing ninety-three (93) infiltration tests were performed between 2018 and 2020.
- Topsoil thickness was reported to range from approximately 2 to 18 inches. A 1-inch-thick asphalt layer underlain by a 4-inch-thick to 8-inch-thick gravel subbase was reported in the borings performed in the roadway.
- A 2-foot-thick to 8-foot-thick fill layer was encountered in three test pits in the southern portion of the site along Pugsley Road. The fill was reported to generally consist of sandy silt. Abandoned utilities and a former strip footing were encountered in the fill layer in the test pits.
- Natural soils were encountered directly beneath the surficial materials and fill, where encountered, and were reported to consist of light brown clayey silt or sand with varying amounts of gravel, cobbles and boulders. The sandy soils were described as medium dense and the silty soils were described as medium stiff to hard. Cobbles and boulders generally increased in frequency with depth.
- Competent bedrock was not encountered within the termination depths of the borings and test pits. Decomposed to weathered rock identified as Mica Schist was encountered in a few test pits at depths ranging from 2 feet to 5 feet below existing surface grade.
- Groundwater was reported in some test pits at depths ranging from 1.5 feet to 10 feet below existing surface grade. Groundwater was reported in the building and roadway borings at depths ranging from 5 feet to 15 feet below existing surface grade. In the proposed septic and stormwater areas, the groundwater was reported at depths between 1.5 feet and 10 feet below existing surface grade. Three test pits were left open for a 24-hour period for groundwater observation. Water was measured to be approximately 0.25 feet to 1 foot below existing surface grade at the end of the 24-hour period.
- The reported unfactored percolation rates for the proposed stormwater basins generally ranged between 0.75 inches per hour to 31 inches per hour. The percolation rates for the proposed septic fields generally ranged between 2 minutes per inch to 120 minutes per inch.

SUBSURFACE INVESTIGATION FOR THIS STUDY

The geotechnical field investigation for this study consisted of the following:

- Drilling 5 borings, identified as AB-1 through AB-5, within the proposed Building A footprint.

- Drilling 12 borings, identified as BB-1 through BB-12, within the proposed Building B footprint.
- Drilling 34 borings, identified as SLB-1 through SLB-34, within proposed site areas and along proposed retaining wall alignments.
- Installing 4 temporary groundwater level observation wells.
- Excavating 20 test pits, identified as LTP-1 through LTP-20, within the proposed building footprints and within proposed site areas.

The locations of all Langan borings, groundwater level observation wells and test pits, and the SESI borings and test pits are shown in Figure 6. Borings and test pits were performed in areas that were accessible at the time of our investigation.

Permission to access the site was obtained from Lincoln Equities Group, LLC prior to performing our field work. The One-Call utility mark-out request was performed by the drilling and excavation subcontractors prior to initiating the field work.

The boring and test pit locations were laid out by our field engineer using handheld GPS equipment, and surface elevations at the boring and test pit locations were taken from the plan titled "Boring and Test Pit Location Plan" dated 6/25/2020 prepared by SESI.

The borings and test pits were completed under the full-time observation of a field engineer from our office and under the direct supervision of our project Professional Engineer. Our field engineer maintained logs of the explorations, classified soil and rock encountered, and obtained representative material samples.

Borings

The Building A borings, identified as AB-1 through AB-5, and the Building B borings, identified as BB-1 through BB-12, extended to depths between approximately 20 feet and 45 feet below surface grades. The site borings, identified as SLB-1 through SLB-34, extended to depths between approximately 15 feet and 30 feet below surface grades. Borings were drilled by Craig Geotechnical Drilling, Co., Inc. (Craig) using an ATV-mounted drill rig with mud-rotary drilling techniques.

Soil samples were obtained and Standard Penetration Tests (SPTs) were performed using a standard 2-inch outside-diameter split-spoon sampler driven by 140-lb safety or automatic hammers in accordance with ASTM D1586. Sampling and SPTs were performed continuously in the upper 12 feet and at 5-foot intervals thereafter. Rock was cored for 10 feet with a NX-sized core barrel, where encountered. The boreholes were backfilled with soil cuttings and grouted using bentonite.

The soil samples were classified in accordance with the Unified Soil Classification System (USCS). The soil samples were sent to our storage facility in Whippany, NJ for further classification and laboratory testing. The samples will be stored for 16 months from the date of investigation.

Groundwater Level Observation Wells

Four temporary groundwater level observation wells were installed in completed boreholes BB-2, BB-7, SLB-19 and SLB-28. The wells consisted of 15-foot-long to 20-foot-long, 2-inch-diameter (solid and screened) PVC pipes and groundwater levels were monitored throughout the field investigation.

Test Pits

The exploratory test pits, identified as LTP-1 through LTP-20, were excavated throughout the proposed building footprints and site areas. All test pits were excavated by CG Contracting using a Kobelco SK 140 SR LC excavator. The test pits extended to depths of between approximately 12 feet and 15 feet below surface grades. The test pits were backfilled with the excavated materials upon completion.

Laboratory Testing

Soil samples from the 2021 Langan investigation were classified and examined in the field by a Langan geotechnical engineer. Representative samples were selected and tested to determine engineering properties and to confirm field classifications. The laboratory test results from the Langan investigation are included in Appendix F. Laboratory test results from the SESI investigation are provided in Attachment A. The laboratory tests from all subsurface investigations (Langan and SESI) included:

- Organic Content Determinations
- Natural water content determinations (ASTM D2216)
- Fines content passing No. 200 sieve (ASTM D1140)
- Atterberg Limit Determinations (ASTM D4318)
- California Bearing Ratio (CBR) Tests (ASTM D1883)
- Moisture Density (Modified Proctor) Tests (ASTM D1557)
- Expansion Index Tests (D4829)

SUBSURFACE CONDITIONS

Based on the results of the borings and test pits performed for this study and the previous investigations, the site subsurface conditions generally consist of a surface layer of topsoil overlying successive strata of natural soils, glacial till, and bedrock. Fill was encountered at localized areas of the site.

The following sections describe the encountered strata and observed groundwater conditions. Simplified, graphical presentations of the subsurface conditions encountered within the Building A borings and Building B borings are presented in Table 1A and Table 1B, respectively. Simplified subsurface profiles within the proposed building footprints are provided as Figure 7A and Figure 7B.

Topsoil

Topsoil generally consisting of brown to dark brown sand or silt with root fibers and varying amounts of gravel and clay was encountered in the majority of the borings and test pits. The topsoil was typically observed to range in thickness from approximately 6 inches to 24 inches. The SESI report indicated topsoil thickness ranged from approximately 2 inches to 18 inches.

Laboratory testing was performed on several samples from the topsoil and soils immediately below the topsoil to determine the organic content. The results are summarized in the table below.

Typical Results of Organic Content Determinations

Depth	Organic Content (%)
0 ft to 2 ft	2.0 to 6.6
2 ft to 4 ft	1.0 to 1.1
4 ft to 6 ft	0.7

Fill

No fill materials were encountered in the Langan borings and test pits. During the SESI investigation, a 2-foot-thick to 8-foot-thick fill layer was encountered in three test pits in the southern portion of the site along Pugsley Road. The fill generally consisted of sandy silt. Abandoned utilities and a former strip footing were encountered in the fill layer in the test pits. A 6-inch-thick buried topsoil layer was encountered in SESI test pit TP-301 at 4.5 feet below existing surface grade.

Natural Soils (Clay/Silt/Sand)

A stratum of natural soils consisting of alternating layers of brownish gray clay, silt and sand with varying amounts of gravel, cobbles, and boulders was encountered beneath the topsoil layer in

all borings and test pits. The clayey, silty and sandy soils were first encountered at depths ranging from approximately 0.5 feet to 2 feet below existing grades. Boulders encountered in this layer were observed to be between approximately 1 foot to 3 feet thick.

The sandy soils were typically found to be loose to very dense as evidenced by SPT N-values ranging from 2 blows/foot to 78 blows/foot, excluding split spoon refusal values (average SPT N-value of 18 blows/foot). The clay and silt were found to be very soft to very stiff as evidenced by SPT N-values ranging from weight of hammer to 30 blows/foot, and typically above 5 blows/foot (average SPT N-value of 15 blows/foot). The unconfined compressive strengths (q_u values) as measured by the field pocket penetrometer for the clay samples, varied typically between 1,000 pounds per square foot (psf) and 7,000 psf.

The natural soils stratum was found to range in thickness from approximately 4 feet to 30 feet.

These natural soils were classified as CL, ML, SM and SC in accordance with USCS. Typical index properties determined from laboratory testing performed on these natural soils are provided in the table below.

Typical Results of Identification Tests (Natural Soils)

	Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Fines Content (%)	USCS Class.
Sand	12 - 14	18 – 21*	13 - 17*	1 - 7*	35 - 50	SC, SM
Clay	11 - 15	22 - 25	14 - 15	7 - 11	50 - 61	CL

* - Atterberg limit determinations performed on fine-grained portion of the sample.

Glacial Till

Glacial till generally consisting of grayish brown silt or clay with varying amounts of sand, gravel, cobbles and boulders was encountered below the natural soils in most of the borings and test pits. The top of the glacial till layer was encountered at depths ranging between approximately 4 feet to 20 feet below existing grades, corresponding to approximate el 615 to el 680. Boulders encountered in this layer were observed to be between approximately 0.5 feet to 4 feet thick.

The glacial till was typically found to be medium dense to very dense as evidenced by SPT N-values ranging from 13 blows/foot to refusal (greater than 100 blows/foot) (average SPT N-value of 40 blows/foot, excluding refusal values). The unconfined compressive strengths (q_u values) as measured by the field pocket penetrometer varied typically between 3,000 psf and 9,000 psf.

Typical index properties determined from laboratory testing performed on one sample from the glacial till layer are provided in the table below.

Results of Identification Tests (Glacial Till)

	Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	USCS Class.
Till	9.3	22	14	8	CL

All borings and test pits where glacial till was encountered were terminated in this layer.

Bedrock

A schist rock strata was encountered and cored for 10 feet in boring BB-1. The top of the schist rock was encountered at approximate el 625 (or about 25 feet below surface grade). The rock was typically described as dark gray to bluish gray micaceous schist. The recorded total rock core recovery values ranged between 85% and 87%, and the rock quality designation (RQD) values ranged between 75% and 82%.

During the SESI investigation, competent bedrock was not encountered within the termination depths of the borings and test pits. Decomposed to weathered rock identified as Mica Schist was encountered in a few test pits in proposed site areas north of the proposed Building A and west of the proposed Building B.

In the test pits north of Building A, TP-4A and TP-3A, SESI identified “weathered rock or boulder” and “possible weathered rock or bedrock” at depths ranging between approximately 3 feet and 7.5 feet, corresponding to approximate el 639.5 to el 644.

In the test pits west of Building B, TP-18B and TP-20A, SESI identified “silt with weathered Mica Schist” and “decomposed Mica Schist” at a depth of approximately 5 feet, corresponding to approximate el 619 to el 629.

Groundwater

Groundwater levels were monitored in the observation wells installed in completed boreholes BB-2, BB-7, SLB-19 and SLB-28. The stabilized groundwater levels in the wells are summarized in the table below.

Observation Well	Approximate Top of Well Elevation	Depth to Stabilized Groundwater Level	Stabilized Water Level Elevation
BB-2	El 666	8 feet	El 658
BB-7	El 669.5	14.5 feet	El 655
SLB-19	El 662	2.5 feet	El 659.5
SLB-28	El 630.5	12.5 feet	El 618

Groundwater conditions were also monitored during the excavation of the test pits. Where encountered, the groundwater levels were observed to be typically between approximately 4 feet to 10 feet below surface grades (or approximate el 629 to el 676).

Groundwater levels are subject to seasonal fluctuations. A summary of the Langan groundwater level measurements in the observation wells is provided in Table 2A. A summary of the groundwater level observations in the test pits is provided in Table 2B.

EVALUATION AND RECOMMENDATIONS

Our geotechnical recommendations for earthwork, foundation and slab support, and other geotechnical aspects of construction are presented below.

Site Clearing and Preparation

Prior to commencement of grading or fill placement, any miscellaneous trash, debris, or other unsuitable materials should be removed from the site. All debris and vegetation should be properly disposed off-site in accordance with applicable regulations.

Clearing and grubbing of all trees (including removal of any associated root systems) and vegetation designated for removal should be performed.

We recommend the following guidelines for removal of the topsoil within the project site:

- Topsoil should be completely stripped from the proposed warehouse building footprints and 10 feet beyond the building limits.
- Topsoil should be completely stripped in proposed pavement areas receiving less than 5 feet of new fill.

- In pavement areas receiving more than 5 feet of new fill to raise grades, the topsoil layer can be left in place subsequent to removal of vegetation and root mats and performance of subgrade preparation procedures recommended below.
- The topsoil should be stockpiled and protected from erosion. Topsoil should be evaluated by the Landscape Architect for re-use in landscape areas.

Topsoil stripped from the proposed development areas can be mixed with the cut natural soils (using a tentative 50/50 blend) and used as fill in pavement areas as determined by a qualified geotechnical engineer. The proportions of topsoil and natural soils will be dependent on the amount of organics present in the topsoil layer. The resulting mixture should contain less than 3% (by weight) organics. Topsoil containing roots and a significant amount of organics should not be mixed to create fill. This mixture containing topsoil should not be used as fill within 3 feet of proposed pavement finished grades.

If necessary to help balance the site from an earthwork perspective, the reuse of topsoil as fill or in areas where topsoil has been left in-place as described herein requires that a sufficient grubbing and root raking program be implemented to remove the roots and vegetative matter from the soils. In addition, the Contractor will be required to completely remove tree stumps and associated root mass.

Rock walls present throughout the site should be removed prior to placing fill. Specific requirements regarding boulder fill are further discussed in the Engineered Fill section herein.

All clearing and stripping activities should be performed in strict accordance with the approved soil erosion and sediment control plan prepared for the project. All site preparation work should be performed in accordance with any environmental regulations and requirements established for the site as well as all Local, State, and Federal regulations. Dust control measures should be implemented during construction to limit the generation of airborne particulates.

All work should also be performed so as not to adversely impact neighboring structures, adjacent roadways, and utilities to remain. Protection of these elements should be provided as necessary during the course of all construction activities at the site.

Subgrade Preparation

After performing the aforementioned site preparation work, and prior to placing compacted fill to raise site grades or constructing finished surfaces in on-grade supported areas (building slabs, pavement, and sidewalks), all site soil within the proposed development areas should be proofrolled with three (3) overlapping coverages of a vibratory roller having a minimum static drum weight of 5 tons. Additional proofrolling coverages should be performed in any areas deemed necessary based on observations made by a qualified inspecting geotechnical engineer. Soft areas identified during proofrolling should be excavated and replaced with approved, compacted fill.

If subgrade areas become wet and disturbed, the surficial soils may no longer be suitable for use in fill placement unless sufficiently dried. Should soft or unsuitable subgrade soils be observed as identified by the inspecting Geotechnical Engineer during construction and sufficient time to dry the material is not feasible, these materials should be excavated and replaced with approved compacted backfill.

Prior to constructing finished surfaces (building slabs, asphalt and concrete pavement), we also recommend that the subbase be proof-rolled using a fully loaded tri-axle dump truck in the presence of a qualified geotechnical engineer. Soft areas identified during proof-rolling should be excavated and replaced with approved, compacted fill.

We also recommend that the site be graded and drainage swales and berms be used to convey surface runoff away from fill areas. During the cutting and filling, construction equipment should follow consistent traffic patterns throughout the site to minimize disturbance of the subgrade during wet periods.

The Contractor's ability to successfully work the site soils, combined with the weather conditions and the time of year during the site preparation and filling phases of construction, will have a significant impact on timely project completion. Care should be taken to prevent disturbance of the proof-rolled areas and softening of these materials prior to finished construction. At a minimum, all subgrade areas should be temporarily sloped and sealed by rolling with a smooth drum roller at the end of each working day, as necessary, so as to maximize surface water runoff, and minimize potential ponding and infiltration.

For pavement and building slab areas, the aggregate subbase material can be placed as soon as practical upon completing site grading and subgrade preparation work as a protective layer. Prior to floor slab construction and pavement installation, this aggregate subbase layer will have to be repaired, re-graded, and re-compacted. Alternatively, a 6 to 12-inch-thick layer of processed aggregate or imported sand and gravel mixture can be placed as a working platform over the building pad footprint prior to foundation and utility construction. The additional aggregate would then be placed above the working platform for slab subbase immediately prior to constructing the warehouse slabs.

Filling of Low-Lying Areas

Low-lying areas of the site are susceptible to ponding and are anticipated to contain soft soils and sediment. If any low-lying areas are to be filled, we expect that these areas will require removal of wet/soft organic soils and sediment, and replacement with approved, compacted fill.

The Contractor should expect to have to dewater any low-lying areas holding water prior to preparing the subgrade in these areas and placing and compacting fill material.

Following removal of any encountered wet/soft organic soils, a layer of crushed stone can also be placed at the bottom of the excavation prior to placing and compacting fill material. The bottom

of the excavation may consist of fine-grained soils that will be sensitive to moisture. Care should be taken to prevent softening of the fine-grained soils prior to fill placement. We recommend that geotextile fabric be placed at the bottom of the excavation prior to placing crushed stone and that it be wrapped completely around the stone and aggregate.

The excavations should then be backfilled in accordance with recommendations provided in the Engineered Fill section of this report.

Soil Stabilization

Fine-grained soils (silt and clay) or coarse-grained soils with appreciable amounts of fines will be encountered at the proposed building and pavement subgrade throughout the site and will be used as fill throughout the site.

To improve workability, reduce moisture, and increase the strength of these subgrade soils for supporting construction equipment, the Contractor can stabilize the soils by using either Portland cement or Lime additives.

Cement stabilization and lime stabilization involve in-place mixing of the clayey soils with an appropriate amount of cement or lime, followed by proper compaction and curing time. The stabilized soil will result in a reduced moisture content and improved workability of the soil. Portland cement additives can be used to improve the properties of both silt and clay based soils; lime additive treatment requires the presence of clay with which to react to improve the clay based soil properties, and is not effective in improving primarily silt based fine grained soils.

The percentage of cement or lime by weight per square yard of soil should be determined by the Contractor and may be modified by the Geotechnical Engineer if field conditions warrant. All lime used for this stabilization should be high-calcium lime, containing a minimum 90 percent active lime content by weight. The Contractor should use approved single or multiple pass rotary speed mixers to uniformly mix soil, cement, or lime, and water to the required depth. Stabilization should be performed only when ambient air temperature is above 40 degrees Fahrenheit, and when the soil is not frozen. Do not perform this work during wet or unsuitable weather, or when freezing weather is anticipated within 24 hours of mixing/compaction.

The cement-soil and lime-soil mixtures should be initially compacted with a sheeps-foot roller, and then completed with surface compaction using a smooth drum roller to seal the fill material.

The stabilized soil should be allowed to properly cure and gain adequate strength prior to placing successive lifts of fill or traversing the area with construction equipment. Curing may take several days (typically 3 to 5 days) depending on soil type, initial moisture content, and weather conditions. The Contractor should conduct a proofroll on the top of each lift using a fully-loaded tandem dump truck for observation by a qualified Geotechnical Engineer prior to the placement of the next successive lift.

Recommended Additive Quantities for Stabilization:

- Cement or Lime: 4% to 8% (by weight)

A laboratory and field cement and/or lime test program should be performed prior to construction if such stabilization measures will be utilized to confirm proper admixture percentages and construction means and methods.

Excavation

Based on the latest JMC grading plans, we understand that cuts up to approximately 22 feet will be required to achieve proposed grades. In addition, excavations below existing grades will be necessary to reach the bearing elevations for footings and utilities.

Very dense soil with cobbles and boulders should be expected to be encountered during excavation. It may be necessary for the Contractor to use a ripper blade to loosen up the soil to assist in making cuts. In addition, the Contractor should be prepared to break large boulders using a hydraulic hoe-ram.

Engineered Fill

Reuse of Existing On-site Soils

The on-site soils having a maximum particle size of 6 inches in diameter can be used as compacted fill to raise grades or backfill foundation and utility excavations. The use of larger aggregate should only be done as approved by a qualified geotechnical engineer based on inspection of conditions encountered during construction.

The majority of the on-site soils have a relatively high percentage of fines and are expected to be difficult to handle, place, and compact if they become excessively wet. The Contractor should make provisions to dry portions of the excavated material such as by discing/air drying and soil stabilization as necessary, prior to compaction to an acceptable moisture content as determined by the Geotechnical Engineer.

Excavated materials which are at acceptable moisture contents should be reused as fill as soon as possible to minimize exposure to weather. Stockpiled materials that are planned for reuse should be protected or sealed by the Contractor to keep the materials from becoming wet.

The on-site soil contains cobbles and boulders. On-site crushing is anticipated to be necessary to create a suitable gradation for this material. We recommend that the maximum particle size in the fill being placed not exceed 6 inches in diameter. However, the use of larger aggregate can be done as approved by a qualified geotechnical engineer based on inspection of conditions encountered during construction. The cobbles and boulders should be placed in a manner to

avoid “nesting” and formation of voids. Any voids that do occur between cobbles and boulders during placement should be completely filled with smaller gravel/cobble fill and soil.

Boulder fill (maximum dimension of 3 feet) should not be placed within the following:

- 3 feet of proposed pavement subgrade level.
- 3 feet of the proposed footing subgrade level.
- 3 feet of ground surface in landscaped areas.
- 2 feet of proposed utility inverts.

Imported Fill

Imported fill should consist of a relatively well-graded mixture of sand and gravel with not more than 15 percent (by weight) finer than the No. 200 sieve. The use of any imported fill containing a higher percentage of fines would need to be evaluated by a qualified geotechnical engineer during construction.

Suitable fill should be free of organics and other deleterious materials. Any approved imported fill should contain no contamination in exceedance of the applicable New York State DEC standards. In addition, the fill material should not originate from any site subject to federal or state environmental regulatory requirements for site remediation or permitting of hazardous or petroleum waste or material including but not limited to underground storage tanks, state hazardous waste sites, brownfield sites, New York City ‘E’ designated sites, national priority list sites, state voluntary cleanup, or landfill sites. The Contractor should provide documentation of compliance prior to delivery of any fill to the site.

Grain size distribution and Modified Proctor compaction tests (ASTM D1557) should be done on representative samples of the backfill and imported fill material proposed by the Contractor. Imported fill should be placed in accordance with the above-described procedure for on-site soils used as compacted fill.

Fill Placement and Compaction

Structural fill (i.e. beneath the building and pavement areas) should be placed in uniform lifts and compacted to at least 95 percent of the material’s maximum dry density as determined by the Modified Proctor Compaction Test (ASTM D1557). Fill placed in landscape areas should be compacted to at least 92 percent of the material’s maximum dry density as determined by the Modified Proctor Compaction Test (ASTM D1557). On-site soils and imported select fill should be placed in maximum 12-inch-thick loose lifts and compacted using a smooth drum vibratory roller having a minimum static drum weight of 5 tons. Because the site contains silty/clayey soils, we recommend that the Contractor also utilize a sheeps-foot roller to compact the fill. Any fill containing a significant amount of crushed boulders should be compacted using a larger roller having a minimum static drum weight of 10 tons.

Smaller compaction equipment (i.e. walk-behind trench roller or jumping jack compactor) and thinner lifts (maximum 6 to 8 inches thick) should be used in areas of limited maneuverability.

The water content at the time of compaction should be within 3 percentage points of the optimum water content. All fill placement should be subject to observation and testing by a qualified geotechnical engineer.

No fill material should be placed on areas where free water is standing, on frozen subgrade areas, or on surfaces which have not been approved by a qualified geotechnical engineer.

Settlement Plate Monitoring

Fills up to approximately 28 feet will be required throughout the site. Where new fills exceed 15 feet in height within the proposed building footprints or other critical site areas, we recommend that settlement plates be installed so that the magnitude and rate of settlement can be monitored during construction. The settlement plates should be installed at the subgrade level subsequent to site clearing and subgrade preparation, and prior to fill placement. Additional settlement plates should be installed at/near the finished subgrade surface subsequent to completing the fills. The settlement plates should be monitored to evaluate settlement of the underlying soils and the fill under its own weight. Settlement is expected to occur as the fill is being placed, and generally be complete within 1 month after completion of the fill operations.

Foundation and Slab Support

Shallow Foundations

The proposed buildings can be supported on shallow foundations bearing on approved, compacted fill or proof-rolled native soils. A maximum allowable bearing pressure of 5 kips/ft² can be used for design of foundations.

It is critical that a qualified geotechnical engineer be present during the foundation excavation work to verify adequate bearing is achieved. After the bearing surface has been approved, it should be protected until the footing is poured.

Perimeter strip footings should have a minimum width of 24 inches and interior strip footings should have a minimum width of 18 inches. The minimum dimension for isolated footings should be 3 feet by 3 feet.

All exterior footings or footings within an unheated portion of the building must be constructed below the frost depth of at least 4 feet below the lowest adjacent grade.

For mass concrete poured against approved compacted soil subgrade, a coefficient of sliding friction of 0.35 can be used.

Subgrade Preparation

Prior to footing construction, all footing bearing areas should be level and proofrolled and compacted using either a large smooth drum roller or a double-drum walk-behind vibratory compactor, such as a Wacker RT 82-SC or equivalent. Footing areas must be inspected and approved by a qualified geotechnical engineer prior to steel reinforcement or concrete placement. Any soft, loose, or unsuitable soils identified by the inspecting geotechnical engineer during proof-rolling should be removed and replaced with approved compacted fill. The on-site soils are extremely sensitive to water exposure. Care should be taken to prevent the softening of these materials prior to concrete placement for footings.

If the foundation excavations will be left open for more than one day or excavated during a wet time of the year, we recommend that the bottom of the footing trench be over-excavated and a 4-inch-thick layer of compacted $\frac{3}{4}$ -inch clean, crushed stone or a 3-inch-thick lean concrete mud mat be placed to protect the footing subgrade from softening due to water and disturbance prior to placement of concrete.

The Contractor should be responsible for maintaining all footing subgrades in their as-approved condition until footing concrete is placed and the excavations are properly backfilled. Rainwater, snow, ice or trash/debris should not be allowed to accumulate in the excavation. If subgrade areas become wet and disturbed, they may no longer be suitable for foundations. Footings should be constructed as soon as possible following subgrade approval by the geotechnical engineer to minimize possible deterioration.

Floor Slabs

The building ground floor slab can be conventional slab-on-grade construction bearing on proofrolled/compacted granular fill soil subgrade areas. The floor slab can be designed using a modulus of subgrade reaction of 150 lbs/in³.

Slab areas should be proof-rolled with a smooth drum roller having a minimum static drum weight of 5 tons. Slab bearing areas must be inspected and approved by a qualified geotechnical engineer prior to steel reinforcement or concrete placement. Any soft, loose, or unsuitable soils identified by the inspecting geotechnical engineer during proof-rolling should be removed and replaced with approved, compacted fill.

We recommend that, at a minimum, a vapor barrier for moisture control having a minimum thickness of 15 mils be provided beneath the floor slab. The vapor barrier can possibly be eliminated from warehouse floor slab areas that do not have special floor coverings (i.e. tile, carpeting) and are not humidity controlled areas, subject to approval by the Architect and Owner.

A 6-inch-thick layer of $\frac{3}{4}$ -inch clean, crushed stone or processed aggregate should be provided beneath the floor slab to act as a capillary break and protect the soil subgrade. The crushed stone or processed aggregate should be placed beneath the vapor barrier.

Construction and/or saw cut joints should be provided as necessary for crack control.

Below-Grade Walls

Permanent below-grade walls will be required for the proposed loading dock areas. The below-grade walls are expected to bear on compacted fill or natural soils. Below-grade walls can be designed using an equivalent fluid pressure of 100 lbs/ft³ where the structure provides lateral restraint at the top of the wall. This parameter presumes the retaining wall backfill meets the minimum requirements for approved compacted fill previously discussed, that full drainage is provided behind the wall, and that there are not any surface surcharge or structure loads at the top of the wall. Adjustment of the pressures should be made by the designer where appropriate to consider these factors. Presuming the aforementioned fill, fill placement, and compaction requirements, a coefficient of at-rest earth pressure $K_o = 0.55$ can be used in evaluating surcharge loads transmitted to the wall.

For mass concrete poured against approved compacted soil subgrade, a coefficient of sliding friction of 0.35 can be used.

Passive resistance for approved compacted on-site soils can be calculated using an equivalent fluid unit weight of 120 lbs/ft³, which includes a reduction factor of 2. Extreme care and proper construction sequencing must be taken during construction in areas where passive resistance is required for wall support. This includes filling simultaneously on both sides of the wall, and not performing future excavations without properly bracing the wall.

Building Settlements

Settlement for the proposed building is estimated to be less than 1 inch provided the subgrade preparation work described herein is performed and after the mass fill settlement is complete. Differential settlement of adjacent structure columns is estimated to be less than ¾ inches.

Seismicity

Based on the latest New York State Building Code and the United States Geological Survey, both proposed buildings should be designed using the following parameters:

- Site Class = D
- Maximum Considered Earthquake Ground Motions:
 - 0.2 Second Spectral Response Acceleration, %g: $S_s = 24.0$
 - 1.0 Second Spectral Response Acceleration, %g: $S_1 = 5.8$

The above ground motions should be adjusted for site class "D" effects using coefficients $F_a = 1.6$ and $F_v = 2.4$.

Based on the relative density of the site soils as inferred from the boring data, liquefaction is considered to be unlikely.

Site Retaining Walls

Fill Retaining Walls

Depending on the proposed wall height, we expect that the retaining walls may be designed as one of the following wall systems:

- Geogrid reinforced modular block wall systems such as Mesa®, Keystone®, or Versa-Lok® systems.
- Geogrid reinforced stone-filled wire-formed basket retaining wall systems such as the SierraScape by Tensar or the Terramesh Gabion by Maccaferri.
- Gravity Block retaining wall.

For the retaining walls that require significant wall heights, the fill retaining walls will need to be designed using a batter; the batter should be taken into account when designing the site because the top of the wall will be offset from the bottom of the wall by several feet.

Wall Backfill

We recommend that imported select granular fill having a fines content less than 15% be utilized as backfill behind these “fill” site retaining walls, including in the entire reinforced zone of geogrid reinforced walls.

At this time, we recommend that the fine-grained (silt/clay) on-site soils not be used within the reinforced zone. However, the existing granular soils are anticipated to be acceptable as fill within the reinforced zone but should be subject to review and approval by the Wall Designer.

Cut Retaining Walls

Cut retaining walls may be designed as one of the following wall systems:

- Gravity walls such as a large block wall system (as manufactured by Recon® or Redi-Rock®).
- Soldier beam and concrete panel walls.
- Concrete cantilever walls.

The use of gravity wall systems needs to be considered with respect to any excavation/grading restrictions that may exist adjacent to the wall alignments. We recommend that the gravity wall systems which are retaining soil only be used for retaining walls with maximum exposed wall face heights less than 12 feet.

For the soldier beam and panel walls, we recommend that the beams be drilled in and socketed into the dense glacial till with concrete. Grouted drilled-in permanent tie-back soil anchors can be

used to restrain the soldier beams where necessary. Any proposed tie-backs having components outside the site property line will require prior permission from the adjacent property owners.

A cut retaining wall can alternatively be designed as a fill retaining wall (as described above) by over-excavating into the slope provided there is sufficient space between the proposed retaining wall and the nearest property line or grading restriction to allow for sloped excavation without adversely impacting the adjacent property. This also presumes that the temporary cut slope behind the wall can be maintained during construction of the wall so as not to disturb the soil outside the site property line.

Foundation Support

At this time, we anticipate that the foundation support for shallow foundation supported proposed retaining walls can be designed by the Wall Designer in accordance with the Foundation Support section of this report.

Wall Subgrade Preparation

We recommend that the wall foundation subgrade be prepared in accordance with the Site Grading, Fill Placement, and Subgrade Preparation sections of this report. All wall foundation subgrade should be prepared by proofrolling with a large smooth drum roller or an approved double-drum walk-behind vibratory compactor. Any soft areas should be removed and replaced with approved compacted fill.

Wall Drainage

The site retaining walls should be designed with a perforated pipe wrapped with a non-woven geotextile fabric behind the wall to assist in the relief of water pressure. The perforated pipe should be connected to weep holes near the base of the wall, daylighted on both ends of the wall, or drained into a nearby permanent drainage structure. The wall drainage should be coordinated with the Site/Civil Engineer.

Wall Design

The Contractor's proposed retaining wall types, construction means and methods, and supporting design calculations, signed and sealed by a Professional Engineer licensed in the State of New York, should be submitted to the Owner and the Geotechnical Engineer. Global Stability should be included as part of the Wall Designer's calculations.

We recommend that a guiderail and fence be installed at the top of the retaining walls and should be part of the design of the retaining walls.

Permanent Soil Slopes

We recommend that the permanent cuts/fills in soil have a maximum slope of 3H:1V. For soil slopes steeper than 3H:1V, we recommend that erosion control matting be used to provide sufficient soil stabilization. We recommend against excavating or constructing cut/fill slopes steeper than 2H:1V.

Fill Slopes

Fill placement for fill slopes should be done in horizontal lifts. The fill should be benched into existing slope faces and keyed at the toe of the slope.

Where feasible, we recommend that each lift be constructed beyond the proposed slope face and cut back after slope construction to ensure proper compaction of the slope face.

Cut Slopes

All cut slopes should be uniform. Cut slopes may need to be flatter than 3H:1V and/or benched if groundwater seepage is observed at the slope face. The purpose of the flatter slopes and/or bench is to reduce the potential for erosion and instability. In addition, permanent erosion control matting may be necessary. The Contractor should be careful not to over-excavate or create steeper slopes than designed. Placement and compaction of fill to replace over-excavations and/or to flatten steep slopes is difficult and should only be done under the guidance of a qualified geotechnical engineer.

Surface drainage including drainage ditches and berms located at the top of the cut slopes should be constructed as deemed necessary by the Site/Civil Engineer.

Soil slope cutting work should be done under the full time observation of a qualified geotechnical engineer so the exposed conditions can be evaluated and determinations made if any supplemental recommendations regarding slope excavation or other stabilization measures are necessary.

Erosion Control

To reduce and slow weathering, erosion, and surficial sloughing of temporary and permanent slopes, we recommend that the following erosion control measures be implemented:

- Seeding and other slope protection should be implemented immediately following construction of the cut. Temporary erosion control measures must be provided during construction activities and maintained until permanent erosion control measures are functional.
- Excavation of cut slopes should be limited during the wet season to minimize erosion.

- Concentrated surface water or significant sheet flow should not be discharged onto temporary or permanent slopes.
- Groundwater seepage, if encountered during construction, should be collected and discharged at appropriate off-site locations.
- Surface water runoff must be properly contained and channeled using drainage ditches, berms, swales, and/or siltation fences.
- Removal of existing natural vegetation should be minimized and limited to active construction areas.
- Surface water and drainage from impervious surfaces must be directed to appropriate stormwater facilities.

Seepage Control

We anticipate that pockets of groundwater seepage could be encountered as the slopes are excavated. This is relatively common when excavating cut slopes in compact glacial till soils. These localized areas of groundwater seepage typically “dry up” soon after the cut slope is completed as the water stored within permeable areas drains out. However, it is possible that areas of wet soil will persist and continue to seep.

We recommend that areas of persistent wet soil be repaired by placing at least 6 inches of sand and gravel filter blanket material topped with about 6 inches of quarry rock (2-inch to 4-inch size). The purpose of the sand and gravel filter is to help control against piping and loss of native soil materials on the slope, which could lead to surficial slope failure if not controlled. Some over-excavation of the existing soils will be necessary to install the sand and gravel filter and quarry rock.

In larger areas where persistent water seepage is present, we recommend that lateral drains be installed. Each lateral drain should consist of a perforated pipe installed parallel to the slope within a trench excavated beneath the seep into the underlying relatively impermeable glacial soils. The perforated pipe should be placed near the base of the trench. The trench should then be backfilled with $\frac{3}{4}$ ” clean, crushed stone. The down slope side of the trench should be lined with an impermeable plastic liner. The perforated pipe should be discharged into the site’s stormwater drainage system.

Where groundwater seepage is near the base of the slope, an underdrain at the toe of the slope should be installed. Where groundwater seepage is relatively shallow, cut-off trenches at the top of the slope can be used.

Detention Basin Construction

We understand that several detention and infiltration basins are proposed to be constructed at the site. We recommend that the side slopes for the proposed ponds be cut or constructed no

steeper than 3H:1V. The side slopes and basin bottom should be compacted to form a stable base and side slopes. The Contractor should avoid over-excavating the side slopes and/or causing instability of the side slopes.

Fill placed to construct stormwater basin embankments should be placed in horizontal lifts. Fill can consist of on-site or imported soil and should be placed in 12-inch thick loose lifts and compacted to at least 95% of the material's maximum dry density as determined by the Modified Proctor Compaction Test (ASTM D 1557). The water content at the time of compaction should be within 3 percentage points of the optimum water content. Backfill placed in the excavations for inlet and outlet pipe installations should be placed in 8-inch thick loose lifts and compacted to at least 95% of the material's maximum dry density.

The Contractor should establish vegetation immediately after constructing the basins to minimize erosion.

Stormwater Infiltration and Septic Fields

We understand that four (4) on-site wastewater treatment systems, five (5) detention basins and five (5) infiltration basins are proposed to be constructed at the site.

The SESI investigation included infiltration testing for the proposed stormwater basins and septic fields. The unfactored percolation rates generally ranged between 0.75 inches per hour to 31 inches per hour. Percolation testing was also performed for the proposed septic fields. The percolation rates generally ranged between 2 minutes per inch to 120 minutes per inch. The infiltration and percolation test details are provided in Attachment A.

Utilities

Excavations will be required for the installation of proposed utilities and associated structures. All excavations should be properly sloped and/or braced in conformance with applicable OSHA regulations including, but not limited to, temporary shoring, utilizing trench boxes and/or proper benching.

Prior to construction, we recommend field locating any existing utilities that are to remain or that must be temporarily maintained during construction.

We expect site excavations for proposed utilities to be constructed in native soils or new compacted fill. Exposed utility trenches in soil should be proof-rolled with at least three (3) overlapping coverages of a double-drum walk-behind vibratory compactor such as a Wacker RT 82-SC or equivalent. Any soft or unstable areas identified by the proof-rolling should be removed and replaced with compacted fill. Backfill in utility excavations should meet the

previously discussed requirements for engineered fill, with fill placement and compaction performed as previously discussed.

If unsuitable bearing material is encountered at the proposed utility subgrade elevation, we recommend that 1 foot of over-excavation and replacement with approved bedding material be performed beneath all utilities. The actual extent of removal should be determined by a qualified inspecting geotechnical engineer based on the ground conditions encountered at the time of excavation.

We recommend that a minimum 6 inch layer of $\frac{3}{4}$ -inch clean, crushed stone be placed above the soil subgrade as pipe bedding material and extend up to the springline of the pipe. Material consisting of select granular fill or $\frac{3}{4}$ -inch clean, crushed stone should be placed from the springline of the pipe up to 1 foot above the utility pipe. The remainder of the trench can be backfilled using on-site soils in accordance with the recommendations provided herein.

Temporary Excavation Support and Sloped Excavations

Temporary excavation stability is a function of several factors including the presence of groundwater, the type and density of the various soil strata, the depth of excavation, surcharge loadings adjacent to the excavation, and the length of time and weather conditions while the excavation remains open. Sidewall instability should be expected when groundwater seepage is encountered and in areas of loose sandy soils, if any.

All excavations should be properly sloped and/or braced in conformance with applicable OSHA regulations including, but not limited to, temporary shoring, utilizing trench boxes and/or proper benching. The Contractor should be responsible for maintaining the stability of the soil excavations.

Groundwater Control During Construction

The majority of the excavations for the proposed building foundations and the site utilities are anticipated to be above the measured groundwater levels. However, water seepage was noted in test pit LTP-3 within the proposed Building A footprint, approximately 3 feet higher than the proposed FFE (or at approximate el 652), and in test pits LTP-15 and LTP-19 within or near the proposed Building B footprint, approximately 0.5 feet to 3.5 feet higher than the proposed FFE (or at approximate el 673 to el 676). We anticipate that this water is perched on underlying less permeable soil materials, and that additional perched water may be encountered in other site areas as well. During site cutting to reach proposed grades, we expect that encountered water will lower with the advanced excavation and “dry up” within the cut areas. Groundwater can be expected to fluctuate with weather, seasonal conditions, construction activity, or groundwater pumping. Surface runoff and groundwater seepage with higher groundwater levels should be expected during wet weather conditions. We anticipate that most collected storm water runoff and groundwater seepage can be controlled using conventional submersible pumps in

conjunction with gravel sumps.

Based on the latest grading plans, excavations for the proposed stormwater ponds are anticipated to reach depths of up to 16 feet. During our investigation, groundwater was encountered at depths ranging from approximately 2.5 feet to 14.5 feet below existing grades. Refer to the Subsurface Conditions section and Tables 2A and 2B of this report for specific groundwater depths and elevations encountered at each observation well and test pit location.

Groundwater was encountered within the areas of the proposed stormwater basins north of Building A and north of Building B at levels above bottom of proposed basin elevations and is expected to be present with the basins following construction.

We understand that these basins are intended to consist of wetland ponds with extended detention relying on a groundwater source, so that water being present within the basins is consistent with the current intent for the proposed stormwater management design for the site. During construction, dewatering will need to be performed to lower the water level below the basin bottoms, so that the basins can be constructed in the dry. At this time, the proposed design for these basins is not yet available; recommendations regarding temporary and permanent groundwater level control with the proposed wetland pond basin areas should be reviewed with the civil engineer once the grading and drainage plans for these areas are further advanced.

We recommend that the Contractor anticipate encountering groundwater during the deep stormwater pond excavations that will require more substantial pumping effort in conjunction with continued maintenance of gravel sumps, seepage control, and erosion protection along the side slopes. We recommend that the sump pits and sumps be installed in advance of proposed cuts in order to facilitate removal of groundwater from the clay ahead of time, making excavation easier and cleaner. If groundwater is encountered during the excavation, we recommend that the contractor install temporary perimeter ditches or other subsurface drains to collect or intercept groundwater to facilitate deeper excavation.

Water should not be allowed to pond and sit over soil subgrades. Proper grading, trenching along with pumping are needed to maintain the site in a dry and workable condition, and to prevent disturbance of the bearing subgrades.

The pumping, handling and discharge of all dewatering effluent should be performed in accordance with all applicable regulations and any environmental requirements for the site.

Pavement Design and Construction

From a geotechnical perspective, we anticipate the parking and access drive for the proposed development can consist of on-grade supported asphalt pavement, subsequent to pavement subgrade preparation consisting of proof-rolling of natural soils, and raising grades by placing approved compacted fill.

We have provided recommendations for asphalt pavement minimum sections for the proposed development based on estimated traffic loading for the proposed development provided in the SESI Pavement Design Memo and the anticipated subgrade soils. We have analyzed and designed asphalt pavement sections for the proposed development following the flexible pavement design guidelines given in the AASHTO Guide for Design of Pavement Structures. Refer to Appendix G for pavement design calculations.

Recommended pavement sections provided in this report have been reviewed based on assumed traffic information. The recommended minimum pavement sections should also be reviewed with respect to any specific tenant requirements, once the tenants are all identified, to determine if any increases in the pavement section thicknesses are required.

The following summarizes the data utilized in our calculations:

Design Life	= 20 years
Initial Serviceability	= 4.2
Terminal Serviceability	= 2.5
Reliability	= 90%
Standard Deviation	= 0.45 (flexible pavement) = 0.35 (rigid pavement)

Vehicle Loading (per day):

Light Duty (Car Parking)	= 2,000 cars/day
Heavy Duty (Minor Access Drives and Truck Courts)	= 250 trucks/day
Heavy Duty (Main Access Drive)	= 510 trucks/day + 3,490 car/day

Our calculations indicate the following pavement sections to be suitable for this project following the specified pavement subgrade preparation.

RECOMMENDED FLEXIBLE PAVEMENT MINIMUM SECTIONS (LIGHT DUTY – CAR PARKING)	
Material	Thickness
Bituminous Concrete Surface Course (9.5M64)	1 ½ inches
Bituminous Concrete Binder Course (19M64)	2 inches
Processed Aggregate Base Course (Subbase)	8 inches

RECOMMENDED FLEXIBLE PAVEMENT MINIMUM SECTIONS (HEAVY DUTY – MINOR ACCESS DRIVES AND TRUCK COURTS)	
Material	Thickness
Bituminous Concrete Surface Course (9.5M64)	2 inches
Bituminous Concrete Binder Course (19M64)	2 inches
Bituminous Concrete Base Course (25M64)	3 ½ inches
Processed Aggregate Base Course (Subbase)	8 inches

RECOMMENDED FLEXIBLE PAVEMENT MINIMUM SECTIONS (HEAVY DUTY – MAIN ACCESS DRIVE)	
Material	Thickness
Bituminous Concrete Surface Course (9.5M64)	2 inches
Bituminous Concrete Binder Course (19M64)	2½ inches
Bituminous Concrete Base Course (25M64)	4 inches
Processed Aggregate Base Course (Subbase)	10 inches

The recommended pavement sections use the Superpave mixes in accordance with NYSDOT specifications. The processed aggregate base course should be Type 2 subbase material consisting of stone which is the product of crushing ledge rock in accordance with NYSDOT specifications.

For any paving outside the subject property limits, the minimum pavement sections specified by the Town of Southeast or NYSDOT should be utilized.

We recommend a concrete pavement section for loading dock pads and aprons as follows:

Material	Thickness
4,500 psi concrete	7 inches
Compacted Aggregate Base	8 inches

The concrete pavement should include reinforcement consisting of the following:

- Grade 60 No. 3 deformed bars – slab reinforcement longitudinal and transverse spacing should be a maximum of 16 inches on center each way. Reinforcement should be properly supported during concrete placement.

Steel Reinforcement should be placed so that 3 inches of concrete coverage is provided between the reinforcement steel and the compacted aggregate base. The exterior concrete should have a water content ratio of 0.45 and 6% air entrainment.

Special consideration can be made for concrete pavements in areas that will be subject to repeated impacts from trailer landing gear (i.e. dolly pads and dock loading/unloading aprons) to include fiber reinforcement. We recommend that the design of the concrete pavement consider the following when using fiber reinforcement in addition to the steel reinforcement:

- Fibers should be macro-synthetic.
- We recommend fibers be obtained from one of the following suppliers:
 - Tuf-Strand SF by Euclid Chemical Company
 - CL95 Macro Fiber by PNA Construction Technologies, Inc.
 - Forta-Ferro by Forta Corporation
- A minimum fiber dosage rate of 7.5 lbs/cy should be used with an 8 inch thick slab and the steel reinforcement specified above.
- The use of fibers will affect workability of the concrete during placement. Chemical admixtures such as water-reducers and super plasticizers can be used.
- Fibers should not be mixed at the site.
- The use of fiber reinforcement should be identified on the site plan.

Sawcut joints should be provided as necessary for crack control. At this time, we recommend that control joints be spaced 15 feet apart in both directions. The control joint spacing should be determined once the site plan drawings, including the dimensions of the loading and approach

slab area, are finalized. We recommend that epoxy coated dowels be utilized at the construction joints.

Pavement subgrade preparation work should be inspected by a qualified geotechnical engineer. Should isolated areas exhibit unsuitable conditions, the isolated areas should be over-excavated to a depth as determined by the Geotechnical Engineer and immediately replaced with approved compacted fill or crushed stone.

CONSTRUCTION DOCUMENTS AND INSPECTION / QUALITY ASSURANCE

Technical specifications addressing earthwork and all other work related to the building foundations and site preparation/construction should be prepared by our firm. In addition, the foundation recommendations given herein should be included in the structural drawings for the project. Our firm should be provided with and review any Contractor submittals related to foundation work, site preparation, and soil importation for conformance with the recommendations given in this report.

During construction, it is critical that all geotechnical related work be performed under qualified geotechnical engineering inspection/monitoring/testing in order to ensure proper and timely implementation of the recommendations given in this report. We recommend that Langan perform this work to verify proper implementation of our recommendations and to maintain continuity of our responsibility for this project. Our field engineer would be able to immediately address unexpected or unusual conditions that may be encountered and provide remedial recommendations. This work includes: site preparation and proof-rolling, soil slope stabilization, compacted fill placement, footing and slab subgrade preparation, pavement subgrade preparation, utility construction and backfill placement, and asphalt paving.

CLOSURE/LIMITATIONS

The Contractor is responsible for construction quality control, which includes satisfactorily constructing the foundation system and any associated temporary works to achieve the design intent while not adversely impacting or causing loss of support to neighboring property, structures, utilities, roadways, etc. Construction activities that can alter the existing ground conditions such as excavation, fill placement, foundation construction, ground improvement, dewatering, etc. can also induce stresses, vibrations, and movements in nearby structures and utilities, and disturb occupants. Contractors are solely responsible to ensure that their activities will not adversely affect the structures and utilities, and will not disturb occupants. Contractors must also take all necessary measures to protect the existing structures, utilities, etc. during construction. By using this report, the Owner agrees that Langan will not be held responsible for any damage to adjacent structures, utilities, etc.

This report presents our recommendations regarding the geotechnical aspects of design and construction for the proposed warehouse development located in the Southeast, Putnam County,

New York. This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, or by natural events such as floods, earthquakes, slope instability, or groundwater fluctuations.

The conclusions and recommendations provided in this report result from our interpretation of the geotechnical conditions existing at the site inferred from a limited number of borings and test pits, as well as site information provided to our firm. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Actual subsurface conditions may vary. Langan reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Recommendations provided are dependent upon one another and no recommendation should be followed independent of the others. Our report, conclusions, and interpretations should not be construed as a warranty of the subsurface conditions.

Any proposed changes in structures or their locations should be brought to Langan's attention as soon as possible so that we can determine whether such changes affect our recommendations. Information on subsurface strata and groundwater levels shown on the logs represent conditions encountered only at the locations indicated and at the time of investigation. If different conditions are encountered during construction, they should immediately be brought to Langan's attention for evaluation, as they may affect our recommendations. This report has been prepared to assist the Owner, Site/Civil Engineer, Architect, and Structural Engineer in the design process and is only applicable to the design of the specific project identified. The information in this report cannot be utilized or depended on by engineers or contractors who are involved in evaluations or designs of facilities (including underpinning, grouting, stabilization, etc.) on adjacent properties which are beyond the limits of that which is the specific subject of this report.

Environmental issues (such as permitting or potentially contaminated soil and groundwater) are outside the scope of this study and should be addressed in a separate evaluation.

LIST OF TABLES

Table 1A	Summary of Building A Borings
Table 1B	Summary of Building B Borings
Table 2A	Summary of Groundwater Measurements in Wells
Table 2B	Summary of Groundwater Measurements in Test Pits

TABLE 1A - SUMMARY OF BUILDING A BORINGS

ELEVATION IN FEET	BUILDING A									
	SOUTH								NORTH	
	AB-1		AB-2		AB-3		AB-4		AB-5	
	669		653		647		645		645	
691	47		22		22		22		37	
690	5									
689										
688	22									
687										
686	9									
685										
684	8									
683										
682	19									
681										
680	27									
679										
678										
677										
676										
675	ref									
674			7							
673										
672			12							
671										
670	16		10							
669	qu=2.5 tsf									
668			12		6					
667										
666			42		24		6		5	
665	17									
664	qu=2.5 tsf		28		30		24		22	
663					qu=2.25 tsf					
662					28		18		36	
661					qu=2.5 tsf					
660	17				33		18		22	
659	qu=2.75 tsf		42		qu=4.5 tsf					
658					BOULDER		60		55	
657										
656							23		24	
655										
654	26				32					
653	qu=2.75 tsf		13		qu=4.5 tsf					
652			qu=2.25 tsf							
651										
650										
649	30				38				21	
648	qu=3.5 tsf									
647										
646										
645	22						34		27	
644	qu=4.5 tsf									
643										
642										
641									ref	
640										
639										
638										
637										
636									25	
635										
634										
633										
632										
631										
630									33	

PROPOSED
FFE AT EL 649

COLOR LEGEND
TOPSOIL
SILTY SAND [SM/SP-SM/SW-SM]
SILT [ML]
SAND, CLAYEY SAND [SC]
SILTY CLAY, SANDY CLAY [CL]
TILL
SCHIST BEDROCK

LEGEND



qu

ref

(OW)

- Stablized Groundwater Level Measured in Wells
- Unconfined compressive strength as measured in the field by the pocket penetrometer.
- Split-spoon sampler refusal value
- Groundwater Level Observation Well Location

NOTES

- Subsurface information provided is generalized and is shown for illustration proposes only.
- Subsurface conditions presented herein represent our interpretation of the borings.
- Refer to boring location plan for actual locations.
- Refer to boring logs for actual soil descriptions and details.
- The N-values tabulated are in blows/ft.

TABLE 1B - SUMMARY OF BUILDING B BORINGS

ELEVATION IN FEET	BUILDING B												surface elevation completed depth (ft)
	SOUTH	BUILDING B										NORTH	
	BB-1	BB-2 (OW)	BB-3	BB-4	BB-5	BB-6	BB-7 (OW)	BB-8	BB-9	BB-10	BB-11	BB-12	
691	650	666	654	678	665	685	668	690	672	691	687	663	
690	35	37	32	32	35	37	22	32	21	42	37	37	
689								19		8			
688								19		20			
687								19		17	7		
686								17		15	17		
685						12		19		ref	13		
684						20		24		BOULDER	ref		
683						47		38		25	11		
682						47					ref		
681				8		19							
680				28		39		64		52			
679				30									
678				14							69		PROPOSED
677				59		ref		45	4	47			FFE AT EL 672.5
676				57			5		14				
675							17		9		49		
674		4							8	77			
673		15		ref	10	65	19	44	qu=0.75 tsf	6			
672		26			18		18		qu=1.5 tsf	22	64	12	
671		16			29		4	73			BOULDER	22	
670		23		ref	23	ref	10				42	9	
669		42			10							16	
668					43	72			29	44		36	
667			2										
666			17	95			9				57	31	
665		ref							ref	60			
664	2		9		80	55							
663	11		26	ref			38					ref	
662	18	77	8										
661	6		5		41								
660	8	77											
659	9				ref								
658			37										
657													
656		50											
655	ref				ref								
654			56									ref	
653													
652	BOULDER	49			ref								
651	ref												
650			25										
649			qu=4.5 tsf									37	
648													
647													
646	REC=87%												
645	RQD=85%		49										
644													
643													
642													
641													
640	REC=82%												
639	RQD=75%												
638													
637													
636													
635													
634													
633													
632													
631													
630													
629													
628													
627													
626													
625													
624													
623													
622													
621													
620													
619													
618													
617													
616													
615													

NOTES

- 1 Subsurface information provided is generalized and is shown for illustration proposes only.
- 2 Subsurface conditions presented herein represent our interpretation of the borings.
- 3 Refer to boring location plan for actual locations.
- 4 Refer to boring logs for actual soil descriptions and details.
- 5 The N-values tabulated are in blows/ft.

LEGEND

-  Stabilized Groundwater Level Measured in Wells
- qu** Unconfined compressive strength as measured in the field by the pocket penetrometer.
- ref** Split-spoon sampler refusal value
- (OW)** Groundwater Level Observation Well Location

COLOR LEGEND
TOPSOIL
SILTY SAND [SM/SP-SM/SW-SM]
SILT [ML]
SAND, CLAYEY SAND [SC]
SILTY CLAY, SANDY CLAY [CL]
TILL
SCHIST BEDROCK

TABLE 2A - SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS IN OBSERVATION WELLS

DATE	TIME	SLB-28		BB-7		BB-2		SLB-19		REMARKS
		TOP OF WELL @ EL 630.5		TOP OF WELL @ EL 669.5		TOP OF WELL @ EL 666		TOP OF WELL @ EL 662		
		DEPTH TO WATER ft	WATER LEVEL ELEVATION ft	DEPTH TO WATER ft	WATER LEVEL ELEVATION ft	DEPTH TO WATER ft	WATER LEVEL ELEVATION ft	DEPTH TO WATER ft	WATER LEVEL ELEVATION ft	
28-Apr-21	13:20	13.3	617.2							SLB-28 well installed.
29-Apr-21	13:30	13.3	617.2							
30-Apr-21	13:15	13.3	617.2	14.9	654.6	8.0	658.0			BB-2 and BB-7 wells installed.
3-May-21	12:00			14.9	654.7					
4-May-21	11:30					7.9	658.1			
6-May-21	14:00					8.0	658.0			SLB-19 well installed and developed.
7-May-21	13:30	12.4	618.1	14.4	655.1			2.7	659.3	
9-May-21	13:40	12.5	618.0	14.3	655.2			2.6	659.4	

NOTES

- 1- Temporary groundwater level observation wells were installed in completed boreholes SLB-28, BB-7, BB-2 and SLB-19.
- 2- Elevations provided reference the datum given in the plan titled "Boring and Test Pit Location Plan" dated 6/25/2020 prepared by SESI, which refers to an unknown datum.
- 3- The observation well in SLB-28 consisted of 2-inch-diameter, 10-ft-long screened PVC pipe and 5-ft-long solid riser. Top of well was approx. 1.5 ft above ground surface.
- 4- The observation well in SLB-19 consisted of 2-inch-diameter, 10-ft-long screened PVC pipe and 10-ft-long solid riser.
- 5- The observation well in BB-2 consisted of 2-inch-diameter, 10-ft-long screened PVC pipe and 10-ft-long solid riser.
- 6- The observation well in BB-7 consisted of 2-inch-diameter, 10-ft-long screened PVC pipe and 10-ft-long solid riser. Top of well was approx. 1.5 ft above ground surface.

Proposed Commercial Campus at Fields Corner

Southeast, New York

#190065201

TABLE 2B - SUMMARY OF GROUNDWATER LEVEL MEASUREMENTS IN TEST PITS

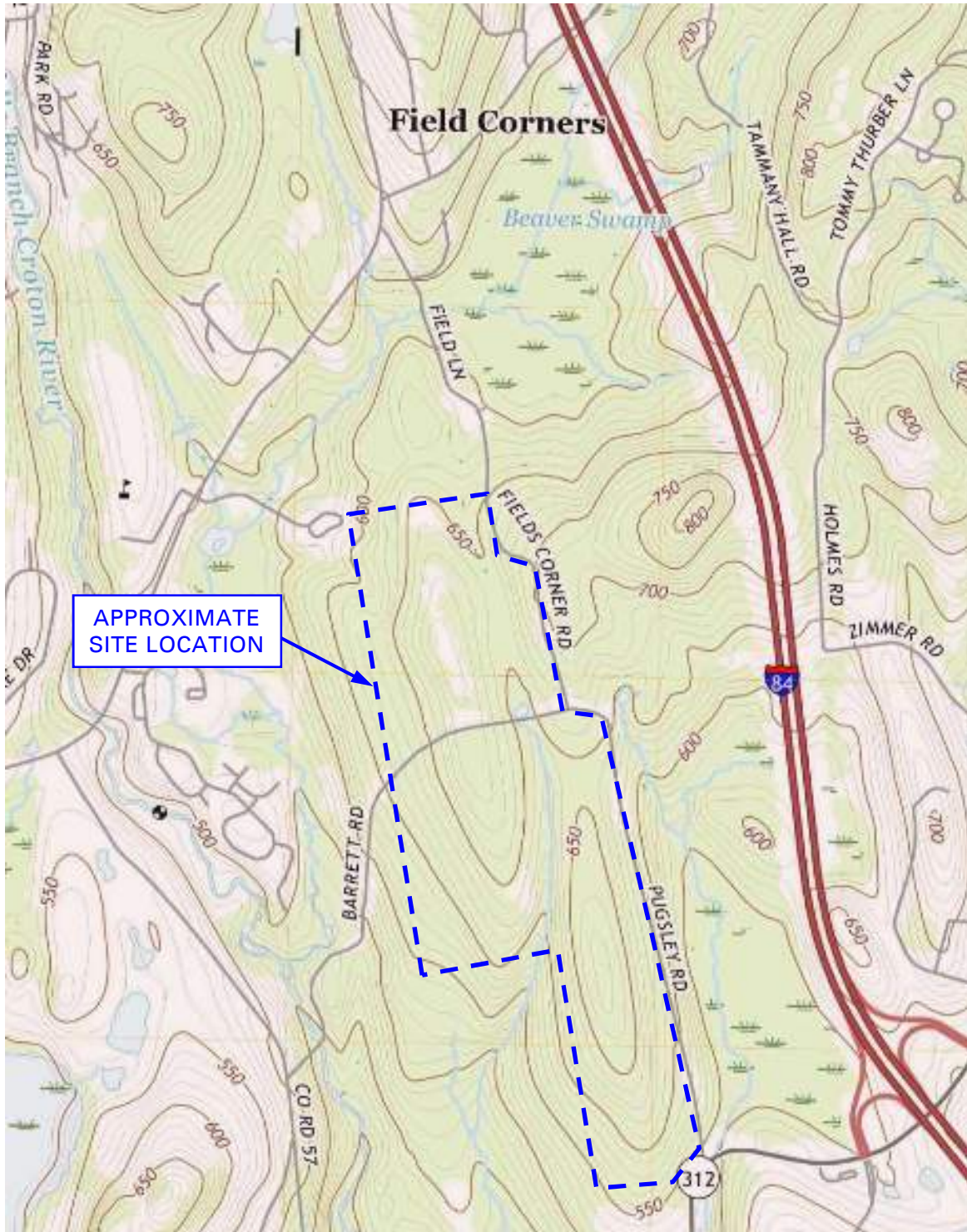
TEST PIT	SURFACE ELEVATION ft	TEST PIT DEPTH ft	DEPTH TO WATER ft	WATER LEVEL ELEVATION ft	REMARKS
LTP-1	651.0	14.0	4.0	647.0	
LTP-2	645.0	13.0	N/E		Excavation dry.
LTP-3	659.0	14.0	7.0	652.0	
LTP-4	635.0	12.0	6.0	629.0	
LTP-5	650.0	14.0	7.0	643.0	
LTP-6	645.0	15.0	8.0	637.0	
LTP-7	633.0	13.0	N/E		Excavation dry.
LTP-8	671.0	12.0	8.0	663.0	
LTP-9	650.0	13.0	7.0	643.0	
LTP-10	679.0	13.0	7.0	672.0	
LTP-11	649.0	13.0	N/E		Excavation dry.
LTP-12	690.0	13.0	N/E		Excavation dry.
LTP-13	645.0	12.0	7.0	638.0	
LTP-14	688.0	12.0	N/E		Excavation dry.
LTP-15	684.0	13.0	8.0	676.0	
LTP-16	659.0	13.0	10.0	649.0	
LTP-17	654.0	12.0	N/E		Excavation dry.
LTP-18	666.0	13.0	9.0	657.0	
LTP-19	681.0	12.0	8.0	673.0	
LTP-20	645.0	12.0	7.0	638.0	

NOTES

- 1- Elevations provided reference the datum given in the plan titled "Boring and Test Pit Location Plan" dated 6/25/2020 prepared by SESI, which refers to an unknown datum.

LIST OF FIGURES

Figure 1	Site Location Map
Figure 2	Historic USGS Map
Figure 3A	Surficial Geology Map
Figure 3B	Geologic Map
Figure 4	US Karst Map
Figure 5	FEMA Flood Map
Figure 6	Boring and Test Pit Location Plan
Figure 7A	Subsurface Profile A-A
Figure 7B	Subsurface Profile B-B



Source: United States Geological Survey (USGS) – Lake Carmel, NY, Quadrangle 2019

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PROPOSED COMMERCIAL CAMPUS AT FIELDS CORNER

SITE LOCATION MAP

SOUTHEAST

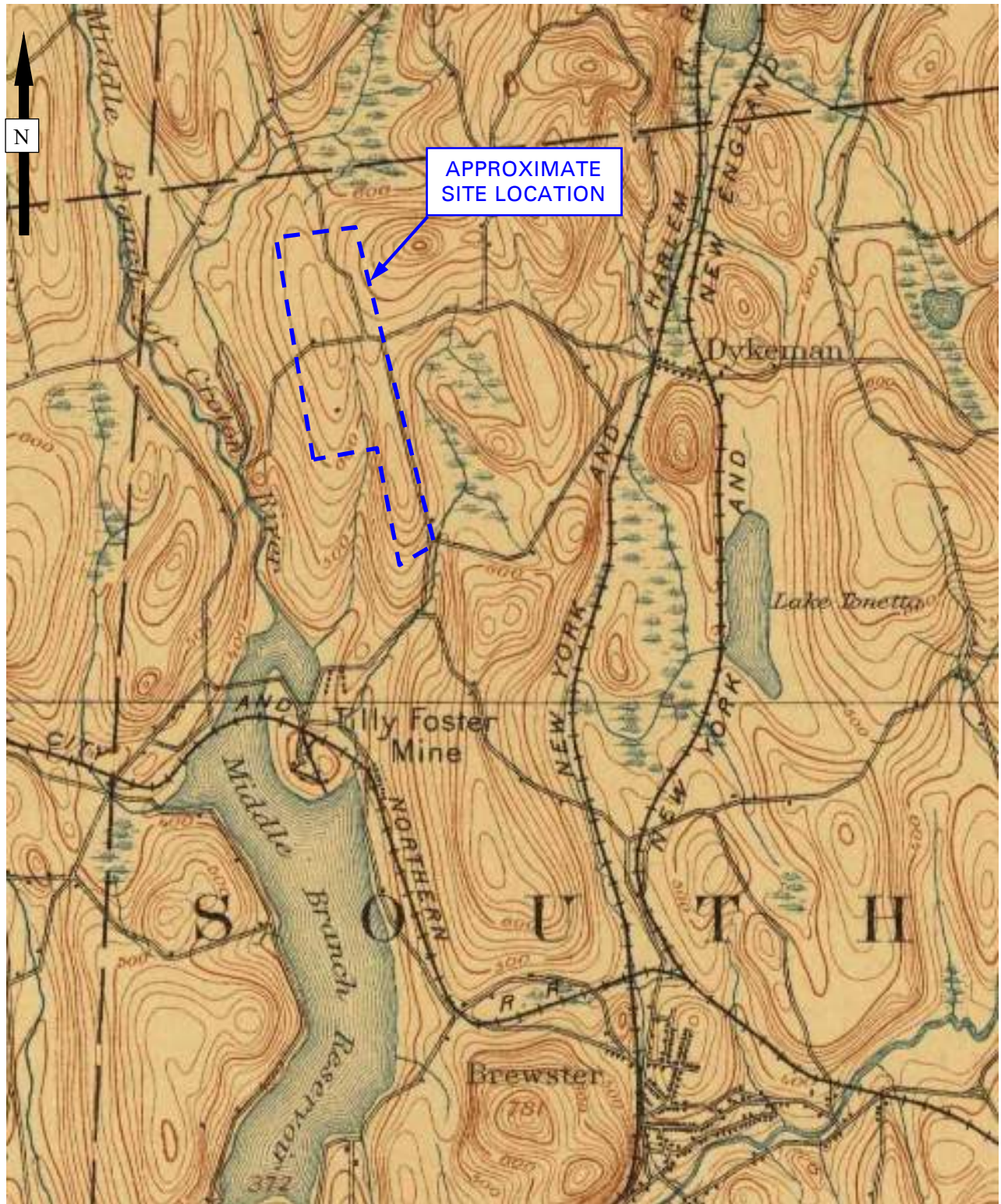
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SCALE
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DATE
2/27/2021

FIGURE
1



Source: United States Geological Survey (USGS) –Carmel, NY, Quadrangle 1892

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PROPOSED COMMERCIAL CAMPUS AT FIELDS CORNER HISTORIC USGS MAP

SOUTHEAST

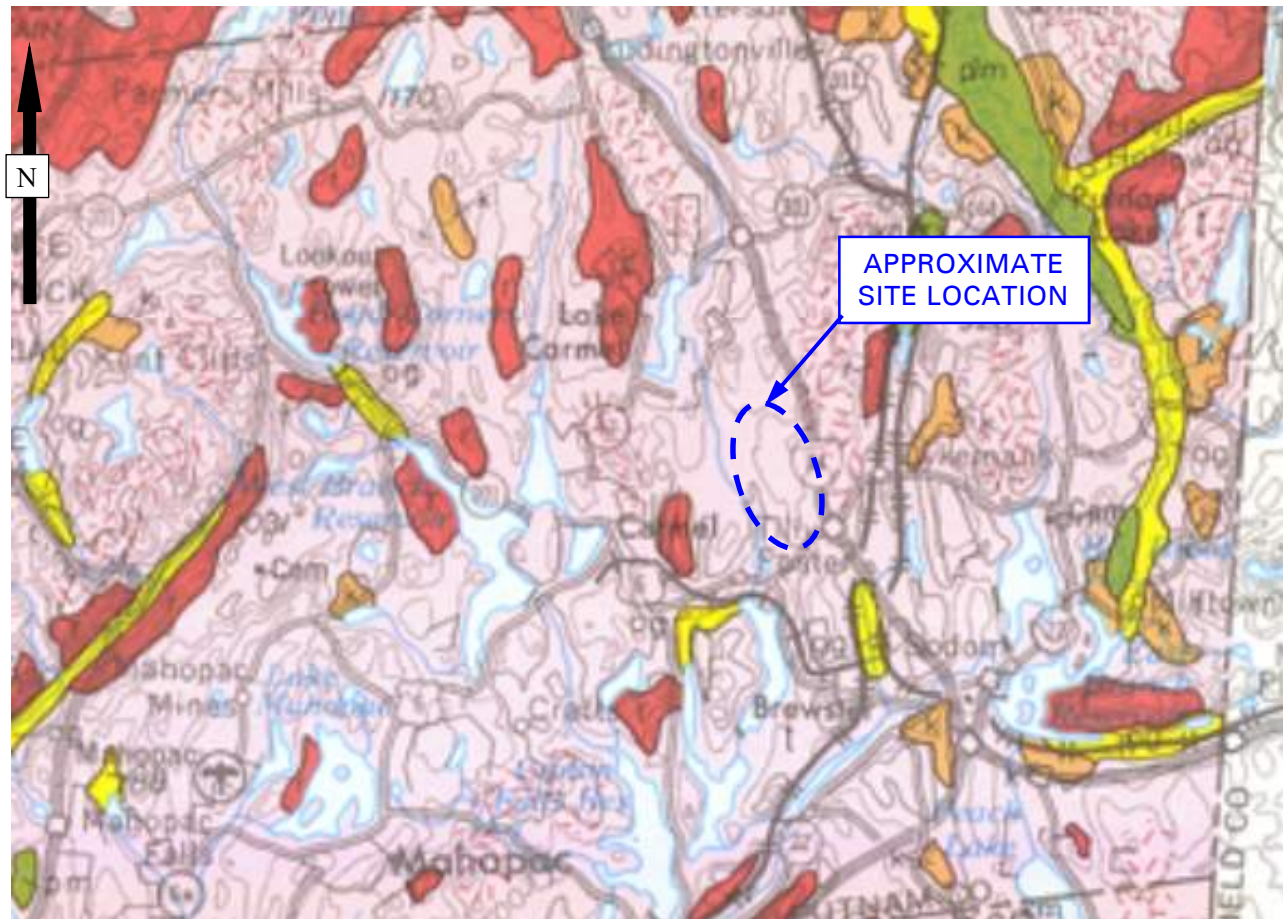
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190065201

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DATE
2/27/2021

FIGURE
2



LEGEND:

t	t – Till Variable texture (e.g. clay, silt-clay, boulder clay), usually poorly sorted diamict, deposition beneath glacier ice, relatively impermeable (loamy matrix), variable clast content — ranging from abundant well-rounded diverse lithologies in valley tills to relatively angular, more limited lithologies in upland tills, tends to be sandy in areas underlain by gneiss or sandstone, potential land instability on steep slopes, thickness variable (1-50 meters).
---	---

Source: Surficial Geologic Map of New York, Lower Hudson Sheet (Cadwell, 1989)

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PROPOSED COMMERCIAL CAMPUS AT FIELDS CORNER

SURFICIAL GEOLOGY MAP

SOUTHEAST

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PROJECT NO.

SCALE

DATE

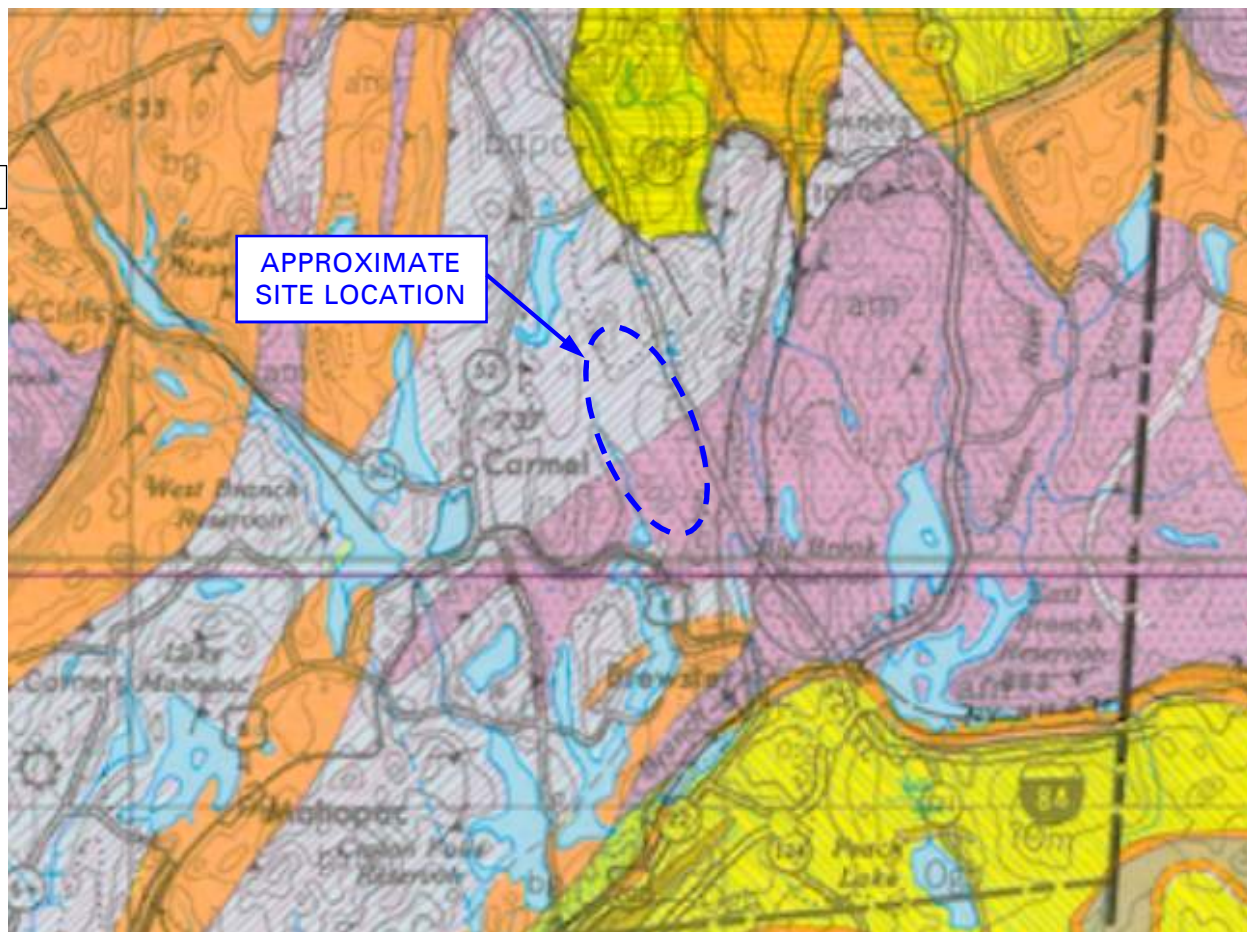
FIGURE

190065201

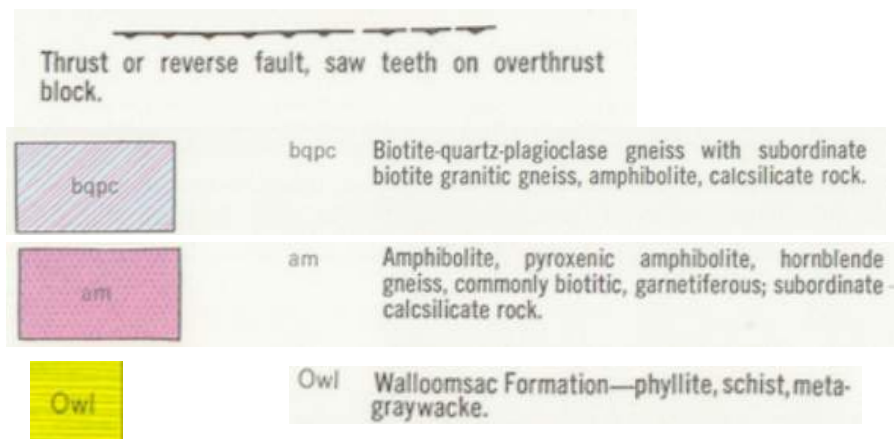
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3A



LEGEND:



Source: Geologic Map of New York, Lower Hudson Sheet (1970, reprinted 1995)

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PROPOSED COMMERCIAL CAMPUS AT FIELDS CORNER BEDROCK GEOLOGY MAP

SOUTHEAST

NEW YORK

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SCALE

DATE

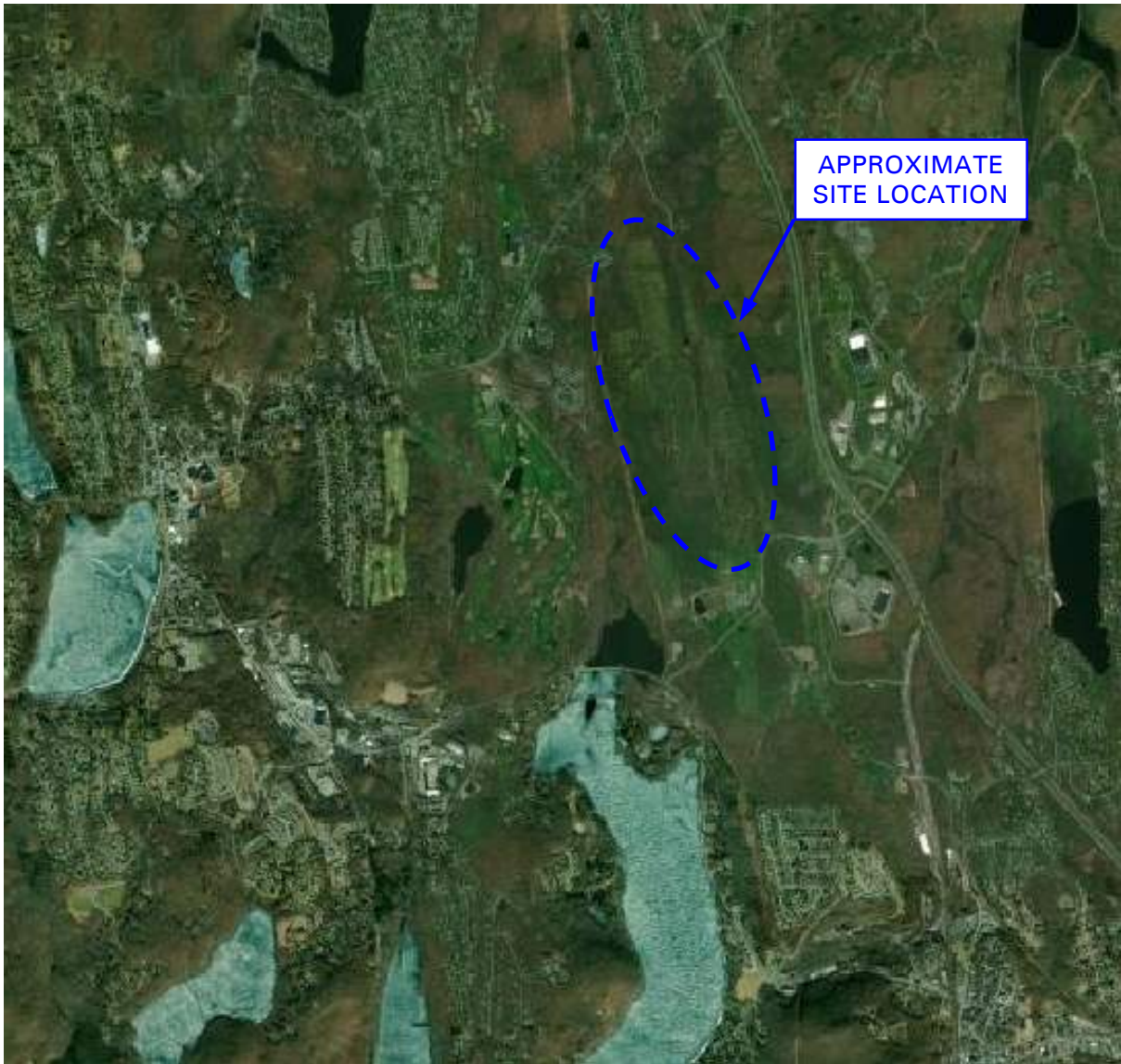
FIGURE

190065201

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2/27/2021

3B



LEGEND:

Humid Climate Karst

- Carbonate rocks at or near the land surface
- Carbonate rocks buried beneath <300 feet (ft) of insoluble sediments
- Carbonate rocks buried beneath ≤50 ft of glacially derived insoluble sediments
- Carbonate rocks buried beneath >50 ft of glacially derived insoluble sediments

Source: USGS Open File Report 2014-1156 Karst in the United States: A Digital Map Compilation and Database (Weary and Doctor 2014)

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PROPOSED COMMERCIAL CAMPUS AT FIELDS CORNER

US KARST MAP

SOUTHEAST

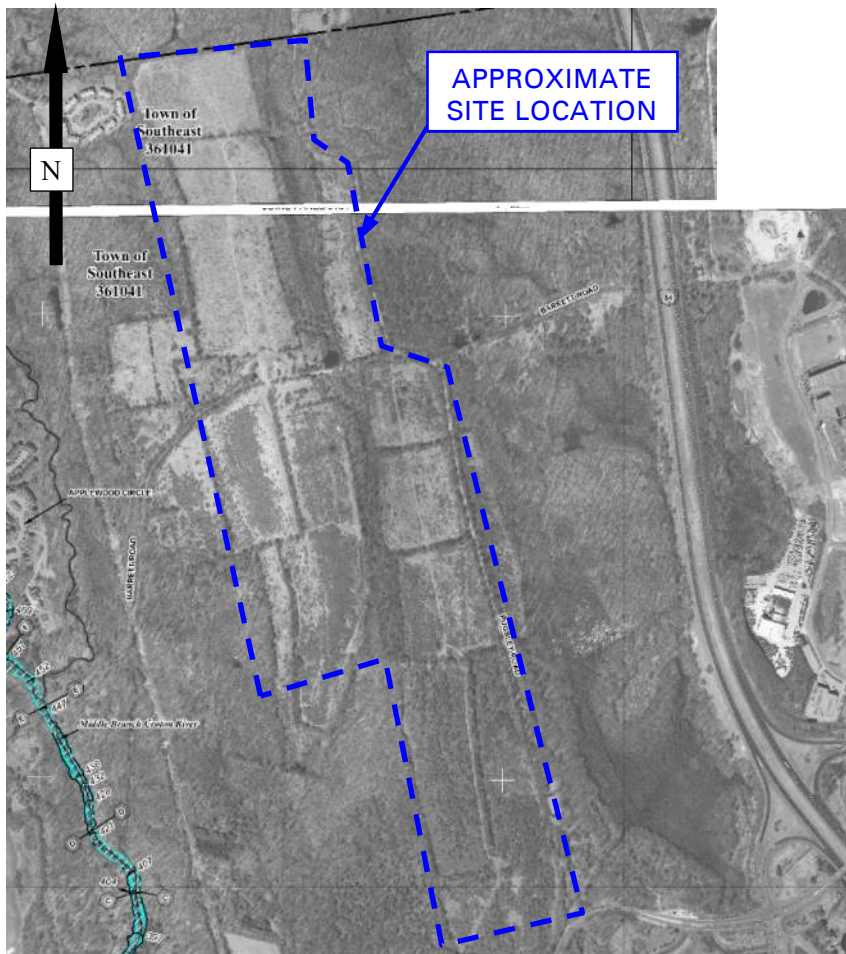
NEW YORK

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N.T.S.

DATE
2/27/2021

FIGURE
4



LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

- OTHER FLOOD AREAS**
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

- OTHER AREAS**
- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- New Jersey Flood Hazard Area Design Flood (NJFHADF)
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- Base Flood Elevation line and value; elevation in feet* (EL. 987)
- Base Flood Elevation value where uniform within zone; elevation in feet*
- * Referenced to the North American Vertical Datum of 1988
- Cross section line
- Limited detail cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000-meter Universal Transverse Mercator grid values, zone 18
- 5000-foot grid values: New Jersey State Plane coordinate system (SPSRZONE 2900), Transverse Mercator projection
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- River Mile

87°07'45", 32°22'30"

76°N
60000 FT
DX5510 x
M1.5

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
August 10, 2006

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

NFP

PANEL 0134E

FIRM
FLOOD INSURANCE RATE MAP

**PUTNAM COUNTY,
NEW YORK
(ALL JURISDICTIONS)**

PANEL 134 OF 256
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COWLE, TOWN OF	36059	0134	E
KENT, TOWN OF	36071	0134	E
HUTTENLOCH, TOWN OF	36102	0134	E
SOUTHEAST, TOWN OF	36151	0134	E

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
36079C0134E

EFFECTIVE DATE
MARCH 4, 2013

Federal Emergency Management Agency

NFP

PANEL 0142E

FIRM
FLOOD INSURANCE RATE MAP

**PUTNAM COUNTY,
NEW YORK
(ALL JURISDICTIONS)**

PANEL 142 OF 256
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
COWLE, TOWN OF	36059	0142	E
SOUTHEAST, TOWN OF	36151	0142	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
36079C0142E

EFFECTIVE DATE
MARCH 4, 2013

Federal Emergency Management Agency

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PROPOSED COMMERCIAL CAMPUS AT FIELDS CORNER

FEMA FLOOD MAP

SOUTHEAST

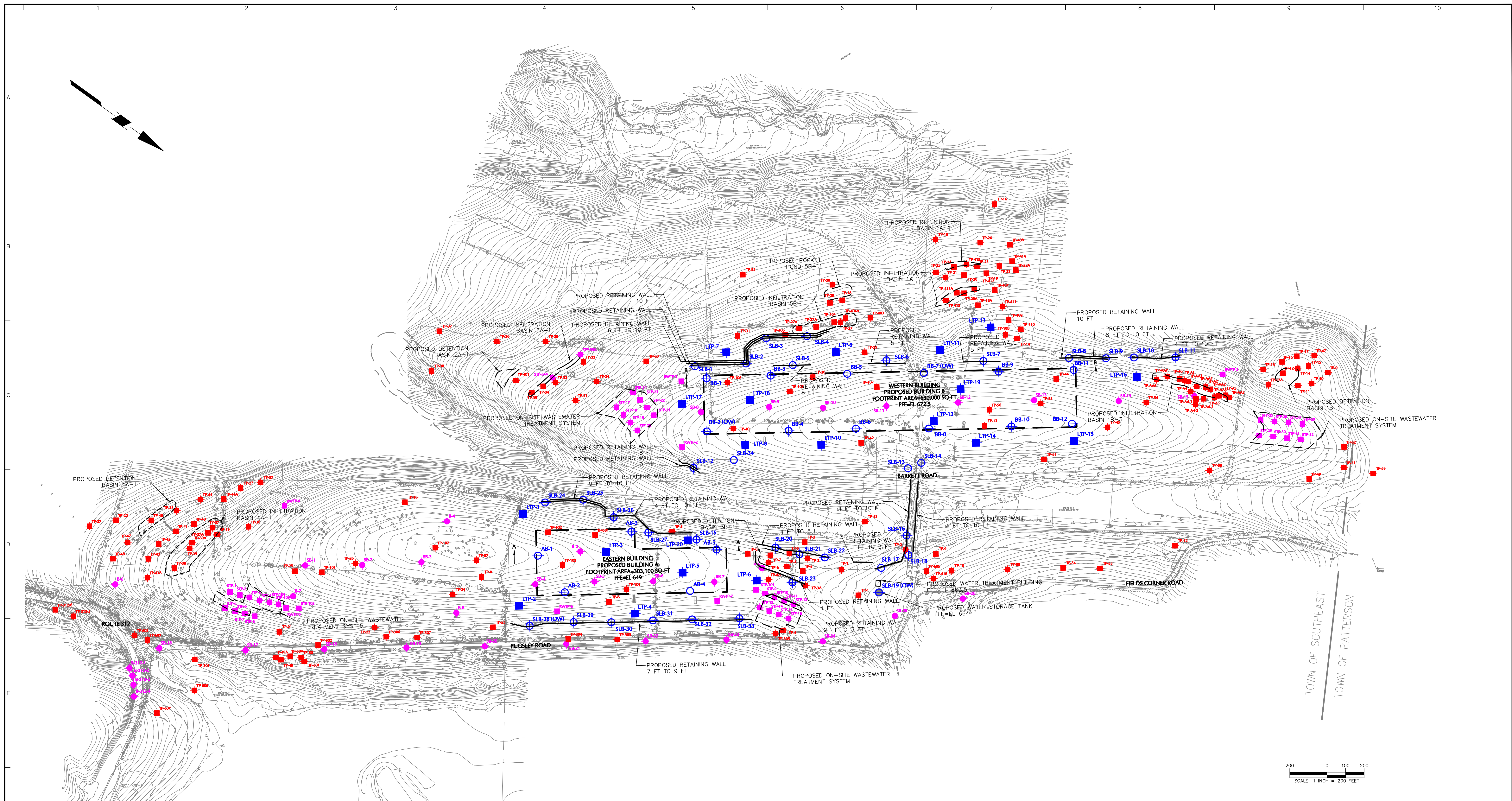
NEW YORK

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SCALE
N.T.S.

DATE
2/27/2021

FIGURE
5



NOTES

1. BASE MAP AND PROPOSED BUILDING INFORMATION TAKEN FROM PLAN TITLED "BORING AND TEST PIT LOCATION PLAN" DATED 06/25/2020 PREPARED BY SESI CONSULTING ENGINEERING D.P.C.
2. ELEVATIONS PROVIDED REFERENCE THE DATUM GIVEN IN THE ABOVE-REFERENCED PLAN, WHICH REFERS TO AN UNKNOWN DATUM.
3. TEST PITS LTP-1 THROUGH LTP-20 WERE EXCAVATED BY C GALLAGHER CONTRACTING BETWEEN 12 AND 13 APRIL 2021 UNDER FULL-TIME OBSERVATION BY LANGAN.
4. AB-SERIES, BB-SERIES AND SLB-SERIES BORINGS WERE PERFORMED BY CRAIG GEOTECHNICAL DRILLING, CO., INC (CRAIG) BETWEEN 22 APRIL AND 10 MAY 2021 UNDER FULL-TIME OBSERVATION BY LANGAN.
5. SB-SERIES BORINGS PERFORMED BY SESI IN MARCH 2018.
6. B-312-SERIES BORING PERFORMED BY SESI IN JUNE 2020.
7. STP, RWT/P AND TP SERIES TEST PITS WERE PERFORMED BY SESI BETWEEN OCTOBER 2018 AND JUNE 2020.
8. ALL LOCATIONS, ELEVATIONS, DIMENSIONS AND BUILDING LIMITS ARE APPROXIMATE AND SHOULD BE VERIFIED IN FIELD.
9. REFER TO FIGURE 7A AND FIGURE 7B FOR SUBSURFACE PROFILES.

LEGEND

- | | | |
|---|----------------|---|
|  | AB-1 | APPROXIMATE LOCATION OF LANGAN BUILDING A BORING |
|  | BB-1 | APPROXIMATE LOCATION OF LANGAN BUILDING B BORING |
|  | SLB-1 | APPROXIMATE LOCATION OF LANGAN SITE BORING |
|  | (OW) | LOCATION OF TEMPORARY OBSERVATION WELL |
|  | LTP-1 | APPROXIMATE LOCATION OF LANGAN TEST PIT |
|  | STP-1 | APPROXIMATE LOCATION OF 2018 SEPTIC TEST PIT BY SESI |
|  | TP-1 | APPROXIMATE LOCATION OF STORMWATER TEST PIT BY SESI |
|  | SB-3 | APPROXIMATE LOCATION OF BORING BY SESI |
|  | B-312-1 | APPROXIMATE LOCATION OF ROADWAY BORING BY SESI |
|  | RWTP-1 | APPROXIMATE LOCATION OF 2018 ROADWAY TEST PIT BY SESI |
|  | | APPROXIMATE LOCATION OF SUBSURFACE PROFILE |

LANGAN
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Environmental Services, Inc.
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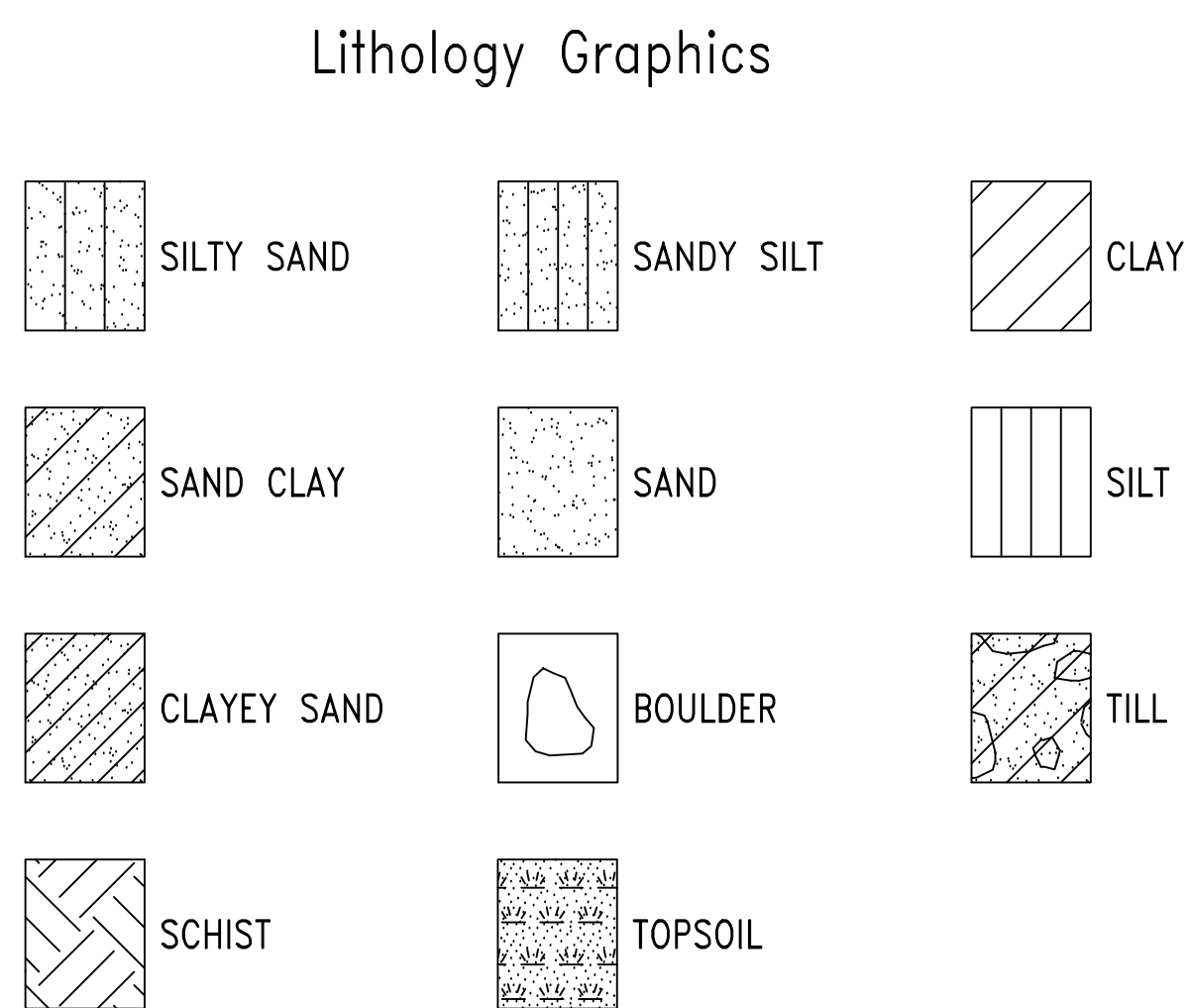
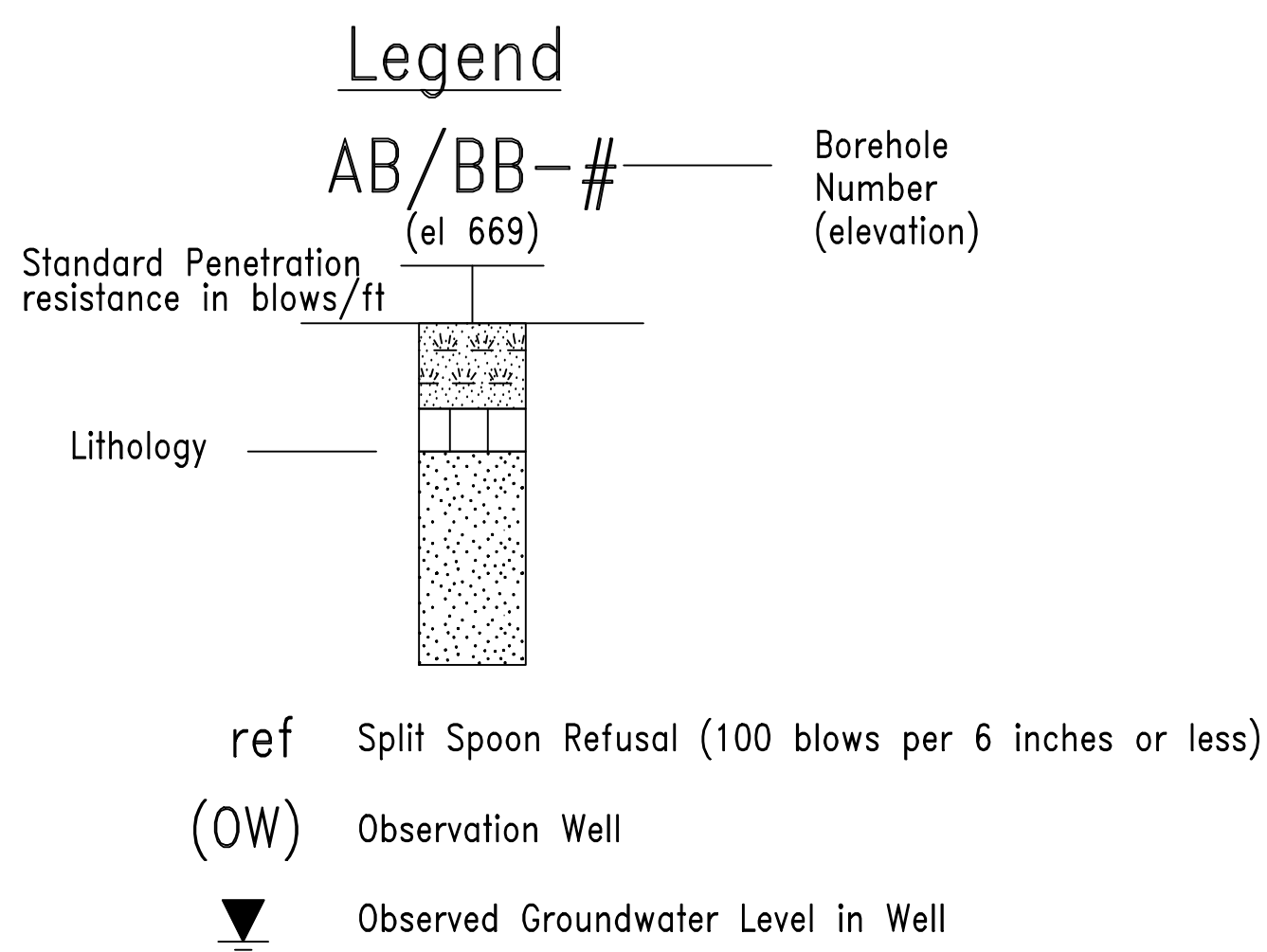
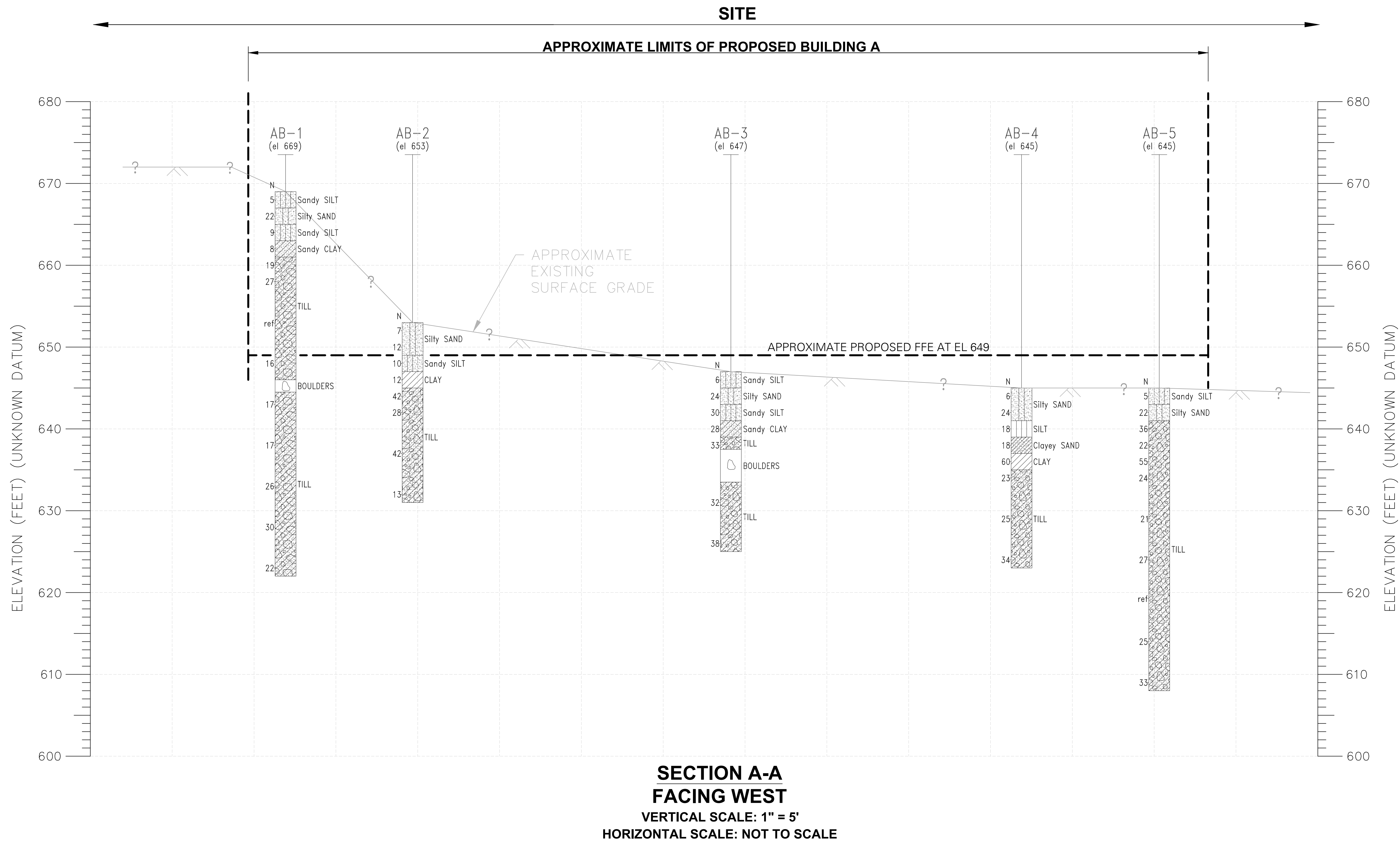
Project

**PROPOSED
COMMERCIAL CAMPUS
AT FIELDS CORNER**

Drawing Title

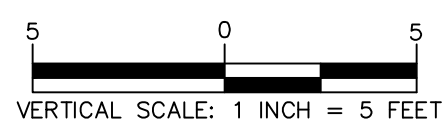
**BORING AND TEST
PIT LOCATION
PLAN**

Project No.	Figure 6
190065201	
Date	
5/10/2021	
Drawn By	
VAR	
Checked By	
BCE	
Sheet 0 of 0	



NOTES

1. REFERENCE SURVEY AND PROPOSED BUILDING FOOTPRINT LIMITS ARE TAKEN FROM A PLAN ENTITLED "BORING AND TEST PIT LOCATION PLAN", PREPARED BY SESI CONSULTING ENGINEERING D.P.C. AND DATED 25 JUNE 2020.
2. THE ELEVATIONS AND DIMENSIONS SHOWN ARE APPROXIMATE AND BASED ON THE ABOVE-REFERENCED DRAWING, WHICH REFERENCES AN UNKNOWN DATUM.
3. BORINGS WERE PERFORMED BETWEEN 23 APRIL AND 7 MAY 2021 BY CRAIG GEOTECHNICAL DRILLING, CO, INC UNDER FULL-TIME OBSERVATION OF LANGAN.
4. THIS PROFILE IS A GENERALIZED SOIL CROSS SECTION INTERPRETED FROM WIDELY SPACED BORINGS. SOIL AND GROUNDWATER MAY VARY IN TYPE, LOCATION, ELEVATION AND ENVIRONMENTAL AND ENGINEERING PROPERTIES BETWEEN POINTS OF EXPLORATION. VARIATIONS IN SUBSURFACE CONDITIONS SHOULD BE EXPECTED BETWEEN BORINGS.
5. REFER TO BORING LOGS FOR DETAILED DESCRIPTIONS OF BORINGS.
6. REFER TO FIGURE 6 FOR BORING LOCATION PLAN.



LANGAN
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NJ CERTIFICATE OF AUTHORIZATION No. 2454279640

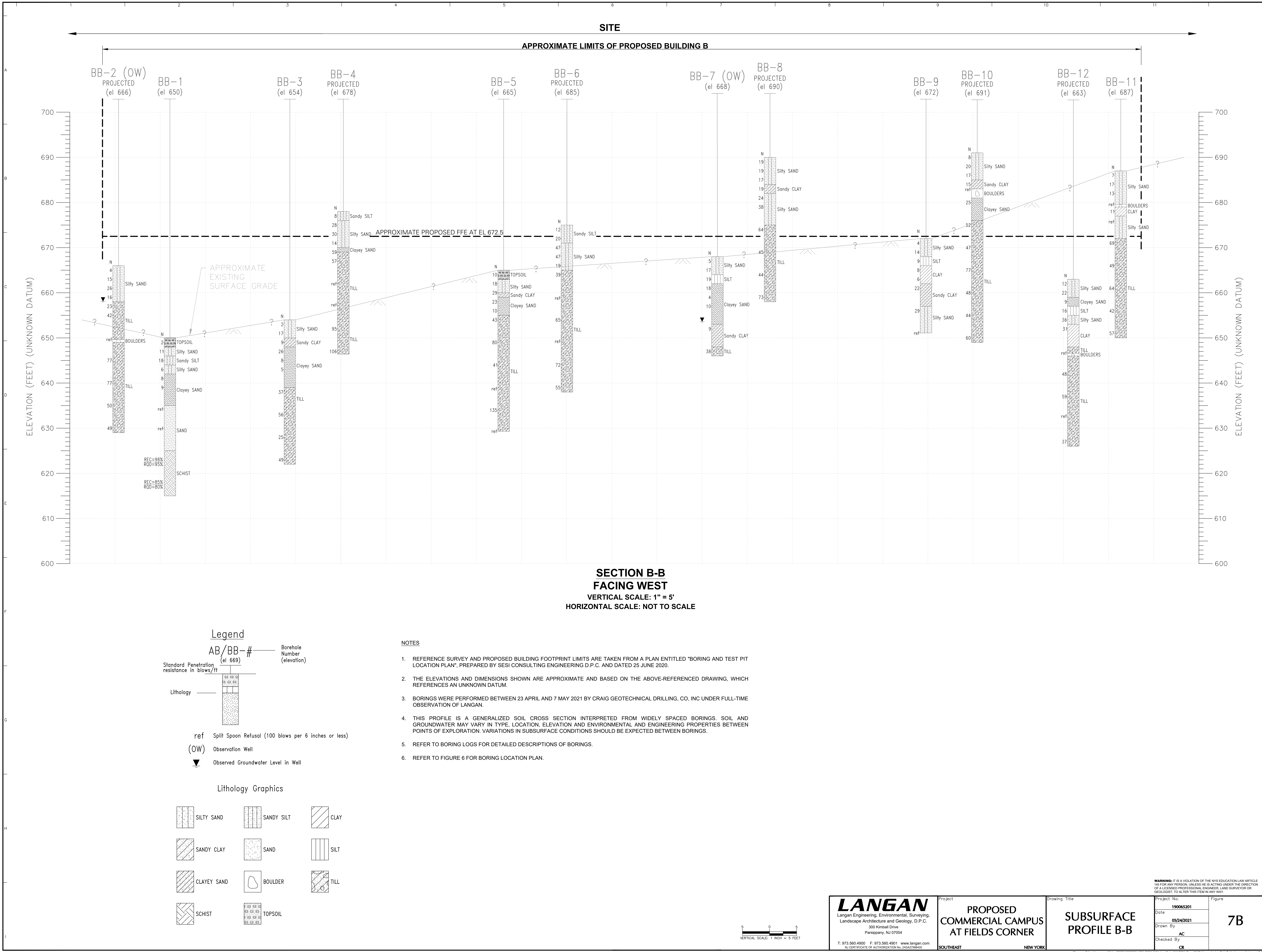
Project
**PROPOSED
COMMERCIAL CAMPUS
AT FIELDS CORNER**
BREWSTER
PUTNAM COUNTY
NEW YORK

Drawing Title
**SUBSURFACE
PROFILE A-A**

Project No.
190065201
Date
05/24/2021
Drawn By
AC
Checked By
CR

7A

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, LAND SURVEYOR OR GEOLOGIST, TO ALTER THIS ITEM IN ANY WAY.



APPENDIX A

Logs of Building A Borings

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 669 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/23/21		4/23/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				47 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				13		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		First	
4			4	6		Completion	
Casing Hammer		Weight (lbs)		Drop (in)		24 HR.	
Automatic		140		30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety		Weight (lbs)		Rodrigo Fernandez Santoyo			
		140					
		Drop (in)					
		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist (psi)	N-Value (Blows/ft)		
	+669.0	Brown SILT, some fine sand, trace roots (moist) [ML]	0				2			Started Drilling at 12:34 PM on 4/23/2021.
			1	S-1	SS	5	2	5		S-1 at 0ft
			2				3			
	+667.0	Grayish brown silty f-m SAND (moist) [SM]	2				8			S-2 at 2ft
			3	S-2	SS	14	12	22		
			4				10			
	+665.0	Grayish brown clayey SILT, some f-m sand (moist) [ML]	4				7			
			5	S-3	SS	14	6	9		Drove casing to 4.0ft. Drilled to 4.0ft. Grayish brown wash.
			6				5			S-3 at 4ft
	+663.0	Grayish brown sandy CLAY, some silt (wet) [CL] passing #200 = 56% wc=14.5%	6				5			
			7	S-4	SS	16	4	8		S-4 at 6ft
			8				4			
	+661.0	Grayish brown sandy SILT, trace clay, trace fine gravel (moist) [TILL]	8				5			Drilled to 8.0ft. Grayish brown wash.
			9	S-5	SS	14	9	19		S-5 at 8ft
			10				10			
		Grayish brown sandy SILT, trace clay, trace fine gravel (moist) [TILL]	10				11			
			11	S-6	SS	22	8	27		S-6 at 10ft
			12				13			
			13				14			
			14				17			
		Grayish brown sandy SILT, trace clay, trace fine gravel (moist) [TILL]	15				15			
			16	S-7	SS	8	19	50/1		Drilled to 15.0ft. Grayish brown wash. Rig chattering.
			17							S-7 at 15ft. Spoon bouncing
			18							Hard drilling at 16ft
			19							
	+649.0		20							

Project			Project No.						
Proposed Commercial Campus at Fields Corner			190065201						
Location			Elevation and Datum						
Southeast, New York			Approx el 669 (unknown datum - SESI Survey)						
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	+649.0	Gray silty CLAY, trace f-c sand, trace fine gravel (wet) [TILL]	20				6		Drilled to 20.0ft. Grayish brown wash. S-8 at 20ft q _u =2.50 tsf
			21	S-8	SS	18	7	16	
				22				9	
	+646.0	POSSIBLE BOULDER	23						Drilled through approximately 1.5ft thick obstruction from 23ft to 24.5ft
			24						
	+644.5	Gray silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	25				7		Drilled to 25.0ft. Grayish brown wash. Rig chattering. S-9 at 25ft q _u =2.50 tsf
			26	S-9	SS	15	6	17	
				27				11	
		Gray silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	28				15		Drilled to 30.0ft. Grayish brown wash. Rig chattering. S-10 at 30ft q _u =2.75 tsf
			29						
			30	S-10	SS	15	6	17	
		Gray sandy SILT, some clay trace fine gravel (wet) [TILL]	31				7		Drilled to 35.0ft. Gray wash. Rig chattering. S-11 at 35ft q _u =2.75 tsf
			32				10		
			33				11		
		Gray silty CLAY, some f-c SAND, trace fine gravel (wet) [TILL]	34						Drilled to 40.0ft. Gray wash. S-12 at 40ft q _u =3.50 tsf
			35	S-11	SS	3	9	26	
			36				11		
			37				15		
			38				14		
			39						
			40				18		Drilled to 40.0ft. Gray wash. S-12 at 40ft q _u =3.50 tsf
			41	S-12	SS	22	10	30	
			42				20		
			43				19		
			44						
			45						

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Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 669 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	624.0	Gray silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	45	S-13	SS	22	11	22	Drilled to 45.0ft. Gray wash. S-13 at 45ft q _u =4.50 tsf
	622.0		7						
		End of boring at 47'	47				15		Finished drilling at 1:52 PM on 4/23/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			48						
			49						
			50						
			51						
			52						
			53						
			54						
			55						
			56						
			57						
			58						
			59						
			60						
			61						
			62						
			63						
			64						
			65						
			66						
			67						
			68						
			69						
			70						

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201									
Location Southeast, New York				Elevation and Datum Approx el 653 (unknown datum - SESI Survey)									
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 4/26/21		Date Finished 4/26/21							
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 22 ft		Rock Depth N.E.							
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples		Disturbed		Undisturbed		Core			
Casing Diameter (in) 4			Casing Depth (ft) 8	Water Level (ft.)		First ▽		4		Completion ▽		24 HR. ▽	
Casing Hammer Automatic		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Paul Mullins							
Sampler 2" OD Split Spoon													
Sampler Hammer Safety		Weight (lbs) 140		Drop (in) 30		Field Engineer Gopal Goswami							

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	653.0	Brown silty f-m SAND, some clay, trace f-c gravel with roots (moist) [SM]	0				1		Started Drilling at 11:03 AM on 4/26/202.
			1	S-1	SS	16	2	7	S-1 at 0ft
			2				5		
		Brown silty f-m SAND, some clay, trace f-c gravel with roots (moist) [SM] organic content = 1.1%	3	S-2	SS	16	6	12	S-2 at 2ft
			4				6		
	649.0	Grayish brown sandy SILT, some clay, trace fine gravel (wet) [ML]	5	S-3	SS	12	5	10	Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			6				4		S-3 at 4ft.
	647.0	Grayish brown silty CLAY, some f-c sand, trace f-c gravel (wet) [CL]	7	S-4	SS	14	9	12	S-4 at 6ft
			8				6		
	645.0	Grayish brown f-c SAND, some clay, some silt, trace f-c gravel (wet) [TILL]	9	S-5	SS	10	14	42	Drove casing to 8.0ft. Drilled to 8.0ft. Light brown wash.
			10				20		S-5 at 8ft
		Grayish green sandy SILT, some clay, trace silt, trace f-c gravel (wet) [TILL]	11	S-6	SS	12	7	28	S-6 at 10ft
			12				12		
			13				16		
			14				27		
		Gray clayey SILT, some f-c sand, trace f-c gravel (wet) [TILL]	15	S-7	SS	14	7	42	Drilled to 15.0ft. Light brown wash.
			16				12		S-7 at 15ft
			17				30		
			18				23		
			19						
	633.0		20						

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Project Proposed Commercial Campus at Fields Corner			Project No. 190065201						
Location Southeast, New York			Elevation and Datum Approx el 653 (unknown datum - SESI Survey)						
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)	
	633.0	Gray silty CLAY, trace f-m sand some silt, trace fine gravel (wet) [TILL] LL = 22, PL = 14, PI = 8 wc = 9.3%	20	S-8	SS	20	6	13	Drilled to 20.0ft. Gray green wash. S-8 at 20ft q _u =2.25 tsf
	631.0		21				6		
		End of boring at 22'	22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
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			42						
			43						
			44						
			45						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 647 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/7/21		5/7/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				22 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				7		Undisturbed	
Casing Diameter (in)				First		Completion	
4				4		24 HR.	
Casing Hammer				Drop (in)		N.E.	
Automatic				30		-	
Weight (lbs)				Drop (in)		-	
140				30		-	
Sampler				Drilling Foreman		-	
2" OD Split Spoon				Paul Mullins		-	
Sampler Hammer				Field Engineer		-	
Safety				Rodrigo Fernandez Santoyo		-	
Weight (lbs)				Drop (in)		-	
140				30		-	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	+647.0	Brown sandy SILT, trace clay (wet) [ML]	0				3		Started Drilling at 8:33 AM on 5/7/2021.
			1	S-1	SS	4	3	6	S-1 at 0ft
	+645.0	Brown silty f-c SAND, some clay (moist) [SM]	2				5		S-2 at 2ft
			3	S-2	SS	16	11	24	
	+643.0	Grayish brown SILT, some f-m sand, trace clay (wet) [ML]	4				13		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			5	S-3	SS	19	15	30	S-3 at 4ft $q_u=2.25$ tsf
	+641.0	Grayish brown silty CLAY, trace f-m sand, trace fine gravel (wet) [CL]	6				20		S-4 at 6ft $q_u=2.50$ tsf
			7	S-4	SS	22	17	28	
	+639.0	Grayish brown silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	8				24		
			9	S-5	SS	19	10	33	Drilled to 8.0ft. Grayish brown wash.
	+637.5	POSSIBLE BOULDER	10				14		S-5 at 8ft. Spoon bouncing $q_u=4.50$ tsf
			11				19		Drilled through 4ft obstruction from 9.5 ft to 13.5 ft.
			12				50/1		
	+633.5	Grayish brown clayey SILT, trace f-m sand, trace fine gravel (wet) [TILL]	13						
			14						
			15	S-6	SS	24	15	32	Drilled to 15.0ft.
			16				16		S-6 at 15ft $q_u=4.50$ tsf
			17				18		
			18						
			19						
			20						

Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 647 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	627.0	Grayish brown sandy SILT, trace clay, trace fine gravel (wet) [TILL]	20	S-7	SS	4	12	38	Drilled to 20.0ft. Grayish brown wash. Rig chattering. S-7 at 20ft
	625.0		21				18		
		End of boring at 22'	22				25		Finished drilling at 9:11 AM on 5/7/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
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			39						
			40						
			41						
			42						
			43						
			44						
			45						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 645 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/26/21		4/26/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				22 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				8		Undisturbed	
Casing Diameter (in)				First		Core	
4				8		-	
Casing Depth (ft)				Completion		24 HR.	
4				8		-	
Casing Hammer				Drilling Foreman			
Automatic				Paul Mullins			
Weight (lbs)				Field Engineer			
140				Gopal Goswami			
Drop (in)							
30							
Sampler							
2" OD Split Spoon							
Sampler Hammer							
Safety							
Weight (lbs)							
140							
Drop (in)							
30							

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	645.0	Brown silty f-m SAND, some clay, trace fine gravel (moist) [SM]	0				2		Started Drilling at 4/26/2021 12:07 PM. S-1 at 0ft
			1	S-1	SS	12	2	5	
		Brown f-c SAND, some silt, trace f-c gravel, trace clay (moist) [SM]	2				4		S-2 at 2ft
			3	S-2	SS	12	9	24	
	641.0	Brown SILT, some clay, some f-c sand, trace fine gravel (moist) [ML]	4				7		Drove casing to 4.0ft. Drill to 4.0ft. Gray brown wash.
			5	S-3	SS	12	8	18	S-3 at 4ft
	639.0	Brownish gray clayey f-c SAND, some silt, trace fine gravel (moist) [SC]	6				10		S-4 at 6ft
			7	S-4	SS	12	7	18	
	637.0	Gray CLAY, some f-c sand, some silt, some f-c gravel (wet) [CL]	8				8		Drilled to 8.0ft. Gray brown wash.
			9	S-5	SS	6	12	60	S-5 at 8ft
	635.0	Gray CLAY, some f-c sand, some silt, some f-c gravel (wet) [TILL]	10				20		S-6 at 10ft
			11	S-6	SS	14	9	23	
			12				12		
			13				15		
			14						
		Gray silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	15				24		Drilled to 15.0ft. Greenish gray wash.
			16	S-7	SS	12	12	25	S-7 at 15ft
			17				13		
			18				16		
			19						
			20						

Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 645 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	625.0	Gray CLAY, some silt, some f-c sand, some f-c gravel (wet) [TILL]	20	S-8	SS	10	24	34	Drilled to 20.0ft. Gray wash. S-8 at 20ft
	21		21						
	623.0	End of boring at 22'	22				13		Finished drilling at 12:49 PM on 4/26/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
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			34						
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			42						
			43						
			44						
			45						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 645 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/23/21		4/23/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				37 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				11		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		First	
4			4	20		Completion	
Casing Hammer		Weight (lbs)		Drop (in)		24 HR.	
Automatic		140		30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety		Weight (lbs)		Rodrigo Fernandez Santoyo			
		140					
		Drop (in)					
		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	+645.0	Light brown sandy SILT, trace clay, trace roots (moist) [ML]	0				4			Started Drilling at 10:03 AM on 4/23/2021.
			1	S-1	SS	20	3			S-1 at 0ft
	+643.0	Grayish brown silty f-c SAND, trace f-c gravel, trace clay (moist) [SM]	2				9			S-2 at 2ft
			3	S-2	SS	21	12			
			4				10			
	+641.0	Grayish brown clayey f-c SAND, some silt, trace coarse gravel (moist) [TILL]	5	S-3	SS	15	8			Drove casing to 4.0ft. Drilled to 4.0ft. Grayish brown wash. S-3 at 4ft. Gravel in shoe
			6				27			
			7	S-4	SS	14	6			Drilled to 6.0ft. Rig chattering. Grayish brown wash. S-4 at 6ft
			8				10			
		Grayish brown silty f-c SAND, some clay, trace fine gravel (moist) [TILL]	9	S-5	SS	16	12			Drilled to 8.0ft. Grayish brown wash. S-5 at 8ft
			10				32			
			11	S-6	SS	15	23			Drilled to 10.0ft. Grayish brown wash. S-6 at 10ft
			12				25			
			13				9			
			14				10			
			15				14			
			16	S-7	SS	13	8			Drilled to 15.0ft. Grayish brown wash. Rig chattering. S-7 at 15ft
			17				9			
			18				12			
			19				19			
	+625.0	Grayish brown sandy SILT, some clay, trace f-c gravel (moist) [TILL]	20							

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Project			Project No.							
Proposed Commercial Campus at Fields Corner			190065201							
Location			Elevation and Datum							
Southeast, New York			Approx el 645 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)		
	625.0	Gray clayey SILT, some f-c sand, trace fine gravel (moist) [TILL]	20					11	Drilled to 20.0ft. Grayish brown wash. S-8 at 20ft	
			21	S-8	SS	6		12 15		
			22					12		
				23						Drilled to 25.0ft. Grayish brown wash. S-9 at 25ft. Spoon bouncing
			24							
			25	S-9	SS	8	13	50/3		
				26						
				27						Drilled to 30.0ft. Rig chattering. Gray wash. S-10 at 30ft
			28							
			29							
			Gray sandy SILT, some clay, trace fine gravel (moist) [TILL]	30					8	Drilled to 35.0ft. Grayish brown wash. S-11 at 35ft
				31	S-10	SS	15	9	16	
			32					22		
			33						Finished drilling at 11:26 AM on 4/23/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.	
			34							
		Gray clayey SILT, some f-c sand, trace fine gravel (moist) [TILL]	35					10		
			36	S-11	SS	15	11	22		
			37					26		
	608.0	End of boring at 37'								
			38							
			39							
			40							
			41							
			42							
			43							
			44							
			45							

APPENDIX B

Logs of Building B Borings

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 650 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/29/21		4/29/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				35 ft		25 ft	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				8		Undisturbed	
Casing Diameter (in)		Casing Depth (ft)		Water Level (ft.)		Core	
4		4		First		2	
				▽		-	
Casing Hammer		Weight (lbs)		Completion		24 HR.	
Automatic		140		4		▽	
Drilling Foreman				First		Completion	
Paul Mullins				4		-	
Sampler				2" OD Split Spoon		24 HR.	
2" OD Split Spoon				Field Engineer		-	
Sampler Hammer		Weight (lbs)		Gopal Goswami			
Automatic		140					
		Drop (in)					
		30					

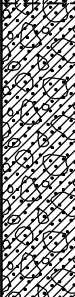
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
					Number	Type	Recov. (in)	Penetr. resist BLU6in	N-Value (Blows/ft)	
	+650.0	Brown silty f-m SAND, trace clay, trace fine gravel with roots (moist) [TOPSOIL]		0				1		Started Drilling at 8:11 AM on 4/29/2021. S-1 at 0ft
	+648.0	Light brown f-c SAND, some silt, trace clay, trace coarse gravel (moist) [SM]		1	S-1	SS	12	1	2	S-2 at 2ft
	+646.0	Brownish gray sandy SILT, some clay, trace fine gravel (wet) [ML]		2				1		
	+644.0	Brownish gray silty f-c SAND, trace clay (wet) [SM]		3	S-2	SS	14	4	11	
	+642.0	Brownish gray clayey f-c SAND, some silt, trace coarse gravel (wet) [SC] passing #200 = 42% wc = 12.6%		4				7		Drove casing to 4.0ft. Drilled to 4.0ft. Gray brown wash.
		Brownish gray clayey f-c SAND, some silt (wet) [SC]		5	S-3	SS	16	4	18	S-3 at 4ft
				6				10		
				7	S-4	SS	10	6	2	S-4 at 6ft
				8				4	5	
				9	S-5	SS	6	3	8	Drilled to 8.0ft. Gray brown to greenish gray wash.
				10				5		S-5 at 8ft
				11	S-6	SS	14	5	9	S-6 at 10ft
				12				5		
				13				4		
				14				5		
	+635.0	Dark gray f-c SAND, trace silt (wet) [SP]		15	S-7	SS	8	23	50/3	Drilled to 15.0ft. Greenish gray to brownish gray wash.
				16				8		S-7 at 15ft
				17						
				18						
	+631.0			19						Start of boulder
				20						

Project			Project No.										
Proposed Commercial Campus at Fields Corner			190065201										
Location			Elevation and Datum										
Southeast, New York			Approx el 650 (unknown datum - SESI Survey)										
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Coring (min)	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
					Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)				
	630.0	No Recovery - POSSIBLE BOULDER		20	S-8	SS	0	50/1	10 20 30 40	50/1	Drilled to 20.0ft. Greenish gray wash. S-8 at 20ft		
				21									
	628.0			22							End of boulder		
				23									
				24									
				25									
	625.0	Dark gray to bluish gray micaceous SCHIST; fresh; very wide fracture spacing; rock quality excellent	1:35	26	C-1	NX Core	REC=52"/60" =87%	RQD=51"/60" =85%			Drilled to 25.0ft. Gray to greenish gray wash. C-1 at 25ft		
			2:04	27									
			2:12	28									
			3:25	29									
			1:50	30									
		Dark gray to bluish gray micaceous SCHIST; fresh; very wide fracture spacing; rock quality excellent	2:45	31	C-2	NX Core	REC=49"/60" =82%	RQD=45"/60" =75%			C-2 at 30ft		
			1:30	32									
			4:04	33									
			3:07	34									
		3:09	35										
	615.0	End of boring at 35'		36							Finished drilling at 9:38 AM on 4/29/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.		
				37									
				38									
				39									
				40									
				41									
				42									
				43									
				44									
				45									

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 666 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/30/21		4/30/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				37 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				11		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		Core	
4			4	First		Completion	
Casing Hammer			Weight (lbs)	4		24 HR.	
Automatic			140	Drop (in)		7.9	
Drop (in)			30	Drilling Foreman			
Sampler				Paul Mullins			
2" OD Split Spoon				Field Engineer			
Sampler Hammer			Weight (lbs)	Gopal Goswami			
Automatic			140				
Drop (in)			30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	666.0	Brown to light brown silty f-m SAND, some clay, trace roots (moist) [SM]	0				1			Started Drilling at 8:32 AM on 4/30/2021.
			1	S-1	SS	12	2			S-1 at 0ft
		Brown to grayish brown silty f-c SAND, some clay (moist) [SM]	2				2			
			3	S-2	SS	20	3			S-2 at 2ft
		Brown silty f-c SAND, some clay, trace fine gravel (wet) [SM]	4				6			
			5	S-3	SS	12	8			Drove casing to 4.0ft. Drilled to 4.0ft. Gray brown wash.
		Brown silty f-c SAND, trace clay, trace fine gravel (wet) [SM]	6				7			S-3 at 4ft
			7	S-4	SS	10	11			
			8				10			S-4 at 6ft
	658.0	Brownish gray sandy CLAY, some silt, trace fine gravel (wet) [TILL]	9	S-5	SS	14	6			
			10				8			Drilled to 8.0ft. Gray brown wash.
		Brownish gray silty f-c SAND, trace clay, trace fine gravel (wet) [TILL]	11	S-6	SS	16	7			S-5 at 8ft
			12				8			
			13				11			S-6 at 10ft
			14				10			
		Brownish gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	15	S-7	SS	12	13			
	649.7	POSSIBLE BOULDER	16				29			Drilled to 15.0ft. Gray brown wash.
	649.0		17				33			S-7 at 15ft
			18							Rig Chattering
			19							
			20							Breakthrough of boulder

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Project			Project No.											
Proposed Commercial Campus at Fields Corner			190065201											
Location			Elevation and Datum											
Southeast, New York			Approx el 666 (unknown datum - SESI Survey)											
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)					
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft) 10 20 30 40						
	646.0	Brownish gray silty f-c SAND, some clay, trace fine gravel (wet) [TILL]	20				30					Drilled to 20.0ft. Gray brown wash. S-8 at 20ft		
			21	S-8	SS	20	42						77	
			22				35							
				23				28						Rod Chattering
			24											
			25											
	641.0	Gray clayey SILT, some f-c sand, trace fine gravel (wet) [TILL]	25				30						Drilled to 25.0ft. Gray brown wash. S-9 at 25ft	
			26	S-9	SS	20	42					77		
			27				35							
				28				28						Rod Chattering
			29											
			30											
		Gray silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	30				16					Drilled to 30.0ft. Gray brown wash. S-10 at 30ft		
			31	S-10	SS	24	24						50	
			32				26							
				33				48					Rod Chattering	
			34											
			35											
			Gray SILT, some clay, some f-c sand, trace fine gravel (wet) [TILL]	35				17					Drilled to 35.0ft. Gray brown wash. S-11 at 35ft	
			36	S-11	SS	24	23					49		
			37				26							
	629.0	End of boring at 37'		37				36					Finished drilling at 9:38 AM at 4/30/2021. Installed 2" diameter PVC temporary observation well with 10ft slotted screen and 10ft riser.	
			38											
			39											
		40												
		41												
		42												
		43												
		44												
		45												

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 654 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/30/21		4/30/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				32 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				10		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		Core	
4			4	First		-	
Casing Hammer			Weight (lbs)	Completion		24 HR.	
Automatic			140	4		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Automatic			Weight (lbs)	Gopal Goswami			
			140				
Drop (in)			30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	654.0	Light brown silty f-m SAND, some clay, trace roots (moist) [SM]	0				1			Started Drilling at 4/30/2021 10:17 AM. S-1 at 0ft
			1	S-1	SS	14	1			
			2				8			S-2 at 2ft
		Light brown to grayish brown silty f-m SAND, some clay (moist) [SM]	3	S-2	SS	20	5			
			4				12			
	650.0	Brownish gray sandy CLAY, some silt, trace fine gravel (wet) [CL]	4				11			
			5	S-3	SS	14	4			Drove casing to 4.0ft. Drill to 4.0ft. Greenish gray wash. S-3 at 4ft
			6				5			
	648.0	Brownish gray clayey f-c SAND, some silt, trace fine gravel (wet) [SC]	6				3			S-4 at 6ft
			7	S-4	SS	12	13			
			8				16			
		Brownish gray clayey f-c SAND, some silt, trace fine gravel (wet) [SC]	9	S-5	SS	16	10			Drilled to 8.0ft. Greenish gray wash. S-5 at 8ft q _u = .50 tsf
			10				11			
			11	S-6	SS	12	1			S-6 at 10ft
		Brownish gray clayey f-c SAND, some silt, trace fine gravel (wet) [SC] passing #200 = 47% wc = 12.7%	12				4			
			13				4			
			14				1			
	639.0	Brownish gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	15				3			
			16	S-7	SS	16	2			Drilled to 15.0ft. Greenish gray wash. S-7 at 15ft
			17				1			
			18				15			
			19				22			
			20				23			

Project			Project No.								
Proposed Commercial Campus at Fields Corner			190065201								
Location			Elevation and Datum								
Southeast, New York			Approx el 654 (unknown datum - SESI Survey)								
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)			
	634.0	Gray SILT, some clay, some f-c sand (wet) [TILL]	20							Drilled to 20.0ft. Greenish gray wash. S-8 at 20ft	
			21	S-8	SS	2	34		56		
			22				22				
			23								
			24								
		Gray sandy SILT, some clay, some f-c gravel (wet) [TILL]	25				6			Drilled to 25.0ft. Gray wash. S-9 at 25ft q _u =4.50 tsf	
			26	S-9	SS	16	10		25		
			27				15				
			28				43				
			29								
	Gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	30				48			Drilled to 30.0ft. Gray wash. S-10 at 30ft		
		31	S-10	SS	10	23		49			
		32				26					
	622.0	End of boring at 32'	32				48			Finished drilling at 11:11 AM ont 4/30/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.	
		33									
		34									
		35									
		36									
		37									
		38									
		39									
		40									
		41									
		42									
		43									
		44									
		45									

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Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 678 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/6/21		Date Finished 5/6/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 31.6 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 10	Undisturbed -	Core -
Casing Diameter (in) 4		Casing Depth (ft) 4		Water Level (ft.) First 6	Completion -	24 HR. -	
Casing Hammer Automatic	Weight (lbs) 140		Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Rodrigo Fernandez Santoyo			
Sampler Hammer Safety	Weight (lbs) 140		Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)	
	+678.0	Brown sandy SILT, trace clay, trace roots (moist) [ML]	0				4		Started Drilling at 7:44 AM on 5/6/2021.
			1	S-1	SS	10	4	8	S-1 at 0ft
	+676.0	Grayish brown sandy SILT, trace gravel, trace clay (moist) [ML]	2				17		S-2 at 2ft
			3	S-2	SS	10	11	28	
		Grayish brown silty f-m SAND, trace fine gravel, trace clay (moist) [SM]	4				14		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			5	S-3	SS	20	13	30	S-3 at 4ft
		Grayish brown sandy SILT, trace fine gravel (wet) [ML]	6				17		S-4 at 6ft
	+670.0		7	S-4	SS	14	7	14	
		Grayish brown clayey f-c SAND, some silt, trace f-c gravel (wet) [SC]	8				7		Drilled to 8.0ft. Grayish brown wash.
	+669.0		9	S-5	SS	8	8	59	S-5 at 8ft
		Grayish brown silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	10				52		S-6 at 10ft
			11	S-6	SS	14	36	57	
			12				30		
			13				27		
			14				25		Drove casing to 14.0ft
		Grayish brown sandy SILT, some clay, trace f-c gravel (wet) [TILL]	15	S-7	SS	6	28		Drilled to 15.0ft. S-7 at 15ft.
			16				55	50/0	Spoon bouncing
			17						
			18						
			19						
			20						

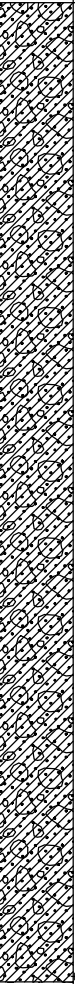
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Project			Project No.								
Proposed Commercial Campus at Fields Corner			190065201								
Location			Elevation and Datum								
Southeast, New York			Approx el 678 (unknown datum - SESI Survey)								
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft) 10 20 30 40			
	658.0	Grayish brown sandy SILT, some clay, trace f-c gravel (wet) [TILL]	20	S-8	SS	5	46 50/2		50/2	Drilled to 20.0ft. Grayish brown wash. Rig Chattering. S-8 at 20ft	
	21										
	22										
	23										
	653.0	Gray clayey SILT, some f-c sand, trace f-c gravel (wet) [TILL]	24							95	Drilled to 25.0ft. Grayish brown wash. Rig Chattering. S-9 at 25ft
			25	S-9	SS	22	38 45 50 48				
			26								
			27								
	646.4	Gray silty CLAY, some f-c sand, trace f-c gravel (wet) [TILL]	28							106	Drilled to 30.0ft. Gray wash. Rig Chattering. S-10 at 30ft
			29								
			30	S-10	SS	20	36 44 62 50/1				
			31								
		End of boring at 31.6'	32								Finished drilling at 9:15 AM on 5/6/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			33								
			34								
			35								
			36								
			37								
			38								
			39								
			40								
			41								
			42								
			43								
			44								
			45								

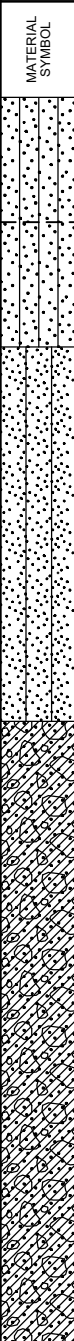
Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 665 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	5/4/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	35.7 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Field Engineer	Athira Nair

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist (lb/in)	N-Value (Blows/ft)		
	665.0	Brown silty f-c SAND, trace clay, trace roots (moist) [TOPSOIL] organic content = 2.4%	0				3			Started Drilling at 11:33 AM on 5/4/2021.
			1	S-1	SS	20	5	10		S-1 at 0ft
	663.0	Brown silty f-c SAND, trace roots (moist) [SM] organic content = 1.1%	2				5			S-2 at 2ft
			3	S-2	SS	12	8	18		
		Brown f-c SAND, some silt (moist) [SM]	4				15			Drilled to 4.0ft.
	660.0		5	S-3A	SS	10	17	29		S-3 at 4ft
		Tannish brown sandy CLAY, trace silt (moist) [CL]	6	S-3B			12			
	659.0	Tannish brown clayey f-m SAND, some silt, trace f-c gravel (moist) [SC]	7	S-4	SS	10	7	23		S-4 at 6ft
			8				16			
		Tannish brown clayey f-m SAND, some silt, trace f-c gravel (moist) [SC] passing #200 = 43% wc = 12.7%	9	S-5	SS	15	5	10		Drilled to 8.0ft, S-5 at 8ft
	655.0		10				6			
		Tannish brown silty f-c SAND, some clay (moist) [TILL]	11	S-6	SS	24	12	43		S-6 at 10ft
			12				20			
			13				23			
			14				27			
	649.0	Tannish brown silty CLAY, some f-c sand, trace f-c gravel (moist) [TILL]	15	S-7A		12	23	80		S-7 at 15ft
		Dark gray f-c SAND, some fine gravel (moist) [TILL]	16	S-7B			53			
			17				27			Rig chattering
			18				26			
			19							
			20							

Project	Proposed Commercial Campus at Fields Corner	Project No.	190065201
Location	Southeast, New York	Elevation and Datum	Approx el 665 (unknown datum - SESI Survey)

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					N-Value (Blows/ft)				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		10	20	30	40	
	645.0	Gray clayey f-c SAND, some silt, trace f-c gravel (wet) [TILL]	20				18						S-8 at 20ft
			21	S-8	SS	18	18 23 33					41	
			22										Rig chattering
			23										
			24										
		Dark gray silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	25	S-9	SS	15	48 48 50/3						S-9 at 25ft
			26									50/3	
			27										
			28										
			29										
		Dark gray silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	30	S-10	SS	18	34 47 88 50/3						Drilled to 30ft. S-10 at 30ft
			31									135	Switched to automatic hammer. Split spoon refusal
			32										
			33										
			34										Rig chattering
			35	S-11	SS	6	60 50/2						Drilled to 35ft. S-11 at 35ft
	629.3	Dark gray clayey SILT, some f-c sand, trace fine gravel (wet) [TILL]	36										50/2
		End of boring at 35.7'	37										Finished drilling at 12:55 PM on 5/4/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			38										
			39										
			40										
			41										
			42										
			43										
			44										
			45										

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 685 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/5/21		Date Finished 5/5/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 37 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 11	Undisturbed -	Core -
Casing Diameter (in) 4			Casing Depth (ft) 19	Water Level (ft.) First 8	Completion 24 HR. -	24 HR. -	
Casing Hammer Automatic	Weight (lbs) 140		Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Rodrigo Fernandez Santoyo			
Sampler Hammer Safety	Weight (lbs) 140		Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)				
	685.0	Light brown sandy SILT, trace fine gravel (moist) [ML]	0				4	10	20	30	40	Started Drilling at 7:38 AM on 5/5/2021. S-1 at 0ft S-2 at 2ft Drove casing to 4.0ft. Drilled to 4.0ft. S-3 at 4ft S-4 at 6ft Drilled to 8.0ft. Rig chattering. Grayish brown wash. S-5 at 8ft Drove casing to 9.0ft S-6 at 10ft Drove casing to 14.0ft Drilled to 15.0ft. Rig chattering. Grayish brown wash. S-7 at 15ft Drove casing to 19.0ft
			1	S-1	SS	14	6	12				
	683.0	Light grayish brown sandy SILT (moist) [ML]	2				10					
			3	S-2	SS	18	10	20				
	681.0	Light brown silty f-m SAND, trace clay (moist) [SM]	4				10					
			5	S-3	SS	6	23	47				
		Light brown silty f-c SAND, trace clay, trace f-c gravel (moist) [SM]	6				24					
			7	S-4	SS	12	17	47				
		Grayish brown silty f-c SAND, some clay (wet) [SM]	8				25					
			9	S-5	SS	14	19	19				
	675.0	Grayish brown sandy SILT, trace clay, trace f-c gravel (wet) [TILL]	10				10					
			11	S-6	SS	22	9	39				
			12				9					
			13									
			14									
			15	S-7	SS	6	17	50/2				
			16				20		50/2			
			17				19					
			18				38					
			19									
		20										

Project	Proposed Commercial Campus at Fields Corner	Project No.	190065201
Location	Southeast, New York	Elevation and Datum	Approx el 685 (unknown datum - SESI Survey)

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					N-Value (Blows/ft)				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		10	20	30	40	
	665.0	Grayish brown sandy SILT, trace clay, trace f-c gravel (wet) [TILL]	20				38						Drilled to 20.0ft. S-8 at 20ft
			21	S-8	SS	18	30					65	
							35						
			22				38						
			23										Drilled to 25.0ft. Grayish brown wash. Rig Chattering. S-9 at 25ft. Spoon bouncing
			24										
	660.0	Gray clayey SILT, some f-c sand, trace fine gravel (wet) [TILL]	25	S-9	SS	6	23					50/3	
			26				50/3						
			27										Drilled to 30.0ft. Grayish brown wash. Rig chattering. S-10 at 30ft
			28										
			29										
		Gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	30	S-10	SS	22	14					72	
			31				32						Drilled to 35.0ft. Grayish brown wash. Rig Chattering. S-11 at 35ft
			32				40						
			33				40						
			34										
		Gray clayey SILT, some f-c sand, trace fine gravel (wet) [TILL]	35	S-11	SS	15	17					55	Finished drilling at 9:57 AM on 5/5/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			36				25						
			37				30						
	648.0	End of boring at 37'	38				36						
			39										
			40										
			41										
			42										
			43										
			44										
			45										

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 668 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/28/21		4/28/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				22 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				8		Undisturbed	
Casing Diameter (in)				First		Core	
4				8		-	
Casing Depth (ft)				Completion		24 HR.	
4				8		-	
Casing Hammer				Drilling Foreman			
Automatic				Paul Mullins			
Weight (lbs)				Field Engineer			
140				Gopal Goswami			
Drop (in)							
30							
Sampler							
2" OD Split Spoon							
Sampler Hammer							
Safety							
Weight (lbs)							
140							
Drop (in)							
30							

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	+668.0	Dark brown to brown silty f-m SAND, trace clay, trace roots (moist) [TOPSOIL]	0				2		Started Drilling at 12:03 PM on 4/28/2021.
			1	S-1	SS	10	2	5	S-1 at 0ft
	+666.0	Brown f-c SAND, some silt, trace clay, trace fine gravel (moist) [SM]	2				2		S-2 at 2ft
			3	S-2	SS	16	6	17	
	+664.0	Brownish gray clayey SILT, some f-c sand, trace fine gravel (moist) [ML]	4				11		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			5	S-3	SS	12	10	19	S-3 at 4ft
	+662.0	Brown clayey f-c SAND, some silt, trace fine gravel (moist) [SC]	6				9		S-4 at 6ft
			7	S-4	SS	14	10	18	
	+660.0	Brown clayey f-c SAND, some silt, trace f-c gravel (wet) [SC] passing #200 = 44% wc = 12.6%	8				8		Drilled to 8.0ft. Gray brown wash.
			9	S-5	SS	10	3	4	S-5 at 8ft
		Brown clayey f-c SAND, some silt, trace f-c gravel (wet) [SC]	10				2		S-6 at 10ft
			11	S-6	SS	8	3	10	
			12				7		
			13				3		
			14						
	+653.0	Brown sandy CLAY, some silt, trace f-c gravel (wet) [CL]	15				2		Drilled to 15.0ft. Gray brown wash.
			16	S-7	SS	10	5	9	S-7 at 15ft
			17				4		
			18				8		
			19						
	+648.0		20						

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Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 668 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	648.0	Gray sandy SILT, some clay, trace f-c gravel (wet) [TILL]	20	S-8	SS	16	15	38	Drilled to 20.0ft. Gray brown wash. S-8 at 20ft
	21		19						
	646.0	End of boring at 22'	22				27		Finished drilling at 12:58 PM on 4/28/2021. Installed 2" diameter PVC temporary observation well with 10ft slotted screen and 10ft riser.
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 690 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/27/21		4/27/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				32 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				10		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		Core	
4			4	First		-	
Casing Hammer			Weight (lbs)	Completion		24 HR.	
Automatic			140	Drop (in)		30	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety				Gopal Goswami			
Weight (lbs)			Drop (in)				
140			30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	690.0	Brown silty f-m SAND, some clay, trace f-c gravel (moist) [SM]	0				10		Started Drilling at 8:18 AM on 4/27/2021.
			1	S-1	SS	12	11	19	S-1 at 0ft
		Brown silty f-m SAND, some clay, trace f-c gravel (moist) [SM]	2				8		S-2 at 2ft
			3	S-2	SS	16	11	19	
		Brown silty f-c SAND, some clay, trace fine gravel (moist) [SM]	4				8		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			5	S-3	SS	12	7	17	S-3 at 4ft
	684.0	Brown sandy CLAY, some silt, trace fine gravel (wet) [CL]	6				10		
			7	S-4	SS	16	10	19	S-4 at 6ft
			8				11		Rod Chattering
	682.0	Brownish gray f-c SAND, some silt, trace clay, trace fine gravel (wet) [SM]	9	S-5	SS	14	9	24	Drilled to 8.0ft. Brown wash.
			10				15		S-5 at 8ft
		Brownish gray silty f-c SAND, some clay, trace fine gravel (wet) [SM]	11	S-6	SS	16	12	38	S-6 at 10ft
			12				23		
			13				20		Rig Chattering
			14						
	675.0	Brownish gray silty f-c SAND, some f-c gravel, trace clay (wet) [TILL]	15				31		Drilled to 15.0ft. Light brown wash.
			16	S-7	SS	16	35	64	S-7 at 15ft
			17				29		Rig chattering.
			18				33		
			19						Rig chattering.
	670.0		20						

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Project			Proposed Commercial Campus at Fields Corner			Project No.			190065201			
Location			Southeast, New York			Elevation and Datum			Approx el 690 (unknown datum - SESI Survey)			
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)			
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)				
	670.0	Gray silty f-m SAND, some clay, trace fine gravel (wet) [TILL]	20				17				Drilled to 20.0ft. Light brown to gray brown wash. S-8 at 20ft	
			21	S-8	SS		22	21				45
			22					24				
			23					27				
			24									
		Gray clayey SILT, some f-c sand, trace clay, trace fine gravel (wet) [TILL]	25				27				Drilled to 25.0ft. Gray brown wash. S-9 at 25ft	
			26	S-9	SS		20	20				44
			27					24				
			28					32				
			29									
		Gray silty CLAY, some f-c sand, trace f-c gravel (wet) [TILL]	30				49				Drilled to 30.0ft. Gray wash. Safety 50/5" Blowcounts from Auto hammer. S-10 at 30ft	
			31	S-10	SS		5	33				73
			32					40				
		33					48					
	658.0	End of boring to 32'	34								Finished drilling at 9:19 AM on 4/27/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.	
		35										
		36										
		37										
		38										
		39										
		40										
		41										
		42										
		43										
		44										
		45										

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 672 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/28/21		4/28/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				20.9 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				8		Undisturbed	
Casing Diameter (in)		Casing Depth (ft)		First		Core	
4		4		6		-	
Casing Hammer		Weight (lbs)		Completion		24 HR.	
Automatic		140		-		-	
Drop (in)				Drilling Foreman			
30				Paul Mullins			
Sampler				Field Engineer			
2" OD Split Spoon				Gopal Goswami			
Sampler Hammer		Weight (lbs)					
Safety		140					
Drop (in)		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	672.0	Brown silty f-m SAND, some clay, trace fine gravel with roots (moist) [SM]	0				2		Started Drilling at 9:58 AM on 4/28/2021.
			1	S-1	SS	12	2		S-1 at 0ft
		Brown silty f-c SAND, trace clay, trace fine gravel (moist) [SM]	2				6		S-2 at 2ft
			3	S-2	SS	20	6	14	
	668.0	Brown clayey SILT, some f-c sand, trace f-c gravel (moist) [ML]	4				4		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			5	S-3	SS	10	3	9	S-3 at 4ft
	666.0	Grayish brown silty CLAY, some f-m sand, trace fine gravel (wet) [CL]	6				6		S-4 at 6ft
			7	S-4	SS	12	3	8	q _u = .75 tsf
		Grayish brown silty CLAY, some f-c sand, trace fine gravel (wet) [CL]	8				2		Drilled to 8.0ft. Gray brown wash.
			9	S-5	SS	12	3	6	S-5 at 8ft
	662.0	Grayish brown sandy CLAY, some silt, trace coarse gravel (wet) [CL]	10				5		q _u = 1.50 tsf
			11	S-6	SS	15	9	22	S-6 at 10ft
			12				13		
			13				11		
			14						
	657.0	Brownish gray silty f-c SAND, trace clay, trace fine gravel (wet) [SM]	15				9		Drilled to 15.0ft. Greenish gray wash.
			16	S-7	SS	12	11	29	S-7 at 15ft
			17				18		
			18				19		
			19						
	652.0		20						

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Project			Project No.							
Proposed Commercial Campus at Fields Corner			190065201							
Location			Elevation and Datum							
Southeast, New York			Approx el 672 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)		
	+652.0	Gray silty f-c SAND, some f-c gravel, trace clay (wet) [SM]	20	S-8	SS	10	22		50/5	Drilled to 20.0ft. Gray brown wash. 16(1")-75-35 for remaining length using Autohammer. S-8 at 20ft
	+651.1	End of boring at 21'	21				50/5			
			22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							
			30							
			31							
			32							
			33							
			34							
			35							
			36							
			37							
			38							
			39							
			40							
			41							
			42							
			43							
			44							
			45							

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201						
Location Southeast, New York				Elevation and Datum Approx el 691 (unknown datum - SESI Survey)						
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 4/27/21		Date Finished 4/27/21				
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 42 ft		Rock Depth N.E.				
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples 12		Undisturbed -		Core -		
Casing Diameter (in) 4			Casing Depth (ft) 4		Water Level (ft.) First ▽ 10		Completion ▽ -		24 HR. ▽ -	
Casing Hammer Automatic		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Paul Mullins				
Sampler 2" OD Split Spoon					Field Engineer Gopal Goswami					
Sampler Hammer Safety		Weight (lbs) 140		Drop (in) 30						

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	691.0	Brown silty f-m SAND, trace clay, trace fine gravel, trace roots (moist) [SM]	0				2		Started Drilling at 9:38 AM on 4/27/2021.
			1	S-1	SS	16	3	8	S-1 at 0ft
		Brown silty f-m SAND, trace clay, trace fine gravel (moist) [SM]	2				5		S-2 at 2ft
			3	S-2	SS	18	10	20	
		No Recovery	4				10		
			5	S-3	SS	0	22	17	Drove casing to 4.0ft. Drilled to 4.0ft. Gray brown wash. S-3 at 4ft
	685.0	Brownish gray sandy CLAY, some silt, trace f-c gravel (moist) [CL]	6				7		
			7	S-4	SS	16	9	15	S-4 at 6ft
	683.0	POSSIBLE BOULDER	8	S-5	SS	0	10	50/1	Rig Chattering Drilled to 8.0ft. Gray brown wash. Boulder from 8 ft to 10 ft. Drilled through boulder. S-5 at 8ft
	681.0	Grayish brown clayey f-c SAND, some silt, trace coarse gravel (wet) [SC]	10				14		
			11	S-6	SS	16	7	25	Drilled to 10.0ft. Greenish gray wash. S-6 at 10ft
			12				12		
			13				13		
			14				10		
	676.0	Gray silty f-c SAND, some clay, trace f-c gravel (moist) [TILL]	15						
			16	S-7	SS	16	14	52	Drilled to 15.0ft. Gray brown wash. S-7 at 15ft
			17				22		
			18				30		
			19				34		
			20						

Project			Project No.						
Proposed Commercial Campus at Fields Corner			190065201						
Location			Elevation and Datum						
Southeast, New York			Approx el 691 (unknown datum - SESI Survey)						
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	671.0	Gray silty CLAY, some f-c sand, trace f-c gravel (moist) [TILL]	20				14		Drilled to 20.0ft. Gray brown wash. S-8 at 20ft
			21	S-8	SS	16	16	47	
			22				31		
			23				32		
			24						Rod Chattering
		Gray sandy SILT, some clay, trace f-c gravel (moist) [TILL]	25				22		Drilled to 25.0ft. Gray brown wash. S-9 at 25ft
			26	S-9	SS	16	40	77	
			27				37		
			28				45		
			29						
		Gray SILT, some f-c sand, some clay, trace f-c gravel (moist) [TILL]	30				17		Drilled to 30.0ft. Gray brown wash. S-10 at 30ft
			31	S-10	SS	20	23	48	
			32				25		
			33						
			34						
		Gray sandy SILT, some clay, trace f-c gravel (moist) [TILL]	35				20		Drilled to 35.0ft. Gray brown wash. S-11 at 35ft
			36	S-11	SS	22	21	44	
			37				23		
			38				23		Rig Chattering
			39						
		Gray silty f-c SAND, some clay, trace f-c gravel (moist) [TILL]	40				30		Drilled to 40.0ft. Gray brown wash. S-12 at 40ft
			41	S-12	SS	20	35	60	
			42				25		
			43				37		
			44						
			45						
	649.0	End of boring at 42'	42						Finished drilling at 11:04 AM on 4/27/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			43						
			44						

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 687 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	4/28/21	Date Finished	
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	37 ft	Rock Depth	
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	11	Undisturbed	-
Casing Diameter (in)	4	Casing Depth (ft)	13	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Field Engineer	Gopal Goswami

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	+687.0	Light brown f-c SAND, some silt, trace clay, trace coarse gravel, trace roots (moist) [SM]	0				2		Started Drilling at 8:02 AM on 4/28/2021.
			1	S-1	SS	14	3	7	S-1 at 0ft
			2				4		
		Light brown silty f-c SAND, trace clay, trace coarse gravel (moist) [SM]	3	S-2	SS	12	9	17	S-2 at 2ft
			4				7		
		Brown silty f-c SAND, some clay, trace f-c gravel (moist) [SM]	5	S-3	SS	10	14	13	Drove casing to 4.0ft. Drilled to 4.0ft. Light brown to brown wash. S-3 at 4ft
			6				6		
		Brown silty f-c SAND, some clay, trace f-c gravel (wet) [SM]	7	S-4	SS	10	12		S-4 at 6ft
			8				6	50/5	Possible boulder
	+679.6	POSSIBLE BOULDER	9						
	+679.0	Grayish brown silty CLAY, some f-c sand, trace f-c gravel (wet) [CL]	10	S-5	SS	16	3	11	Drove casing to 8.0ft. Hard casing drive. Drilled to 8.0ft. Light brown to brown wash. S-5 at 8ft
			11				5		
	+677.0	Grayish brown silty f-c SAND, with clay pocket, trace f-c gravel (wet) [SM]	12	S-6	SS	12	17		S-6 at 10ft
			13				25		
			14				50/3	50/3	Rod Chattering
			15						
			16						
		Gray silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	17	S-7	SS	20	20	69	Drove casing to 13.0ft. Hard casing drive.
			18				29		
			19				40		
			20				38		Drilled to 15.0ft. Gray brown wash. S-7 at 15ft

Project			Project No.							
Proposed Commercial Campus at Fields Corner			190065201							
Location			Elevation and Datum							
Southeast, New York			Approx el 687 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)		
	667.0	No Recovery. Gravel piece in drive shoe.	20				14			Drilled to 20.0ft. Brown to gray brown wash.
			21	S-8	SS	0	21		49	S-8 at 20ft
			22				28			Gravel in shoe
			23				36			
			24							
		Gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	25				19			Drilled to 25.0ft. Gray wash.
			26	S-9	SS	12	22		64	S-9 at 25ft
			27				42			Rig Chattering. Possible boulder
			28				48			
			29							
		Gray silty f-m SAND, some clay, trace fine gravel (wet) [TILL]	30				16			Drilled to 30.0ft. Gray wash.
			31	S-10	SS	22	17		42	S-10 at 30ft
			32				25			
			33				28			
			34							
			35							
		Gray silty f-m SAND, some clay, trace fine gravel (wet) [TILL]	36	S-11	SS	22	26		57	Drilled to 35.0ft. Gray wash.
			37				17			S-11 at 35ft
			38				40			
			39				30			
			40							
			41							
	650.0	End of boring at 37'	42							Finished drilling at 9:41 AM on 4/28/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			43							
			44							
			45							

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 663 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/27/21		4/27/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				37 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				11		Undisturbed	
Casing Diameter (in)		Casing Depth (ft)		Water Level (ft.)		Core	
4		4		First		-	
				15		Completion	
Casing Hammer		Weight (lbs)		24 HR.		-	
Automatic		140		Drop (in)		-	
		30		Drilling Foreman			
Sampler				Paul Mullins			
2" OD Split Spoon				Field Engineer			
Sampler Hammer		Weight (lbs)		Gopal Goswami			
Safety		140					
		Drop (in)					
		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	+663.0	Brown silty f-m SAND, trace clay, trace fine gravel, trace roots (moist) [SM]	0				3		Started Drilling at 11:28 AM on 4/27/2021.
			1	S-1	SS	6	8	12	S-1 at 0ft
		Brown to light brown silty f-c SAND, trace clay, trace roots (moist) [SM]	2				10		S-2 at 2ft
			3	S-2	SS	14	12	22	
	659.0	Brownish gray sandy CLAY, some silt, trace fine gravel (moist) [CL]	4				16		Drove casing to 4.0ft. Drilled to 4.0ft. Brown to light brown wash.
			5	S-3	SS	12	5	9	S-3 at 4ft
	657.0	Brownish gray SILT, some clay, some f-c sand, trace fine gravel (moist) [ML]	6				7		S-4 at 6ft
			7	S-4	SS	16	9	16	
	655.0	Grayish brown silty f-c SAND, some clay, trace f-c gravel (moist) [SM]	8				11		Drilled to 8.0ft. Brown wash.
			9	S-5	SS	12	7	36	S-5 at 8ft
	653.0	Grayish brown silty CLAY, some f-c sand, trace f-c gravel (moist) [CL]	10				16		S-6 at 10ft
			11	S-6	SS	18	22	31	
			12				14		
			13				17		Rig Chattering
	648.0	Grayish brown silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	15				20		Drilled to 15.0ft. Gray brown wash.
	646.6	POSSIBLE BOULDER	16	S-7	SS	16	24	50/4	S-7 at 15ft
	646.0		17						Rig Chattering. Boulder breakthrough
			18						
			19						
			20						

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Project			Project No.							
Proposed Commercial Campus at Fields Corner			190065201							
Location			Elevation and Datum							
Southeast, New York			Approx el 663 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft) 10 20 30 40		
	643.0	Grayish brown silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	20				20		48	Drilled to 20.0ft. Gray wash. S-8 at 20ft
			21	S-8	SS	22	22			
			22				26	34		
				23						Rig Chattering
			24							
		Grayish brown sandy SILT, trace clay, trace f-c gravel (wet) [TILL]	25				24		59	
			26	S-9	SS	10	22			
			27				37	44		
				28						Rig Chattering
			29							
		Grayish brown sandy SILT, trace clay, trace f-c gravel (wet) [TILL]	30	S-10	SS	4	50/4		50/4	
		31								
		32						Rig Chattering		
		33								
		34							Rig Chattering	
		35				22		37		Drilled to 35.0ft. Gray brown wash. S-11 at 35ft
		36	S-11	SS	20	19				
						18	21			
	626.0	End of boring at 37'	37						Finished drilling at 12:43 PM at 4/27/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.	
			38							
			39							
			40							
			41							
			42							
			43							
			44							
			45							

APPENDIX C

Logs of Site Borings

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 642 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/4/21		5/4/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				16.3 ft		N.E.	
Size and Type of Bit				Number of Samples		Undisturbed	
3-7/8in Tricone Roller Bit				7		Core	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		Completion	
4			4	First		24 HR.	
Casing Hammer			Weight (lbs)	Drop (in)		N.E.	
Automatic			140	30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety			Weight (lbs)	Drop (in)		Athira Nair	
			140	30			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)				
	+642.0	Dark brown silty f-c SAND, trace roots (moist)[TOPSOIL]	0				1	10	20	30	40	Started Drilling at 8:11 AM on 5/4/2021. S-1 at 0ft
			1	S-1	SS	6	4	7				
	+640.0	Grayish brown f-c SAND, some silt (moist) [SM]	2				7					S-2 at 2ft
				3	S-2	SS	15	8	17			
		Grayish brown silty f-c SAND, trace clay (wet) [SM]	4				7					Drilled to 4.0ft. S-3 at 4ft
				5	S-3	SS	15	11	28			
		Tannish brown f-c SAND, trace silt, trace f-c gravel (wet) [SM]	6				30					S-4 at 6ft. Switched to auto hammer.
				7	S-4A	SS	24	66	58	120		
	+634.0	Dark gray to black f-c GRAVEL (wet) [BOULDERS]					62					Drilled to 8.0ft. S-5 at 8ft
				8	S-4B		84/5					
		Brown to black f-c SAND, some f-c gravel, trace silt (moist) [SW]		S-5	SS	6	50					50/3
				9				50/3				
		Brown to black f-c SAND, some f-c gravel, trace silt (moist) [SW]	10	S-6	SS	8	75					Drilled to 10.0ft. S-6 at 10ft
				11				80	50/1	50/1		
		Brown to black gravelly f-c SAND (wet) [SW]	12									Drilled to 15.0ft. S-7 at 15ft
				13								
			14									
				15	S-7	SS	15	70	67	50/4		
	+625.7	End of boring at 16.3'	16									Finished drilling at 9:04 AM on 5/4/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
				17							50/4	
			18									
				19								
			20									

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 642 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/4/21		Date Finished 5/4/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 21.8 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 8	Undisturbed -	Core -
Casing Diameter (in) 4		Casing Depth (ft) 4			Water Level (ft.) First 6	Completion -	24 HR. -
Casing Hammer Automatic		Weight (lbs) 140	Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Athira Nair			
Sampler Hammer Safety		Weight (lbs) 140	Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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	642.0	Dark brown silty f-m SAND, trace clay, trace roots (dry) [TOPSOIL] organic content = 6.6%	0				6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 642 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	622.0	Gray silty f-m SAND, trace clay, trace f-c gravel (moist) [TILL]	20				9		Drilled to 20.0ft. S-8 at 20ft
	620.2		21	S-8	SS	12	17 21 50/4	38	
		End of boring at 21.8'	22						Finished drilling at 11:30 AM on 5/4/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 632 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	4/29/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	17 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Automatic	Weight (lbs)	140	Drop (in)	30	Field Engineer	Gopal Goswami

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	632.0	Brown silty f-c SAND, trace clay, trace fine gravel (moist) [SM]	0				1			Started drilling at 9:53 AM on 4/29/2021.
			1	S-1	SS	22	1	2		S-1 at 0ft
		Light brown silty f-c SAND, some clay (moist) [SM]	2				4			S-2 at 2ft
			3	S-2	SS	16	5	15		
		Grayish brown silty f-m SAND, some clay, some silt (wet) [SM]	4				10			Drove casing to 4.0ft. Drilled to 4.0ft. Greenish gray wash.
			5	S-3	SS	12	4	9		S-3 at 4ft
	626.0	Greenish gray sandy CLAY, some silt, trace f-c gravel (wet) [CL]	6				6			S-4 at 6ft
			7	S-4	SS	10	9	19		
	624.0	Greenish gray silty CLAY, some f-c sand, trace f-c gravel (wet) [CL]	8				8			Drilled to 8.0ft. Greenish gray wash.
			9	S-5	SS	12	2	8		S-5 at 8ft
	622.0	Dark gray to brownish gray sandy f-c GRAVEL, trace silt (wet) [GW]	10				4			S-6 at 10ft
			11	S-6	SS	10	24	44		
			12				20			
			13				24			Rig chattering
			14				50/1			Rig chattering
	617.0	Gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	15				6			Drilled to 15.0ft. Greenish gray to brownish gray wash.
			16	S-7	SS	14	10	21		S-7 at 15ft
	615.0	End of boring at 17'	17				11			Finished drilling at 10:23 AM on 4/29/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18				25			
			19							
			20							

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 636 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 4/29/21		Date Finished 4/29/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 17 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples Disturbed 7		Undisturbed Core -	
Casing Diameter (in) 4			Casing Depth (ft) 4	Water Level (ft.) First 8		Completion 24 HR. -	
Casing Hammer Automatic		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Paul Mullins	
Sampler 2" OD Split Spoon				Field Engineer Gopal Goswami			
Sampler Hammer Automatic		Weight (lbs) 140		Drop (in) 30			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist. BLU/6in	N-Value (Blows/ft) 10 20 30 40			
	+636.0	Brown silty f-c SAND, some clay, trace roots (moist) [SM] organic content = 2.0%	0				1			Started drilling at 10:53 AM on 4/29/2021. S-1 at 0ft	
			1	S-1	SS	12	1	2		S-2 at 2ft	
		Brown silty f-c SAND, some clay, trace fine gravel (moist) [SM]	2				2				
			3	S-2	SS	12	6	13			
			4				7				
	+632.0	Brown clayey SILT, some f-c sand, trace fine gravel (moist) [ML]	5	S-3	SS	12	10	15		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash. S-3 at 4ft	
			6				8				
	+630.0	Brownish gray sandy CLAY, some silt (moist) [CL]	7	S-4	SS	6	5	10		S-4 at 6ft	
			8				5				
	+628.0	Gray clayey f-m SAND, some silt, trace f-c gravel (wet) [SC] passing #200 = 49% wc = 14.0%	9	S-5	SS	12	4	7		Drilled to 8.0ft. Greenish gray wash. S-5 at 8ft	
			10				5				
	+626.0	Brown to gray silty f-m SAND, trace clay, trace f-c gravel (wet) [TILL]	11	S-6	SS	20	7	13		S-6 at 10ft	
			12				16				
			13				18				
			14								
	+621.0	Gray silty f-m SAND, trace clay, trace f-c gravel (wet) [TILL]	15	S-7	SS	16	10	12		Drilled to 15.0ft. Gray brown wash. S-7 at 15ft	
			16				17				
	+619.0	End of boring at 17'	17				17			29	Finished drilling at 11:18 AM on 4/29/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18								
			19								
		20									

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Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 650 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/4/21		Date Finished 5/4/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 17 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples		Disturbed	Undisturbed
Casing Diameter (in) 4				Casing Depth (ft) 4		7	-
Casing Hammer Automatic				Weight (lbs) 140		Drop (in) 30	Completion
Sampler 2" OD Split Spoon				Field Engineer Paul Mullins		4	24 HR.
Sampler Hammer Safety				Weight (lbs) 140		Drop (in) 30	-
				Athira Nair			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)				
	+650.0	Dark brown to light brown silty f-m SAND, trace clay, trace f-c gravel, trace roots (moist) [TOPSOIL]	0				2					Started drilling at 9:33 AM on 5/4/2021. S-1 at 0ft
			1	S-1	SS	18	4	6				
	+648.0	Brown SILT, some f-m sand, trace clay (moist) [ML]	2				4					S-2 at 2ft
			3	S-2	SS	15	7	13				
	+646.0	Grayish brown silty f-m SAND, some clay (wet) [SM] passing #200 = 49.9% wc = 12.8%	4				6					Drove casing to 4.0ft. Drilled to 4.0ft. S-3 at 4ft
			5	S-3	SS	15	5	10				
		Grayish brown silty f-c SAND, trace clay (wet) [SM]	6				7					S-4 at 6ft
	+643.0	Yellowish brown sandy CLAY, trace silt (wet) [CL]	7	S-4A	SS	12	4	12				
	+642.0	Yellowish tannish brown sandy SILT, some clay (wet) [ML]	8	S-4B			8					Drilled to 4.0ft. S-5 at 8ft
			9	S-5	SS	10	6	14				
	+640.0	Brown silty CLAY, some f-c sand, trace f-c gravel (wet) [CL]	10				12					S-6 at 10ft
			11	S-6	SS	6	10	23				
				12				15				
				13								
				14								
	+635.0	Yellowish tannish brown silty f-c SAND, trace clay, trace f-c gravel (wet) [SM]	15				17					Drilled to 15.0ft. S-7 at 15ft
	+634.0	Dark gray sandy CLAY, trace f-c gravel (wet) [TILL]	16	S-7A	SS	18	20	44				
	+633.0	End of boring at 17'	17	S-7B			24					Finished drilling at 10:03 AM on 5/4/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
							25					
				18								
			19									
			20									

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Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 649 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	4/29/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	17 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Automatic	Weight (lbs)	140	Drop (in)	30	Field Engineer	Gopal Goswami

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist (psi)	N-Value (Blows/ft)	
	649.0	Brown silty f-m SAND, trace clay (moist) [SM]	0				1		Started drilling at 11:31 AM on 4/29/2021.
			1	S-1	SS	10	1		S-1 at 0ft
			2				4		
		Light brown silty f-m SAND, trace clay, trace fine gravel (moist) [SM]	2				5		S-2 at 2ft
			3	S-2	SS	20	5		
			4				8	13	
	645.0	Brownish gray clayey f-c SAND, some silt, trace fine gravel (wet) [SC]	4				4		Drove casing to 4.0ft. Drilled to 4.0ft. Gray brown wash.
			5	S-3	SS	14	4	7	S-3 at 4ft
			6				3		
	643.0	Brownish gray silty f-c SAND, some clay, trace fine gravel (wet) [SM]	6				7		S-4 at 6ft
			7	S-4	SS	14	11	16	Rig chattering.
			8				5		
	641.0	Gray f-c SAND, trace clay, trace silt (wet) [SP]	8				3		Drilled to 8.0ft. Gray brown wash.
			9	S-5	SS	8	3	13	S-5 at 8ft
			10				10		
	639.0	Greenish gray sandy SILT, some clay, trace f-c gravel (wet) [TILL]	10				11		S-6 at 10ft
			11	S-6	SS	16	12	37	
			12				25		
			13				20		
			14						
			15				14		Drilled to 15.0ft. Greenish gray wash.
		Greenish gray clayey SILT, some f-c sand, trace f-c gravel (wet) [TILL]	15				17		S-7 at 15ft
			16	S-7	SS	12	25	42	
			17				26		
	632.0	End of boring at 17'	17						Finished drilling at 11:58 AM on 4/29/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18						
			19						
			20						

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 664 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	4/28/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	17 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Field Engineer	Gopal Goswami

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	+664.0	Brown to light brown silty f-c SAND, trace clay, trace roots (moist) [SM]	0				3			Started drilling at 10:56 AM on 4/28/2021.
			1	S-1	SS	12	3	7		S-1 at 0ft
			2				4			
		Brown to light brown f-c SAND, some silt, trace clay, trace fine gravel (moist) [SM]	3	S-2	SS	14	6	16		S-2 at 2ft
			4				10			
	+660.0	Brown sandy CLAY, some silt (wet) [CL]	5	S-3	SS	12	4	8		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			6				5			S-3 at 4ft
	+658.0	Brown sandy SILT, some clay (wet) [ML]	7	S-4	SS	14	5	11		S-4 at 6ft
			8				6			
	+656.0	Grayish brown silty CLAY, some f-c sand, trace fine gravel (wet) [CL]	9	S-5	SS	14	2	5		Drilled to 8.0ft. Brown wash.
			10				3			S-5 at 8ft
	+654.0	Grayish brown clayey f-c SAND, some silt, trace fine gravel (wet) [SC] passing #200 = 46% wc = 13.3%	11	S-6	SS	20	2	6		q _u = .75 tsf
			12				4			S-6 at 10ft
			13				3			
	+649.0	Greenish gray sandy SILT, some clay, trace f-c gravel (wet) [TILL]	14	S-7	SS	16	12	45		Drilled to 15.0ft. Gray brown wash.
			15				20			S-7 at 15ft
			16				25			
	+647.0	End of boring at 17'	17				28			Finished drilling at 11:28 AM on 4/28/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18							
			19							
			20							

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 655 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/3/21		Date Finished 5/3/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 22 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 8	Undisturbed -	Core -
Casing Diameter (in) 4		Casing Depth (ft) 4		Water Level (ft.) First 4	Completion 24 HR.	▼ -	▼ -
Casing Hammer Automatic	Weight (lbs) 140		Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Athira Nair			
Sampler Hammer Safety	Weight (lbs) 140		Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist. BLU/6in	N-Value (Blows/ft)				
	655.0	Dark brown silty f-c SAND, trace silt, trace roots (dry) [TOPSOIL]	0				3	10	20	30	40	Started drilling at 8:09 AM on 5/3/2021. S-1 at 0ft
			1	S-1	SS	8	2	5				
	653.0	Brown f-c SAND, some silt, trace fine gravel (moist) [SM]	2				3	2				S-2 at 2ft
			3	S-2	SS	10	3	6				
	651.0	Brown sandy CLAY, some silt, trace f-c gravel (wet) [CL]	4				4					Drove casing to 4.0ft. Drilled to 4.0ft. S-3 at 4ft
			5	S-3	SS	12	5	9				
		Brown sandy CLAY, some silt, trace fine gravel (wet) [CL]	6				4					S-4 at 6ft
			7	S-4	SS	15	3	7				
	647.0	Brown clayey f-c SAND, some silt (wet) [SC] passing #200 = 46% wc = 13.1%	8				3					Drilled to 8.0ft. S-5 at 8ft
			9	S-5	SS	12	4	7				
		Grayish brown clayey f-c SAND, some silt (wet) [SC]	10				5					S-6 at 10ft
			11	S-6	SS	10	4	12				
			12				8					
			13									
			14									
			15									
		No Recovery	16	S-7	SS	0	19	30	69			Drilled to 15.0ft. S-7 at 15ft
			17				39	39				
			18									
			19									
635.0			20									

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Project Proposed Commercial Campus at Fields Corner			Project No. 190065201							
Location Southeast, New York			Elevation and Datum Approx el 655 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)		
	635.0	Reddish white to black fine-coarse angular GRAVEL (moist) [BOULDERS]	20				55		63	Drilled to 20.0ft. S-8 at 20ft. Switched to automatic hammer. Finished drilling at 8:44 AM on 5/3/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
	633.5		21	S-8A	SS	12	35			
	633.0	Dark gray clayey f-c SAND, some silt (moist) [SC]	22	S-8B			28	34		
		End of boring at 22'	22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							
			30							
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			45							

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 651 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/3/21		5/3/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				17 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				7		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		First	
4			4	4		Completion	
Casing Hammer		Weight (lbs)		Drop (in)		24 HR.	
Automatic		140		30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety		Weight (lbs)		Drop (in)		Athira Nair	
		140		30			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	+651.0	Dark brown silty f-c SAND, trace silt, trace f-c gravel, trace roots (dry) [TOPSOIL]	0				2		Started drilling at 9:04 AM on 5/3/2021.
			1	S-1	SS	15	5	7	S-1 at 0ft
	+649.0	Brown silty f-c SAND (moist) [SM]	2				5		S-2 at 2ft
			3	S-2	SS	18	6	11	Slight rig chattering
	+647.0	Brown clayey f-c SAND, some silt, traced f-c gravel (wet) [SC] passing #200 = 42% wc = 12.3%	4				4		Drilled to 4.0ft.
			5	S-3	SS	12	3	7	S-3 at 4ft
	+645.0	Grayish brown sandy SILT, some clay (wet) [ML]	6				3		S-4 at 6ft
			7	S-4	SS	18	4	8	
	+643.0	Grayish brown sandy CLAY, some silt, some f-c gravel (wet) [CL]	8				4		Drilled to 8.0ft.
			9	S-5	SS	4	12	23	S-5 at 8ft
	+641.0	Grayish brown clayey f-c sand, some silt, some f-c gravel (wet) [SC]	10				11		S-6 at 10ft
			11	S-6	SS	6	16	28	
			12				15		
	+638.0		13				13		Slight rig chattering
			14				24		
		Grayish brown gravelly f-c SAND, some clay, some silt, trace fine gravel (wet) [TILL]	15				10		Drilled to 15.0ft.
			16	S-7	SS	12	17	43	S-7 at 15ft
	+634.0	End of boring at 17'	17				26		Finished drilling at 9:39 AM on 5/3/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18				42		
			19						
			20						

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 648 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	5/3/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	17 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Field Engineer	Athira Nair

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	648.0	Dark brown silty f-c SAND, trace clay, trace f-c gravel, trace roots (dry) [TOPSOIL]	0				3		Started Drilling at 9:52 AM on 5/3/2021.
			1	S-1	SS	12	4	8	S-1 at 0ft
	646.0	Brown silty f-c SAND, trace f-c gravel (moist) [SM]	2				7		S-2 at 2ft
			3	S-2	SS	18	13	25	
			4				12		Drilled to 4ft.
		Brown silty f-c SAND, some clay, trace f-m gravel, trace organics (wet) [SM] Passing #200 = 48% wc = 13.1% Organic content = 0.7%	5	S-3	SS	15	3	7	S-3 at 4ft
	642.0	Brown sandy SILT, trace clay, trace f-m gravel (wet) [ML]	6				4		S-4 at 6ft
			7	S-4	SS	18	6	13	
	640.0	Grayish brown silty CLAY, some f-c sand (wet) [CL]	8				5		Drilled to 8ft.
			9	S-5	SS	2	3	7	S-5 at 8ft. Switched to automatic hammer
	638.0	Grayish brown silty CLAY, some f-c sand, some fine gravel (wet) [TILL]	10				7		S-6 at 10ft
			11	S-6	SS	12	10	20	
			12				10		
			13				9		
			14						
		Grayish brown clayey f-c SAND, some silt, some f-c gravel (wet) [TILL]	15				35		Drilled to 15ft.
			16	S-7	SS	18	22	50	S-7 at 15ft.
			17				28		
	631.0	End of boring at 17'	17				27		Finished drilling at 10:54 AM on 5/3/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18						
			19						
			20						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 644 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/3/21		5/3/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				19 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				8		Undisturbed	
Casing Diameter (in)				First		Core	
4				8		-	
Casing Depth (ft)				Completion		24 HR.	
4				8		-	
Casing Hammer				Drilling Foreman			
Automatic				Paul Mullins			
Weight (lbs)				Field Engineer			
140				Athira Nair			
Drop (in)							
30							
Sampler							
2" OD Split Spoon							
Sampler Hammer							
Safety							
Weight (lbs)							
140							
Drop (in)							
30							

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (blows/in)	N-Value (Blows/ft)	
	+644.0	Dark brown clayey f-c SAND, some silt, trace roots (dry) [TOPSOIL]	0				1		Started Drilling at 11:07 AM on 5/3/2021.
	+642.5	Brown silty f-c SAND, trace clay, trace roots (moist) [SM]	1	S-1A	SS	18	WOH		S-1 at 0ft
		Brown silty f-c SAND, trace f-c gravel, trace roots (moist) [SM]	2	S-1B			WOH		
	+640.0	Brown sandy CLAY, trace f-c gravel, trace silt (moist) [CL]	3	S-2	SS	18	5	14	S-2 at 2ft
	+638.5	Brown silty f-c SAND, some clay, trace f-m gravel (wet) [SM]	4				9		
	+637.0	Brown sandy SILT, trace clay (moist) [ML]	5	S-3A	SS	15	5	10	Drove casing to 4ft. Drilled to 4ft.
	+636.0	Tannish brown silty CLAY, some f-c sand (wet) [CL] LL = 22, PL = 15, PI = 7 wc = 11.9%	6	S-3B			5		S-3 at 4ft.
	+634.0	Brown sandy CLAY, some silt, trace fine gravel (wet) [CL]	7	S-4A	SS	12	7	17	S-4 at 6ft
			8	S-4B			10		
			9	S-5	SS	15	2		Drilled to 8ft.
			10				3		S-5 at 8ft.
			11	S-6	SS	24	8	25	S-6 at 10ft
			12				17		
			13				22		
	+629.0	Tannish brown silty f-c SAND, some clay, trace f-c gravel (moist) [TILL]	14						
			15	S-7	SS	24	15	33	Drilled to 15ft.
			16				18		S-7 at 15ft.
			17				20		
			18						
			19						
			20						

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Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 644 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	624.0	Gray sandy CLAY, some silt, trace fine gravel (wet) [TILL]	20	S-8	SS	10	8	34	Drilled to 20ft. S-8 at 20ft
	622.0		17						
		End of boring at 22'	22				17		Finished boring at 11:44 AM on 5/3/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
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			36						
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			40						
			41						
			42						
			43						
			44						
			45						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 647 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/6/21		5/6/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				22 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				8		Undisturbed	
Casing Diameter (in)				First		Completion	
4				6		24 HR.	
Casing Hammer				Drop (in)		Core	
Automatic				14		-	
Weight (lbs)				30		-	
Drop (in)				-			
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety				Rodrigo Fernandez Santoyo			
Weight (lbs)							
140							
Drop (in)							
30							

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	+647.0	Brown SILT, some f-m sand, trace clay (moist) [ML]	0				4		Started Drilling at 10:38 AM on 5/6/2021.
			1	S-1	SS	8	3	6	S-1 at 0ft
	+645.0	Light brown silty f-m SAND, trace coarse gravel (moist) [SM]	2				7		S-2 at 2ft
			3	S-2	SS	15	6	16	
		Grayish brown silty f-c SAND, trace clay (moist) [SM]	4				15		
			5	S-3	SS	18	16	39	Drove casing to 4.0ft. Drilled to 4.0ft.
	+641.0	Grayish brown clayey SILT, some f-m SAND (wet) [ML]	6				23		S-3 at 4ft
			7	S-4	SS	14	13	25	S-4 at 6ft
		Grayish brown clayey SILT, trace f-c sand (wet) [ML]	8				12		q _u =1.50 tsf
			9	S-5	SS	20	8	16	Drilled to 8.0ft. Grayish brown wash.
	+637.0	Grayish brown sandy SILT, trace clay, trace fine gravel (wet) [TILL]	10				7		S-5 at 8ft
			11	S-6	SS	22	19	45	q _u =1.00 tsf
			12				26		S-6 at 10ft
			13				30		
			14						Drove casing to 14.0ft
		Grayish brown to brownish gray clayey f-c SAND, trace f-c gravel (wet) [TILL]	15				54		Drilled to 15.0ft. Grayish brown wash. Rig Chattering.
			16	S-7	SS	18	45	87	S-7 at 15ft
			17				42		
			18				49		
			19						
	+627.0		20						

Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 647 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	627.0	Gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	20	S-8	SS	22	24	62	Drilled to 20.0ft. Grayish brown wash. Rig chattering. S-8 at 20ft
	625.0		21				28		
	22	34							
	40								
		End of boring at 22'	22						Finished drilling at 11:55 on 5/6/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 671 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/29/21		4/29/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				17 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				7		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		First	
4			4	4		Completion	
Casing Hammer		Weight (lbs)		Drop (in)		24 HR.	
Automatic		140		30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Automatic		Weight (lbs)		Gopal Goswami			
		140					
		Drop (in)					
		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	671.0	Brown silty f-m SAND, some clay, trace roots (moist) [SM]	0				WOH		Started Drilling at 12:12 PM on 4/29/2021.
			1	S-1	SS	12	1		S-1 at 0ft
		Light brown silty f-m SAND, some clay, trace f-c gravel (moist) [SM]	2				5		S-2 at 2ft
			3	S-2	SS	18	7	15	
	667.0	Gray sandy SILT, some clay, trace f-c gravel (wet) [ML]	4				8		Drove casing to 4.0ft. Hard casing drive. Drilled to 4.0ft. Brown wash.
			5	S-3	SS	16	9	18	S-3 at 4ft
		Brown to grayish brown sandy SILT, some clay (wet) [ML]	6				11		S-4 at 6ft
			7	S-4	SS	10	13	27	
		No Recovery	8				15		Drilled to 8.0ft. Gray brown wash.
			9	S-5	SS	0	6	13	S-5 at 8ft
	661.0	Grayish brown silty CLAY, some f-c sand, trace f-c gravel (wet) [TILL]	10				8		S-6 at 10ft
			11	S-6	SS	10	6	13	
			12				7		
			13				8		
		Grayish brown sandy SILT, trace clay, trace f-c gravel (wet) [TILL]	15				25		Drilled to 15.0ft. Gray brown wash.
			16	S-7	SS	16	25	57	S-7 at 15ft
			17				32		
	654.0	End of boring at 17'	17				29		Finished drilling at 12:42 PM on 4/29/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18						
			19						
			20						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 677 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/5/21		5/5/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				22 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				8		Undisturbed	
Casing Diameter (in)				First		Core	
4				4		-	
Casing Depth (ft)				Completion		24 HR.	
4				4		-	
Casing Hammer				Drilling Foreman			
Automatic				Paul Mullins			
Weight (lbs)				Field Engineer			
140				Rodrigo Fernandez Santoyo			
Drop (in)							
30							

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	677.0	Brown sandy SILT, trace coarse gravel, trace roots (moist) [ML]	0				15		Started Drilling at 11:33 AM on 5/5/2021.
			1	S-1	SS	4	12	20	S-1 at 0ft
	675.0	Brown silty f-m SAND, trace fine gravel (moist) [SM]	2				8		
			3	S-2	SS	15	7	19	S-2 at 2ft
	673.0	Light brown clayey f-c SAND, some silt (wet) [SC]	4				12		
			5	S-3	SS	22	5	12	Drove casing to 4.0ft. Drilled to 4.0ft.
	671.0	Light brown sandy SILT, trace clay (wet) [ML]	6				7		S-3 at 4ft
			7	S-4	SS	18	5	11	q _u =1.20 tsf
		Light brown sandy SILT, trace clay (wet) [ML]	8				6		S-4 at 6ft
			9	S-5	SS	15	5	11	
	667.0	Grayish brown sandy SILT, some clay, trace fine gravel (moist) [TILL]	10				6		Drilled to 8.0ft. Light grayish brown wash.
			11	S-6	SS	15	12	35	S-5 at 8ft
			12				17		S-6 at 10ft
			13				18		
			14				22		
		Grayish brown sandy SILT, some clay, trace fine gravel (moist) [TILL]	15				21		Drilled to 15.0ft. Light grayish brown wash. Rig Chattering.
			16	S-7	SS	15	18	52	S-7 at 15ft
			17				34		
			18				30		
			19						
	657.0		20						

Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 677 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	657.0	Gray SILT, some clay, some f-c sand, trace fine gravel (moist) [TILL]	20				28		Drilled to 20.0ft. Grayish brown wash. Rig Chattering. S-8 at 20ft Finished drilling at 12:16 PM on 5/5/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
	21		S-8	SS	18	41			
	22				43		84		
	23				56				
	655.0	End of boring at 22'	22						
			23						
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 644 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/10/21		Date Finished 5/10/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 17 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples		Disturbed	Undisturbed
Casing Diameter (in) 4				Casing Depth (ft) 4		7	-
Casing Hammer Automatic		Weight (lbs) 140	Drop (in) 30	Water Level (ft.) First		8	Completion
Sampler 2" OD Split Spoon		Field Engineer Rodrigo Fernandez Santoyo		Drilling Foreman Paul Mullins		24 HR.	-
Sampler Hammer Automatic		Weight (lbs) 140	Drop (in) 30			-	-

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	+644.0	Light brown silty f-m SAND, trace clay, trace fine gravel (moist) [SM]	0				1			Started drilling at 7:39 AM on 5/10/2021. S-1 at 0ft
			1	S-1	SS	16	1			
			2				4			S-2 at 2ft
	+642.0	Gray to light brown sandy SILT, trace clay (moist) [ML]	3	S-2	SS	22	5			
			4				20			
	+640.0	Grayish brown silty f-c SAND, trace clay, trace fine gravel (moist) [SM]	5	S-3	SS	19	17			Drove casing to 4.0ft. Drilled to 4.0ft. Grayish brown wash. S-3 at 4ft
			6				14			
		Grayish brown sandy SILT, some clay, trace f-c gravel (moist)	7	S-4	SS	22	16			S-4 at 6ft
			8				18			
	+636.0	Grayish brown silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	9	S-5	SS	8	10			Drilled to 8.0ft. Grayish brown wash. Rig Chattering. S-5 at 8ft q _u =3.00 tsf
			10				7			
		Grayish brown silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	11	S-6	SS	15	19			S-6 at 10ft q _u =2.75 tsf
			12				12			
			13				13			
			14				15			
		Grayish brown silty CLAY, some f-c sand, trace coarse gravel (wet) [TILL]	15	S-7	SS	6	5			Drilled to 15.0ft. Grayish brown wash. Rig chattering. S-7 at 15ft q _u =2.00 tsf
			16				8			
	+627.0	End of boring at 17'	17				10			Finished drilling at 8:23 AM on 5/10/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18							
			19							
			20							

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 647 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/5/21		Date Finished 5/5/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 16.6 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 7	Undisturbed -	Core -
Casing Diameter (in) 4			Casing Depth (ft) 4	Water Level (ft.) ▽	First 4	Completion ▽	24 HR. ▽
Casing Hammer Automatic	Weight (lbs) 140		Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Rodrigo Fernandez Santoyo			
Sampler Hammer Automatic	Weight (lbs) 140		Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	+647.0	Grayish brown f-c SAND, some silt, trace f-c gravel (moist) [SM]	0				4			Started Drilling at 5/5/2021 10:41 AM. S-1 at 0ft
			1	S-1	SS	20	10	18		
	+645.0	Gray to mottled orangish brown sandy SILT, trace clay (moist) [ML]	2				8			S-2 at 2ft
			3	S-2	SS	10	11	19		
	+643.0	Light brown silty f-m SAND (wet) [SM]	4				8			Drove casing to 4.0ft. Drilled to 4.0ft.
			5	S-3	SS	6	2	4		S-3 at 4ft
	+641.0	Gray to brown SILT, some f-m sand, some clay (wet) [ML]	6				2			S-4 at 6ft
			7	S-4	SS	15	4	11		
	+639.0	Light brown CLAY, some f-c sand, some silt (wet) [CL]	8				7			Drilled to 8.0ft.
			9	S-5	SS	16	11	16		S-5 at 8ft q _u =2.00 tsf
		Light brown sandy CLAY, trace coarse gravel (wet) [CL]	10				6			S-6 at 10ft
			11	S-6	SS	6	4	7		
			12				3			
	+632.0	Grayish brown sandy SILT, some clay, trace fine gravel (wet) [TILL]	15				12			Drilled to 15.0ft. Light grayish brown wash.
			16	S-7	SS	12	14	42		S-7 at 15ft
	+630.0	End of boring at 17'	17				28			Finished drilling at 11:15 AM on 5/5/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18				50/1			
			19							
			20							

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 657 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 4/22/21		Date Finished 4/22/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 17 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 7	Undisturbed -	Core -
Casing Diameter (in) 4			Casing Depth (ft) 4	Water Level (ft.) First 10	Completion -	24 HR. -	
Casing Hammer Automatic	Weight (lbs) 140		Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Gopal Goswami			
Sampler Hammer Safety	Weight (lbs) 140		Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
CL	657.0	Brown silty CLAY, some f-c sand, trace roots (moist) [CL]	0				3			Started drilling at 8:19 AM on 4/22/2021.
			1	S-1	SS	16	4	6		S-1 at 0ft q _u = .75 tsf
CL	655.0	Brown sandy CLAY, some silt (moist) [CL]	2				4			S-2 at 2ft
			3	S-2	SS	20	7	14		
CL		Brown sandy CLAY, some silt (moist) [CL]	4				7			
			5	S-3	SS	12	9	23		Drove casing to 4.0ft. Drilled to 4.0ft. Light brown wash. S-3 at 4ft
CL		Brown sandy CLAY, some silt, trace fine gravel (moist) [CL]	6				10			
			7	S-4	SS	20	11	22		S-4 at 6ft q _u = 2.75 tsf
CL	649.0	Grayish brown silty CLAY, trace f-m sand (moist) [CL]	8				11			
			9	S-5	SS	20	13	11		Drilled to 8.0ft. Greenish brown wash. S-5 at 8ft
CL		Grayish brown CLAY, some silt, some f-c sand, trace fine gravel (wet) [CL]	10				3			
			11	S-6	SS	16	3	11		S-6 at 10ft q _u = .75 tsf
CL			12				8			
			13				8			
CL	642.0	Grayish brown SILT, some f-c sand, some clay, trace f-c gravel (wet) [TILL]	15				11			
			16	S-7	SS	12	16	34		Drilled to 15.0ft. Brownish green wash. S-7 at 15ft
CL			17				18			
			18				18			
CL	640.0	End of boring at 17'	19							
			20							Finished drilling at 8:48 AM on 4/22/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.

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Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 658 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/5/21		Date Finished 5/5/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 17 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples		Disturbed	Undisturbed
Casing Diameter (in) 4				Casing Depth (ft) 4		7	-
Casing Hammer Automatic				Weight (lbs) 140		Drop (in) 30	-
Sampler 2" OD Split Spoon				Water Level (ft.) First		2	Completion
Sampler Hammer Automatic				Weight (lbs) 140		Drop (in) 30	24 HR.
				Drilling Foreman Paul Mullins			
				Field Engineer Rodrigo Fernandez Santoyo			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	+658.0	Dark brown f-c SAND, some silt, trace f-c gravel (moist) [SM]	0				4			Started Drilling at 12:26 PM on 5/5/2021.
			1	S-1	SS	6	7		37	S-1 at 0ft
	+656.0	Light brown sandy CLAY, some silt (wet) [CL]	2				4			S-2 at 2ft
			3	S-2	SS	10	7		12	
	+654.0	Light brown silty CLAY, trace f-c sand, trace fine gravel (wet) [CL]	4				2			Drove casing to 4.0ft. Drilled to 4.0ft. Light brown wash.
			5	S-3	SS	20	3		8	S-3 at 4ft
		Light brown silty CLAY, some f-c sand, trace fine gravel (wet) [CL]	6				7			q _u =1.75 tsf
			7	S-4	SS	15	7		15	S-4 at 6ft
	+650.0	Light brown clayey SILT, some f-c sand, trace fine gravel (wet) [ML]	8				4			q _u =2.00 tsf
			9	S-5	SS	16	4		10	Drilled to 8.0ft. Light brown wash.
		Light brown clayey SILT, some f-c sand, trace fine gravel (wet) [ML]	10				4			S-5 at 8ft
			11	S-6	SS	15	11		23	S-6 at 10ft
			12				12			
			13				13			
	+643.0	Grayish brown clayey SILT, some f-c sand trace fine gravel (wet) [TILL]	15				8			Drilled to 15.0ft.
			16	S-7	SS	20	6		18	S-7 at 15ft
	+641.0	End of boring at 17'	17				15			Finished drilling at 12:57 PM on 5/5/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18							
			19							
			20							

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 662 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	5/6/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	21.8 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30	Drilling Foreman	Paul Mullins
Sampler	2" OD Split Spoon			Field Engineer	Rodrigo Fernandez Santoyo		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30		

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	+662.0	Grayish brown silty f-m SAND, trace clay, trace roots (wet) [SM]	0				2		Started drilling at 12:21 PM on 5/6/2021.
			1	S-1	SS	19	3	6	S-1 at 0ft
		Light brown f-m SAND, trace silt, trace roots (moist) [SM]	2				4		S-2 at 2ft
			3	S-2	SS	20	19	38	
			4				8		Drove casing to 4.0ft. Drilled to 4.0ft.
	+658.0	Grayish brown CLAY, some f-m sand, some silt, trace coarse gravel (wet) [CL]	4				4		S-3 at 4ft
			5	S-3	SS	22	5	12	
		Grayish brown sandy CLAY, some silt, trace f-c gravel (wet) [CL]	6				15		S-4 at 6ft
			7	S-4	SS	15	18	33	
	+654.0	POSSIBLE BOULDER	8				15		
			9						
	+652.0	Grayish brown sandy SILT, trace fine gravel, trace clay (wet) [TILL]	10				8		Drilled to 10.0ft. Grayish brown wash. Rig Chattering.
			11	S-5	SS	20	18	38	Drilled through approximately 2-foot-thick obstruction.
			12				20		S-5 at 10ft
			13				23		
			14						
		Grayish brown SILT, some f-c sand, some f-c gravel, trace clay (wet) [TILL]	15				33		Drilled to 15.0ft. Grayish brown wash. Rig chattering.
			16	S-6	SS	20	56	96	S-6 at 15ft
			17				40		
			18				50		
			19						
	+642.0		20						

Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 662 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	642.0	Gray clayey SILT, some f-c sand (wet) [TILL]	20	S-7	SS	10	38	92	Drilled to 20.0ft. Grayish brown wash. S-7 at 20ft
	640.2		21				42		
		End of boring at 21.8'	22				50		Finished drilling at 1:09 PM on 5/6/2021. Installed 2" diameter PVC temporary observation well with 10ft slotted screen and 10ft riser.
			23				50/3		
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
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			36						
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			40						
			41						
			42						
			43						
			44						
			45						

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 639 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/23/21		4/23/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				27 ft		N.E.	
Size and Type of Bit				Number of Samples	Disturbed	Undisturbed	Core
3-7/8in Tricone Roller Bit					9	-	-
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)	First	Completion	24 HR.
4			4		20	-	-
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30	Drilling Foreman	
Sampler				Paul Mullins			
2" OD Split Spoon				Field Engineer			
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Rodrigo Fernandez Santoyo	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	639.0	Grayish brown silty f-c SAND, trace fine gravel, trace clay (moist) [SM]	0				2		Started Drilling at 4/23/2021 9:03 AM. S-1 at 0ft
			1	S-1	SS	20	2	8	
		Grayish brown silty f-c SAND, trace f-c grave, trace clay (moist) [SM]	2				6		S-2 at 2ft
			3	S-2	SS	18	7	15	
	635.0	Grayish brown sandy SILT, some clay (moist) [ML]	4				10		Drove casing to 4.0ft. Drilled to 4.0ft. Grayish brown wash. S-3 at 4ft
			5	S-3	SS	15	6	14	
			6				8		S-4 at 6ft
	633.0	Grayish brown silty f-c SAND, trace clay, trace fine gravel (moist) [SM]	7	S-4	SS	16	6	27	
			8				12		
	631.0	Grayish brown SILT, some clay, some f-c SAND (moist) [ML]	9	S-5	SS	15	15	20	Drilled to 8.0ft. Grayish brown wash. S-5 at 8ft q _u =4.00 tsf
			10				18		
	629.0	Grayish brown silty CLAY, some f-c sand (moist) [CL]	11	S-6	SS	14	15	36	S-6 at 10ft q _u =4.00 tsf
			12				19		
			13				17		
			14				19		
		Gray silty CLAY, some f-c sand, trace f-c gravel (moist) [CL]	15				4		Drilled to 15.0ft. Grayish brown wash. S-7 at 15ft q _u =3.50 tsf
			16	S-7	SS	14	7	15	
			17				8		
			18				12		
			19						
			20						

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Project			Project No.							
Proposed Commercial Campus at Fields Corner			190065201							
Location			Elevation and Datum							
Southeast, New York			Approx el 639 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)		
	+619.0	Gray silty CLAY, some f-c sand (wet) [CL]	20							Drilled to 20.0ft. Grayish brown wash. Rig chattering. S-8 at 20ft q _u =3.50 tsf
			21	S-8	SS	6	4	7	17	
				22					10	
			23							
			24							
		Gray stiff silty CLAY, some f-c sand, trace f-c gravel (wet) [CL]	25							Drilled to 25.0ft. Grayish brown wash. S-9 at 25ft
			26	S-9	SS	16	6	6	16	
			27					10	12	
		End of boring at 27'	28							Finished drilling at 9:52 AM on 4/23/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			29							
			30							
			31							
			32							
			33							
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			45							

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 642 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/22/21		4/22/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				27 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				9		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		Core	
4			4	First		-	
Casing Hammer			Weight (lbs)	10		Completion	
Automatic			140	10		-	
Sampler			Drop (in)	24 HR.		-	
2" OD Split Spoon			30	Drilling Foreman		N.E.	
Sampler Hammer			Weight (lbs)	Paul Mullins		-	
Safety			140	Field Engineer		-	
Drop (in)			30	Gopal Goswami		-	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	642.0	Brown silty f-m SAND, some clay, trace roots (moist) [SM]	0				2		Started Drilling at 11:12 AM on 4/22/2021.
			1	S-1	SS	20	4	10	S-1 at 0ft
		Brown silty f-c SAND, trace clay, trace f-c gravel (moist) [SM]	2				7		S-2 at 2ft
			3	S-2	SS	16	10	21	
	638.0	Brownish gray silty CLAY, some f-m sand, trace fine gravel (moist) [CL]	4				8		Drove casing to 4.0ft. Drilled to 4.0ft. Gray green wash.
			5	S-3	SS	16	6	12	S-3 at 4ft
		Brownish gray silty CLAY, trace f-m sand (moist) [CL] passing #200 = 60.6% wc = 14.7%	6				4		S-4 at 6ft
			7	S-4	SS	14	6	12	
		Brownish gray silty CLAY, some f-m sand, trace fine gravel (moist) [CL]	8				7		Drilled to 8.0ft. Grayish brown wash.
			9	S-5	SS	16	9	24	S-5 at 8ft
	632.0	Grayish brown silty f-m SAND, some clay, trace f-c gravel (wet) [SM]	10				15		Drilled to 10.0ft. Gray green wash.
			11	S-6	SS	24	10	26	S-6 at 10ft
			12				15		
			13						
			14						
	627.0	Gray sandy CLAY, some silt, trace f-c gravel (wet) [TILL]	15				19		Drilled to 15.0ft. Gray green wash.
			16	S-7	SS	12	33	48	S-7 at 15ft q _u =4.00 tsf
			17				15		
			18				20		
			19						
			20						

Project			Project No.							
Proposed Commercial Campus at Fields Corner			190065201							
Location			Elevation and Datum							
Southeast, New York			Approx el 642 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)		
	622.0	Gray silty CLAY, some f-c sand, trace f-c gravel (wet) [TILL]	20	S-8	SS	12	5	8	50/3	50/3
	620.8	POSSIBLE BOULDER	21							
	619.0		22							
			23							
	615.0	Gray CLAY, some silt, some f-c sand, trace f-c gravel (wet) [TILL]	24	S-9	SS	1	9	16	12	24
			25							
			26							
			27							
		End of boring at 27'	28							
			29							
			30							
			31							
			32							
			33							
			34							
			35							
			36							
			37							
			38							
			39							
			40							
			41							
			42							
			43							
			44							
			45							

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 643 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 4/22/21		Date Finished 4/22/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 30.1 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 8	Undisturbed -	Core 1
Casing Diameter (in) 4		Casing Depth (ft) 4		Water Level (ft.) First 6	Completion 24 HR. -	- -	
Casing Hammer Automatic	Weight (lbs) 140		Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Gopal Goswami			
Sampler Hammer Safety	Weight (lbs) 140		Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Coring (min)	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Depth Scale	Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	643.0	Greenish brown silty f-c SAND, some clay, trace fine gravel (moist) [SM]		0				2		Started drilling at 9:17 AM on 4/22/2021.
				1	S-1	SS	16	2		S-1 at 0ft
	641.0	Greenish brown clayey f-c SAND, some silt, trace fine gravel (moist) [SC]		2				10		S-2 at 2ft
				3	S-2	SS	20	9		
	639.0	Brownish green sandy CLAY, some silt, trace fine gravel (moist) [CL]		4				8		Drilled to 4.0ft. Drove casing to 4.0ft. Greenish brown wash.
				5	S-3	SS	12	7		S-3 at 4ft
		Brownish green sandy CLAY, some clay, trace fine gravel (wet) [CL]		6				12		
				7	S-4	SS	20	4		S-4 at 6ft q _u =1.25 tsf
				8				6		
		Grayish brown sandy CLAY, some silt, trace f-c gravel (wet) [CL]		9				8		Drilled to 8.0ft. Brownish green wash.
				10	S-5	SS	12	15		S-5 at 8ft
	633.0	Grayish brown sandy CLAY, some silt, trace f-c gravel (wet) [CL]		11				11		
				12	S-6	SS	24	12		S-6 at 10ft
				13				21		
				14				20		
	628.0	Gray silty CLAY, trace f-m sand (wet) [CL] LL = 25, PL = 14, PI = 11 wc = 14.2%		15				21		Drilled to 15.0ft. Brownish green wash.
				16	S-7	SS	12	27		S-7 at 15ft
				17				10		
				18				10		
				19				10		
	623.0			20				13		

Project				Project No.						
Proposed Commercial Campus at Fields Corner				190065201						
Location				Elevation and Datum						
Southeast, New York				Approx el 643 (unknown datum - SESI Survey)						
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Coring (min)	Depth Scale	Sample Data				Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
					Number	Type	Recov. (in)	Penetr. resist. BL/6in		N-Value (Blows/ft)
	623.0	Gray stiff clayey SILT, some f-m sand (wet) [ML]		20						
				21	S-8	SS	20	7	9	19
				22				10	11	
				23						
				24						
	618.0	No Recovery Bluish gray micaceous schist BOULDER	1:48	25	S-9	SS	0	50/1		50/1
			0:12	26						
			0:09	27	C-1	NX Core	REC=18"/60" =30%	RQD=10"/60" =17%		
			0:14	28						
			1:08	29						
	612.9	End of boring at 30.1'		30						
				31						
				32						
				33						
				34						
				35						
				36						
				37						
				38						
				39						
				40						
				41						
				42						
				43						
				44						
				45						

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Drilled to 25.0ft. Greenish gray wash.
S-9 at 25ft
C-1 at 25.08ft
Boulder

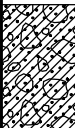
Finished drilling at 10:53 AM on 4/22/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 647 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/22/21		4/22/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				17 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				9		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		First	
4			4	N.E.		Completion	
Casing Hammer		Weight (lbs)		Drop (in)		24 HR.	
Automatic		140		30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety		Weight (lbs)		Gopal Goswami			
		140					
		Drop (in)					
		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	647.0	Grayish brown silty f-c SAND, some clay, trace fine gravel, trace roots (moist) [SM]	0				2		Started drilling at 12:21 PM on 4/22/2021.
			1	S-1	SS	16	2	5	S-1 at 0ft
		Brown silty f-c SAND, trace clay, trace f-c gravel (moist) [SM]	2				7		S-2 at 2ft
			3	S-2	SS	16	8	18	
	643.0	Brownish gray sandy CLAY, some f-c gravel (moist) [CL]	4				6		Drove casing to 4.0ft. Drilled to 4.0ft. Gray wash.
			5	S-3	SS	10	13	23	S-3 at 4ft
		Brownish gray silty CLAY, some f-c sand, trace f-c gravel (moist) [CL-ML]	6				35		S-4 at 6ft
			7	S-4	SS	16	17	35	
	639.0	Light green to grayish brown sandy CLAY, some silt, trace f-c gravel (moist) [TILL]	8				8		Drilled to 8.0ft. Grayish brown wash.
			9	S-5	SS	20	11	28	S-5 at 8ft
		Light green to grayish brown silty CLAY, some f-c SAND, trace f-c gravel (moist) [TILL]	10				25		Drilled to 10.0ft. Greenish gray wash.
			11	S-6	SS	20	22	48	S-6 at 10ft
			12				31		
	632.0	Gray silty CLAY, some f-m sand, trace f-c gravel (moist) [TILL]	15				12		Drilled to 15.0ft. Greenish gray wash.
			16	S-7	SS	16	13	29	S-7 at 15ft
	630.0	End of boring to 17'	17				16		q _u =3.50 tsf
			18				18		Finished drilling at 12:59 PM on 4/22/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			19						
			20						

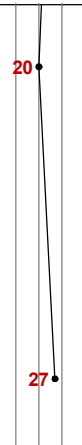
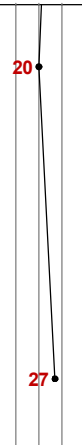
Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 635 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/12/21		5/12/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME Wheel Mounted Drill Rig				27 ft		N.E.	
Size and Type of Bit				Number of Samples	Disturbed	Undisturbed	Core
3-7/8in Tricone Roller Bit					11	-	-
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)	First	Completion	24 HR.
4			4		6		
Casing Hammer		Weight (lbs)		Drop (in)		Drilling Foreman	
Automatic		140		30		Paul Mullins	
Sampler				Field Engineer			
2" OD Split Spoon				Rodrigo Fernandez Santoyo			
Sampler Hammer		Weight (lbs)		Drop (in)			
Safety		140		30			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)		
	+635.0	Grayish brown sandy SILT, some clay (wet) [ML]	0				2			Started Drilling at 9:31 AM on 5/10/2021.
			1	S-1	SS	15	2	4		S-1 at 0ft
		Grayish brown sandy SILT, trace clay (moist) [ML]	2				3			S-2 at 2ft
			3	S-2	SS	20	4	9		
		Grayish brown sandy SILT, trace clay (moist) [ML]	4				5			
			5	S-3	SS	20	8	23		Drove casing to 4.0ft. Drilled to 4.0ft. Grayish brown wash.
			6				15			S-3 at 4ft
	+629.0	Grayish brown clayey f-c SAND, some silt, trace fine gravel (wet) [TILL]	6				7			S-4 at 6ft
			7	S-4	SS	22	11	23		
		Grayish brown sandy SILT, some clay, trace f-c gravel (wet) [TILL]	8				12			
			9	S-5	SS	20	9	29		Drilled to 8.0ft. Grayish brown wash.
			10				13			S-5 at 8ft
		Grayish brown sandy CLAY, some silt, trace f-c gravel (wet) [TILL]	11	S-6	SS	18	14	38		S-6 at 10ft
			12				19			
			13				19			
			14				21			
		Grayish brown clayey SILT, some f-c sand, trace f-c gravel (wet) [TILL]	15				8			Drilled to 15.0ft. Grayish brown wash. Rig chattering.
			16	S-7	SS	12	11	22		S-7 at 15ft
			17				12			
			18							
			19							
			20							

Project Proposed Commercial Campus at Fields Corner			Project No. 190065201							
Location Southeast, New York			Elevation and Datum Approx el 635 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)		
	615.0	Grayish brown silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	20							
			21	S-8	SS	8	15	37		
			22				22			
			23							
			24							
	610.0	Gray silty CLAY, some f-c sand, trace fine gravel (wet) [TILL]	25				8			
			26	S-9	SS	11	14	31		
			27				17			
	608.0	End of boring at 27'	27				18			
			28							
			29							
			30							
			31							
			32							
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			43							
			44							
		45								

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 626 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	5/7/21		Date Finished
Drilling Equipment	CME Wheel Mounted Drill Rig			Completion Depth	22 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Field Engineer	Rodrigo Fernandez Santoyo

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BLU/in	N-Value (Blows/ft)	
	+626.0	Gray to brown clayey SILT, some f-m sand, trace roots (wet) [TOPSOIL]	0				2		Started Drilling at 10:33 AM on 5/7/2021.
			1	S-1	SS	12	2	4	S-1 at 0ft
	+624.0	Grayish brown silty f-m SAND, some clay (moist) [SM]	2				6		S-2 at 2ft
			3	S-2	SS	22	11	19	
	+622.0	Grayish brown SILT, some clay, trace f-c sand (moist) [ML]	4				7		Drove casing to 4.0ft. Drilled to 4.0ft.
			5	S-3	SS	20	10	22	S-3 at 4ft
	+620.0	Grayish brown clayey f-m SAND, some silt, trace fine gravel (moist) [SC]	6				8		S-4 at 6ft
			7	S-4	SS	17	13	28	
	+618.0	Grayish brown sandy SILT, trace clay, trace fine gravel (moist) [TILL]	8				10		Drilled to 8.0ft. Grayish brown wash.
			9	S-5	SS	15	14	29	S-5 at 8ft
		Grayish brown sandy SILT, some clay, trace fine gravel (moist) [TILL]	10				12		S-6 at 10ft
			11	S-6	SS	15	17	38	
			12				21		
			13				22		
			14						
		Grayish brown sandy SILT, some clay, trace fine gravel (wet) [TILL]	15				13		Drilled to 15.0ft. Grayish brown wash.
			16	S-7	SS	14	9	25	S-7 at 15ft
			17				16		
			18				15		
			19						
			20						

Project			Project No.						
Proposed Commercial Campus at Fields Corner			190065201						
Location			Elevation and Datum						
Southeast, New York			Approx el 626 (unknown datum - SESI Survey)						
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	606.0	Grayish brown clayey SILT, trace f-c sand (wet) [TILL]	20	S-8	SS	15	8	7	
			21				13		
			22				13		
	601.0	Gray sandy CLAY, trace fine gravel (wet) [TILL]	25	S-9	SS	20	8	10	
			26				17		
	599.0		27				15		
		End of boring at 27'	27						Finished drilling at 11:36 AM on 5/7/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 638 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	5/7/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	27 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Field Engineer	Rodrigo Fernandez Santoyo

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist. BLU/in	N-Value (Blows/ft)				
	+638.0	Light brown sandy SILT, trace clay, trace roots (moist) [ML]	0				1	10	20	30	40	Started drilling at 9:21 AM on 5/7/2021. S-1 at 0ft
			1	S-1	SS	15	2	4				
	+636.0	Grayish brown silty f-c SAND, trace clay (moist) [SM]	2				2					S-2 at 2ft
			3	S-2	SS	16	12	22				
	+634.0	Grayish brown to brown silty CLAY, some f-c sand (moist) [CL]	4				10					Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash. S-3 at 4ft
			5	S-3	SS	8	8	16				
	+632.0	Grayish brown SILT, some f-m sand, some clay (moist) [TILL]	6				17					S-4 at 6ft
			7	S-4	SS	12	18	41				
		Grayish brown SILT, some clay, trace f-m sand, trace coarse gravel (moist) [TILL]	8				23					Drilled to 8.0ft. Grayish brown wash. S-5 at 8ft
			9	S-5	SS	20	13	29				
		Grayish brown sandy CLAY, some silt, trace fine gravel (wet) [TILL]	10				16					S-6 at 10ft q _u =1.50 tsf
			11	S-6	SS	24	8	24				
			12				11					Drilled to 15.0ft. S-7 at 15ft q _u =1.50 tsf
			13				15					
			14									
			15									
		Grayish brown silty CLAY, some f-c sand (wet) [TILL]	15				14					
			16	S-7	SS	5	19	46				
			17				27					
			18				27					
			19									
			20									

Project Proposed Commercial Campus at Fields Corner			Project No. 190065201						
Location Southeast, New York			Elevation and Datum Approx el 638 (unknown datum - SESI Survey)						
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)	
	618.0	No Recovery	20						Drilled to 20.0ft. Grayish brown wash. Rig chattering. S-8 at 20ft
			21	S-8	SS	0	3 9 13 12	22	
			22						
			23						Drilled to 25.0ft. Grayish brown wash. Rig chattering. S-9 at 25ft
			24						
	613.0	Gray sandy SILT, some clay, trace fine gravel (wet) [TILL]	25				23 18 22 25	40	
	611.0		26	S-9	SS	8			Finished drilling at 10:16 AM on 5/7/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
		End of boring at 27'	27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
			35						
			36						
			37						
			38						
			39						
			40						
			41						
			42						
			43						
			44						
			45						

Project	Proposed Commercial Campus at Fields Corner			Project No.	190065201		
Location	Southeast, New York			Elevation and Datum	Approx el 645 (unknown datum - SESI Survey)		
Drilling Company	Craig Geotechnical Drilling Co., Inc.			Date Started	5/7/21		Date Finished
Drilling Equipment	CME 75 ATV-mounted Rig			Completion Depth	27 ft		Rock Depth
Size and Type of Bit	3-7/8in Tricone Roller Bit			Number of Samples	Disturbed	Undisturbed	Core
Casing Diameter (in)	4	Casing Depth (ft)	4	Water Level (ft.)	First	Completion	24 HR.
Casing Hammer	Automatic	Weight (lbs)	140	Drop (in)	30		
Sampler	2" OD Split Spoon			Drilling Foreman	Paul Mullins		
Sampler Hammer	Safety	Weight (lbs)	140	Drop (in)	30	Field Engineer	Rodrigo Fernandez Santoyo

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)		
				Number	Type	Recov. (in)	Penetr. resist. BLU/in	N-Value (Blows/ft)				
	+645.0	Brown silty f-m SAND (moist) [SM]	0				3					Started drilling at 7:35 AM on 5/7/2021.
			1	S-1	SS	8	5	8				S-1 at 0ft
	+643.0	Grayish brown SILT, some f-m sand (moist) [ML]	2				8					S-2 at 2ft
			3	S-2	SS	14	11	19				
	+641.0	Grayish brown silty f-m SAND, trace clay, trace fine gravel (moist) [SM]	4				11					Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			5	S-3	SS	10	27	40				S-3 at 4ft
	+639.0	Grayish brown sandy SILT, trace clay, trace fine gravel (moist) [ML]	6				14					S-4 at 6ft. Spoon bouncing
			7	S-4	SS	4	50/3	50/3				
	+637.0	Grayish brown sandy SILT, trace clay, trace fine gravel (wet) [TILL]	8				9					Drilled to 8.0ft. Grayish brown wash. Hard drilling at 7ft.
			9	S-5	SS	18	15	24				S-5 at 8ft
		Grayish brown SILT, some f-c sand, trace clay, trace fine gravel (wet) [TILL]	10				14					S-6 at 10ft
			11	S-6	SS	24	24	39				
			12				27					
			13									
			14									
		Grayish brown clayey SILT, some f-c sand, trace fine gravel (wet) [TILL]	15				10					Drilled to 15.0ft. Grayish brown wash.
			16	S-7	SS	20	24	44				S-7 at 15ft
			17				20					
			18									
			19									
	+625.0		20									

Project Proposed Commercial Campus at Fields Corner			Project No. 190065201							
Location Southeast, New York			Elevation and Datum Approx el 645 (unknown datum - SESI Survey)							
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)		
	625.0	Gray silty CLAY, some f-c sand trace fine gravel (wet) [TILL]	20							Drilled to 20.0ft. Grayish brown wash. Rig Chattering. S-8 at 20ft q _u =2.25 tsf
			21	S-8	SS	20	12	26		
				22				14		
			23				16			
			24							
		Gray clayey SILT, some f-c sand trace fine gravel (wet) [TILL]	25				21			Drilled to 25.0ft. Grayish brown wash. S-9 at 25ft
			26	S-9	SS	24	15	35		
			27				20			
	618.0	End of boring at 27'	27				29			Finished drilling at 8:22 AM on 5/7/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			28							
			29							
			30							
			31							
			32							
			33							
			34							
			35							
			36							
			37							
			38							
			39							
			40							
			41							
			42							
			43							
			44							
			45							

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 629 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				4/26/21		4/26/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				15.6 ft		N.E.	
Size and Type of Bit				Number of Samples		Undisturbed	
3-7/8in Tricone Roller Bit				7		Core	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		Completion	
4			4	First		24 HR.	
Casing Hammer		Weight (lbs)		Drop (in)		Core	
Automatic		140		30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety		Weight (lbs)		Gopal Goswami			
		140					
		Drop (in)					
		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist (psi)	N-Value (Blows/ft)		
	629.0	Brown silty f-m SAND, some clay, trace roots (moist) [SM]	0				2			Started drilling at 8:22 AM on 4/26/2021.
			1	S-1	SS	12	2			S-1 at 0ft
			2				3			
		Brown silty f-m SAND, some clay, trace f-c gravel, trace roots (moist) [SM] passing #200 = 45% wc = 12.2% organic content = 1.0%	3	S-2	SS	12	4			S-2 at 2ft
			4				5			
		Brown clayey f-m SAND, some silt, trace f-c gravel (moist) [SC]	5	S-3	SS	12	6			Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash.
			6				7			S-3 at 4ft
		Brown clayey SILT, some f-c sand, trace f-c gravel (wet) [ML]	7	S-4	SS	14	8			S-4 at 6ft
			8				9			
		Gray silty f-m SAND, some f-c gravel, trace clay (wet) [TILL]	9	S-5	SS	16	10			Drilled to 8.0ft. Brown wash.
			10				11			S-5 at 8ft
		No Recovery	11	S-6	SS	0	12			S-6 at 10ft. Possible boulder.
			12				13			
			13				14			
			14				15			
		Greenish gray clayey SILT, some f-c SAND (wet) [SM]	15	S-7	SS	5	12			Drilled to 15.0ft. Gray brown wash.
		End of boring at 15.6'	16				13			S-7 at 15ft. Possible boulder.
			17				17			Finished drilling at 8:55 AM on 4/26/2021. Installed 2" diameter PVC temporary observation well with 10ft slotted screen and 5ft riser.
			18				25			
			19							
			20							

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Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
			Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft)	
631.0	Brown silty f-m SAND, some clay, trace f-c gravel (moist) [SM]	0				1	10 20 30 40	Started drilling at 9:12 AM on 4/26/2021. S-1 at 0ft
		1	S-1	SS	12	3 4 5		
629.0	Grayish brown sandy SILT, some clay (moist) [ML]	2				6		S-2 at 2ft
		3	S-2	SS	16	6 6 5		
	Grayish brown sandy SILT, some clay, trace f-c gravel (moist) [ML] passing #200 = 50% wc = 13.3%	4				7		Drove casing to 4.0ft. Drilled to 4.0ft. Brown wash. S-3 at 4ft
		5	S-3	SS	12	6 7		
625.0	Grayish brown silty f-c SAND, some clay, trace f-c gravel (wet) [SM]	6				7		S-4 at 6ft
		7	S-4	SS	10	7 5		
	Grayish brown silty f-c SAND, some clay, trace f-c gravel (wet) [SM]	8				2		Drilled to 8.0ft. Light brown wash. S-5 at 8ft
		9	S-5	SS	20	5 7		
621.0	Grayish brown sandy SILT, some clay, trace f-c gravel (wet) [ML]	10				11		S-6 at 10ft
		11	S-6	SS	12	14 11 11		
		12				15		Rig chattering
		13						
		14						Rig chattering
		15						
616.0	Gray silty f-m SAND, some clay, trace fine gravel (wet) [TILL]	15				21		Drilled to 15.0ft. Grayish brown wash. S-7 at 15ft
		16	S-7	SS	6	18 20		
614.0	End of boring at 17'	17				15		Finished drilling at 9:43 AM on 4/26/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
		18						
		19						
		20						

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 630 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 4/26/21		Date Finished 4/26/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 17 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples 7		Undisturbed -	
Casing Diameter (in) 4		Casing Depth (ft) 4		Water Level (ft.) First 8		Completion 24 HR. -	
Casing Hammer Automatic		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Paul Mullins	
Sampler 2" OD Split Spoon				Field Engineer Gopal Goswami			
Sampler Hammer Safety		Weight (lbs) 140		Drop (in) 30			

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data						Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)			
	+630.0	Brown silty f-m SAND, some clay, trace f-c gravel, trace roots (moist) [SM]	0				2				Started Drilling at 10:02 AM on 4/26/2021. S-1 at 0ft
			1	S-1	SS	14	3	5			
			2				2				S-2 at 2ft q _u =.50 tsf
			3	S-2	SS	12	5	4	6		
			4				2				Drove casing to 4.0ft. Drilled to 4.0ft. Light brown wash. S-3 at 4ft q _u =1.25 tsf
			5	S-3	SS	12	6	5	10		
			6				5				S-4 at 6ft q _u =1.25 tsf
			7	S-4	SS	12	5	5	10		
			8				5				Drilled to 8.0ft. S-5 at 8ft q _u =1.25 tsf
			9	S-5	SS	16	4	6	13		
			10				1				S-6 at 10ft
			11	S-6	SS	20	6	7	11	29	
		12				13				Rig chattering. Possible boulder.	
		13				10					
		14				10				Drilled to 15.0ft. Gray wash. S-7 at 15ft	
		15	S-7	SS	22	10	10	13	23		
		16				13				Finished drilling at 10:40 AM on 4/26/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.	
		17				13					
		18									
		19									
		20									

Project				Project No.				
Proposed Commercial Campus at Fields Corner				190065201				
Location				Elevation and Datum				
Southeast, New York				Approx el 630 (unknown datum - SESI Survey)				
Drilling Company				Date Started		Date Finished		
Craig Geotechnical Drilling Co., Inc.				5/10/21		5/12/21		
Drilling Equipment				Completion Depth		Rock Depth		
CME Wheel Mounted Drill Rig				17 ft		N.E.		
Size and Type of Bit				Number of Samples	Disturbed	Undisturbed	Core	
3-7/8in Drag Bit					7	-	-	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)	First	Completion	24 HR.	
4			4	▽	4	▼	▼	
Casing Hammer		Weight (lbs)		Drop (in)	Drilling Foreman			
Automatic		140		30	Paul Mullins			
Sampler				Field Engineer				
2" OD Split Spoon				Rodrigo Fernandez Santoyo				
Sampler Hammer		Weight (lbs)		Drop (in)				
Automatic		140		30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	+630.0	Light brown SILT, some fine sand, some clay, trace roots (moist) [ML]	0				1		Started drilling at 10:08 AM on 5/10/2021.
			1	S-1	SS	11	1		S-1 at 0ft
	+628.0	Grayish brown silty f-c SAND, trace clay, trace coarse gravel (moist) [SM]	2				3		S-2 at 2ft
			3	S-2	SS	18	5		
	+626.0	Grayish brown sandy SILT, trace clay (wet) [ML]	4				6		Drove casing to 4.0ft. Drilled to 4.0ft.
			5	S-3	SS	15	3		S-3 at 4ft
	+624.0	Grayish brown CLAY, some silt, some f-m sand (wet) [CL]	6				3		
			7	S-4	SS	8	5		S-4 at 6ft
	+622.0	Grayish brown sandy SILT, some clay, trace f-c gravel (wet) [TILL]	8				5		Drilled to 8.0ft. Grayish brown wash. Rig chattering.
			9	S-5	SS	10	15		S-5 at 8ft
			10				14		
		Grayish brown sandy SILT, trace clay, trace f-c gravel (moist) [TILL]	11	S-6	SS	14	12		S-6 at 10ft
			12				20		
			13				20		
			14						
		Grayish brown silty f-c SAND, trace f-c gravel (wet) [TILL]	15				7		Drilled to 15.0ft. Grayish brown wash. Rig chattering.
			16	S-7	SS	6	9		S-7 at 15ft
			17				15		
	+613.0	End of boring at 17'	17				18		Finished drilling at 1:30 PM on 5/12/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18						
			19						
			20						

Project Proposed Commercial Campus at Fields Corner					Project No. 190065201							
Location Southeast, New York					Elevation and Datum Approx el 629 (unknown datum - SESI Survey)							
Drilling Company Craig Geotechnical Drilling					Date Started 5/10/21		Date Finished 5/10/21					
Drilling Equipment CME Wheel Mounted Drill Rig					Completion Depth 17 ft		Rock Depth N.E.					
Size and Type of Bit 3-7/8in Tricone Roller Bit					Number of Samples		Disturbed 7		Undisturbed -		Core -	
Casing Diameter (in) 4				Casing Depth (ft) 4		Water Level (ft.) First 4		Completion -		24 HR. -		
Casing Hammer Automatic		Weight (lbs) 140		Drop (in) 30		Drilling Foreman Paul Mullins						
Sampler 2" OD Split Spoon		Weight (lbs) 140		Drop (in) 30		Field Engineer Rodrigo Fernandez Santoyo						
Sampler Hammer Automatic		Weight (lbs) 140		Drop (in) 30								
MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data							Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)	
				Number	Type	Recov. (in)	Penetr. resist BL/6in	N-Value (Blows/ft) 10 20 30 40				
	+629.0	Light grayish brown silty f-m SAND, trace clay (wet) [SM]	0				1					Started drilling at 9:26 AM on 5/10/2021. S-1 at 0ft
			1	S-1	SS	15	1					
	+627.0	Grayish brown sandy SILT, trace clay (moist) [ML]	2				5					S-2 at 2ft
			3	S-2	SS	15	7					
	+625.0	Grayish brown silty f-c SAND, trace fine gravel, trace clay (wet) [SM]	4				8					Drove casing to 4.0ft. Drilled to 4.0ft. Grayish brown wash. S-3 at 4ft
			5	S-3	SS	12	6					
	+623.0	Grayish brown sandy SILT, trace clay (wet) [ML]	6				7					S-4 at 6ft
			7	S-4	SS	10	7					
	+621.0	Grayish brown sandy SILT, some clay, trace fine gravel (wet) [TILL]	8				6					Drilled to 8.0ft. Grayish brown wash. S-5 at 8ft
			9	S-5	SS	12	5					
		Grayish brown sandy SILT, some clay, trace fine gravel (wet) [TILL]	10				7					S-6 at 10ft
			11	S-6	SS	10	12					
			12				12					
			13				14					
			14				60/2					
			15									
		Grayish brown CLAY, some silt, some f-c sand, trace fine gravel (wet) [TILL]	15				10					Drilled to 15.0ft. Grayish brown wash. Rig chattering. S-7 at 15ft
			16	S-7	SS	15	10					
			17				18					
			18				17					
	+612.0	End of boring at 17'	17									Finished drilling at 9:57 AM on 5/10/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			18									
			19									
			20									

Project				Project No.			
Proposed Commercial Campus at Fields Corner				190065201			
Location				Elevation and Datum			
Southeast, New York				Approx el 632 (unknown datum - SESI Survey)			
Drilling Company				Date Started		Date Finished	
Craig Geotechnical Drilling Co., Inc.				5/10/21		5/10/21	
Drilling Equipment				Completion Depth		Rock Depth	
CME 75 ATV-mounted Rig				17 ft		N.E.	
Size and Type of Bit				Number of Samples		Disturbed	
3-7/8in Tricone Roller Bit				7		Undisturbed	
Casing Diameter (in)			Casing Depth (ft)	Water Level (ft.)		First	
4			4	4		Completion	
Casing Hammer		Weight (lbs)		Drop (in)		24 HR.	
Automatic		140		30		-	
Sampler				Drilling Foreman			
2" OD Split Spoon				Paul Mullins			
Sampler Hammer				Field Engineer			
Safety		Weight (lbs)		Rodrigo Fernandez Santoyo			
		140					
		Drop (in)					
		30					

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. (psi)	N-Value (Blows/ft)	
	+632.0	Grayish brown sandy SILT, some clay (moist) [ML]	0				1		Started drilling at 8:51 AM on 5/10/2021.
			1	S-1	SS	21	1	3	S-1 at 0ft
			2				5		S-2 at 2ft
			3	S-2	SS	15	5	11	
	+628.0	Grayish brown clayey SILT, some f-c sand (wet) [ML]	4				8		Drove casing to 4.0ft. Drilled to 4.0ft. Grayish brown wash.
			5	S-3	SS	4	5	9	S-3 at 4ft
			6				4		q _u =1.00 tsf
	+626.0	Grayish brown silty CLAY, trace f-m sand (wet) [CL]	7	S-4	SS	14	8	12	S-4 at 6ft
			8				5		q _u =1.25 tsf
	+624.0	Grayish brown clayey SILT, some f-c sand, trace fine gravel (wet) [TILL]	9	S-5	SS	20	14	31	Drilled to 8.0ft. Grayish brown wash.
			10				16		S-5 at 8ft
			11	S-6	SS	18	18	40	S-6 at 10ft
			12				21		
			13				20		
			14						
			15				8		Drilled to 15.0ft. Grayish brown wash. Rig chattering.
	+617.0	Gray clayey silt, some f-c sand, trace f-c gravel (wet) [TILL]	16	S-7	SS	8	11	40	S-7 at 15ft
			17				29		
			18				21		
	+615.0	End of boring at 17'	19						Finished drilling at 9:20 AM on 5/10/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			20						

Project Proposed Commercial Campus at Fields Corner				Project No. 190065201			
Location Southeast, New York				Elevation and Datum Approx el 664 (unknown datum - SESI Survey)			
Drilling Company Craig Geotechnical Drilling Co., Inc.				Date Started 5/6/21		Date Finished 5/6/21	
Drilling Equipment CME 75 ATV-mounted Rig				Completion Depth 22 ft		Rock Depth N.E.	
Size and Type of Bit 3-7/8in Tricone Roller Bit				Number of Samples	Disturbed 8	Undisturbed -	Core -
Casing Diameter (in) 4		Casing Depth (ft) 4		Water Level (ft.) First 6	Completion 24 HR. ▼	-	-
Casing Hammer Automatic	Weight (lbs) 140		Drop (in) 30	Drilling Foreman Paul Mullins			
Sampler 2" OD Split Spoon				Field Engineer Rodrigo Fernandez Santoyo			
Sampler Hammer Safety	Weight (lbs) 140		Drop (in) 30				

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data				N-Value (Blows/ft)	Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. Blows/in		
	+664.0	Brown f-m SAND, some silt (moist) [SM]	0				17		Started drilling at 9:26 AM on 5/6/2021.
			1	S-1	SS	6	21	64	S-1 at 0ft
		Brown f-c SAND, some silt, trace coarse gravel (moist) [SM]	2				43		
			3	S-2	SS	8	15	32	S-2 at 2ft
			4				18		
		Brown silty f-c SAND, trace coarse gravel, trace clay (moist) [SM]	5	S-3	SS	18	14		
			6				18		Drove casing to 4.0ft. Drilled to 4.0ft.
	+658.0	Grayish brown sandy SILT, trace clay (wet) [ML]	7	S-4	SS	15	40	78	S-3 at 4ft
			8				48		
	+656.0	Grayish brown silty f-c SAND, some f-c gravel, trace clay (wet) [SM]	9	S-5	SS	11	30	30	S-4 at 6ft
			10				19		
	+654.0	Grayish brown sandy SILT, some clay, trace f-c gravel (moist) [TILL]	11	S-6	SS	20	14		
			12				16		
			13				26		
			14				34		
			15	S-7	SS	12	55	44	Drilled to 8.0ft. Grayish brown wash.
			16				17	60	S-5 at 8ft
			17				33		
			18				50/2		S-6 at 10ft
			19						
			20						Drilled to 15.0ft. Grayish brown wash. Rig chattering.
									S-7 at 15ft

Project Proposed Commercial Campus at Fields Corner		Project No. 190065201	
Location Southeast, New York		Elevation and Datum Approx el 664 (unknown datum - SESI Survey)	

MATERIAL SYMBOL	Elev. (ft)	Sample Description	Depth Scale	Sample Data					Remarks (Drilling Fluid, Depth of Casing, Fluid Loss, Drilling Resistance, etc.)
				Number	Type	Recov. (in)	Penetr. resist. BL/6in	N-Value (Blows/ft)	
	644.0	Grayish brown clayey SILT, some f-c sand, trace f-c gravel (wet) [TILL]	20				36		Drilled to 20.0ft. Grayish brown wash. Rig chattering. S-8 at 20ft
	642.0		21	S-8	SS	8	18	53	
		End of boring at 22'	22				35		Finished drilling at 10:27 AM on 5/6/2021. Boring backfilled with soil cuttings and bentonite pellets upon completion.
			23				59		
			24						
			25						
			26						
			27						
			28						
			29						
			30						
			31						
			32						
			33						
			34						
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			44						
			45						

APPENDIX D

Logs of Test Pits

LOG OF TEST PIT LTP-1

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/12/2021
LOCATION Southeast, New York	ELEVATION Approx. el 651 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 14 ft	WATER LEVEL - First 4 ft ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 4 ft ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+651.0	Brown Silty f-c SAND, some clay, some roots (moist) [TOPSOIL]	0			Start test pit at 12:05 PM on 04/12/21.
			1	S-1	GRAB	
	+649.5	Gray brown Clayey f-c SAND, some silt, trace f-c gravel (moist) [SC]	2			
			3	S-2	GRAB	
	+647.0	Gray brown Clayey f-c SAND, some silt, some gravel with gray to black BOULDERS (3" to 12") (moist) [SC]	4			Water seepage observed at 4 ft. Start of Boulder layer. Small boulders removed easily.
			5	S-3	GRAB	
	+641.0	Tannish brown Silty CLAY, some f-c sand, trace f-c gravel, trace boulders (wet) [TILL]	10			Hard excavation.
			11			
			12			
			13	S-4	GRAB	
	+637.0	End of test pit at 14ft	14			End test pit at 12:40 PM on 04/12/21. Backfilled with excavated material.
			15			

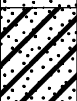
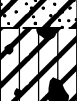
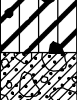
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LOG OF TEST PIT LTP-2

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/12/2021
LOCATION Southeast, New York	ELEVATION Approx. el 646 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First - ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion - ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+646.0	Brown Silty f-c SAND, some clay, some roots, trace gravel (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 11:10 AM on 04/12/21.
	+645.0	Grayish brown f-c Sandy CLAY, some silt, trace f-c gravel (moist) [SC]	1	S-2	GRAB	
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	2			
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	3			
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	4			Start of cobbles and small boulder layer. Easy excavation.
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	5	S-3	GRAB	
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	6			
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	7			
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	8			
	+641.0	Gray brown Sandy CLAY, some silt, trace f-c gravel with small (3" to 8") angular to rounded grayish blue to purple COBBLES (moist) [SC]	9			
	+636.0	Tannish brown Silty f-c SAND, some clay, trace coarse gravel with few boulders, trace decomposed rock (moist) [TILL]	10	S-4	GRAB	
	+636.0	Tannish brown Silty f-c SAND, some clay, trace coarse gravel with few boulders, trace decomposed rock (moist) [TILL]	11			
	+636.0	Tannish brown Silty f-c SAND, some clay, trace coarse gravel with few boulders, trace decomposed rock (moist) [TILL]	12			
	+636.0	Tannish brown Silty f-c SAND, some clay, trace coarse gravel with few boulders, trace decomposed rock (moist) [TILL]	13	BULK-1	GRAB	
	+633.0	End of test pit at 13ft.	14			End test pit at 11:30 AM on 04/12/21. No water seepage observed. Backfilled with excavated material.
			15			

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LOG OF TEST PIT LTP-3

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/12/2021
LOCATION Southeast, New York	ELEVATION Approx. el 659 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 14 ft	WATER LEVEL - First 7 ft  WATER LEVEL - Completion 7 ft 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+659.0	Brown Silty f-c SAND, some clay, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 9:45 AM on 04/12/21.
	+658.0	Grayish brown f-c SAND, some clay, some silt, trace f-c gravel (moist) [SC]	1	S-2	GRAB	
			2			
			3			
			4			
			5			
			6			
			7			Water seepage observed at 7 ft.
			8	S-3	GRAB	Start of boulder layer. Difficult excavation through boulders, easier when boulders removed.
			9			
			10			
			11	S-4	GRAB	
			12			
			13			
			14			End test pit at 10:10 AM on 04/12/21. Backfilled with excavated material.
			15			

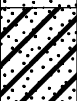
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LOG OF TEST PIT LTP-4

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/12/2021
LOCATION Southeast, New York	ELEVATION Approx. el 635 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 12 ft	WATER LEVEL - First 6 ft ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 6 ft ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+635.0	Brown Silty f-c SAND, trace clay, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 10:30 AM on 04/12/21.
	+634.0	Grayish brown f-c Sandy CLAY, some silt, trace f-c gravel (moist) [SC]	1	S-2	GRAB	
			2			
			3			
			4			
			5			Water seepage observed at 6 ft.
			6			
			7			
			8			Start of boulder layer. Small boulders. Removed easily.
			9	S-3	GRAB	
			10			Hard excavation.
			11	S-4	GRAB	
			12			End test pit at 11:00 AM on 04/12/21. Backfilled with excavated material.
			13			
			14			
			15			

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LOG OF TEST PIT LTP-5

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/12/2021
LOCATION Southeast, New York	ELEVATION Approx. el 650 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 14 ft	WATER LEVEL - First 7 ft ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 7 ft ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+650.0	Brown Silty f-c SAND, some clay, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 9:12 AM on 04/12/21.
	+649.0	Brown to light gray f-c Sandy CLAY, some silt, trace f-c gravel (moist) [SC]	1	S-2	GRAB	
			2			
			3			
			4			
			5			
			6			
	+644.0	Gray to greenish brown Silty CLAY, some f-c sand, trace f-c gravel with small to large (3" to 18"), flat and rounded grayish blue to purple BOULDERS (moist to wet) [CL]	6	S-3	GRAB	Start of boulder layer.
			7			Water seepage observed at 7 ft.
			8			Difficult excavation through boulders. Easy excavation when boulders removed.
			9			
			10	S-4	GRAB	Hard excavation.
			11			
			12			
			13			
	+636.0	End of test pit at 14ft.	14			End test pit at 9:35 AM on 04/12/21. Backfilled with excavated material.
			15			

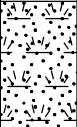
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LOG OF TEST PIT LTP-6

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/12/2021
LOCATION Southeast, New York	ELEVATION Approx. el 645 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 15 ft	WATER LEVEL - First 8 ft ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 8 ft ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+645.0	Brown Silty f-c SAND, some clay, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 8:00 AM on 04/12/21.
			1			
	+643.5	Brown to light gray f-c Sandy CLAY, some silt, trace coarse gravel, trace boulders (moist) [CL]	2	S-2	GRAB	
			3			
			4			
			5			
			6			
			7			
	+638.0	Brown to light gray f-c Sandy CLAY, some silt, trace coarse gravel, trace small to large light gray boulders (3" to 22") (moist) [CL]	7	S-3	GRAB	Start of boulder layer. Removed easily.
	+637.0	Brown Silty f-c SAND, some f-c gravel, trace clay, trace boulders (moist to wet) [TILL]	8			Water seepage observed at 8 ft.
			9			
			10			
			11			
			12			
			13			
			14			
			15			
	+630.0	End of test pit at 15ft.	15			End test pit at 9:05 AM on 04/12/21. Backfilled with excavated material.
			16			

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LOG OF TEST PIT LTP-7

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 633 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First -  WATER LEVEL - Completion - 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+633.0	Brown Sandy SILT, some clay, trace f-c gravel (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 8:35 AM on 04/13/2021
	+632.0	Tannish gray Silty f-c SAND, some f-c gravel, trace clay, trace small boulders (moist) [SM]	1	S-2	GRAB	
			2			
			3			
			4			
			5			
			6			
			7			
			8	S-3	GRAB	Start of boulder layer. Hard excavation around boulders only.
			9	BULK-1	GRAB	
			10	S-4	GRAB	Hard excavation.
			11			
			12			
			13			End test pit at 8:53 AM on 04/13/2021. No water seepage observed. Backfilled with excavated material.
			14			
			15			

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LOG OF TEST PIT LTP-8

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 671 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 12 ft	WATER LEVEL - First 8 ft  WATER LEVEL - Completion 8 ft 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+671.0	Brown Silty f-c SAND, trace clay, trace f-c gravel (moist), some roots [TOPSOIL]	0	S-1	GRAB	Start test pit at 7:40 AM on 04/13/2021
	+670.0	Light brown to Tannish brown Silty f-c SAND, trace f-c gravel, trace clay (moist) [SM]	1	S-2	GRAB	
			2			
			3			
			4			
			5			
	+665.0	Light brown to tannish gray Silty f-c SAND, some f-c gravel with small to large (3" to 24") rounded bluish gray BOULDERS (moist to wet) [SM]	6	S-3	GRAB	Start of boulder layer. Hard excavation around boulders only.
			7			
			8			Water seepage observed at 8 ft.
		Passing #200 = 35% wc = 12.0%	9	BULK-1	GRAB	
	+661.0	Tannish gray SILT, some clay, some f-c Sand, some f-c gravel (wet) [TILL]	10	S-4	GRAB	Hard excavation.
			11			
	+659.0	End of test pit at 12ft.	12			End test pit at 8:05 AM on 04/13/2021. Backfilled with excavated material.
			13			
			14			
			15			

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LOG OF TEST PIT LTP-9

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 650 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First 7 ft  WATER LEVEL - Completion 7 ft 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+650.0	Brown Silty f-c SAND, some roots, trace f-c gravel, trace clay (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 9:35 AM on 07/13/2021.
	+649.0	Tannish gray to brown Silty f-c SAND, some f-c gravel, trace clay (moist) [SM]	1	S-2	GRAB	
			2			
			3			
			4			
			5	S-3	GRAB	Start of boulder layer. Hard excavation around boulder only.
			6			
			7	S-4	GRAB	Water seepage observed at 7 ft.
			8			
			9			Hard excavation.
			10			
			11			
			12			
			13			End test pit at 9:55 AM on 07/13/2021. Backfilled with excavated material.
			14			
			15			

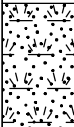
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LOG OF TEST PIT LTP-10

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 679 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First 7 ft 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 7 ft 
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+679.0	Brown Sandy SILT, some clay, some roots, trace f-c gravel (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 7:10 AM on 04/13/2021.
			1			
	+677.5	Light brown Silty f-c SAND, trace clay, trace f-c gravel (moist) [SM]	2	S-2	GRAB	Start of small boulder layer. Not hard to remove. Water seepage observed at 7 ft.
			3			
			4			
			5			
	+673.0	Light brown Silty f-c SAND, some silt, trace f-c gravel with small bluish gray to purple layered BOULDERS (moist to wet) [SM]	6	S-3	GRAB	
			7			
			8			
			9			
	+670.0	Tannish brown Sandy CLAY, some silt, trace f-c gravel, trace small boulders (moist to wet) [CL]	10	S-4	GRAB	
			11			
			12			
			13			
	+666.0	End of test pit at 13ft.	13			End test pit at 7:40 AM on 04/13/2021. Backfilled with excavated material.
			14			
			15			

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LOG OF TEST PIT LTP-11

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 649 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First - ▽ WATER LEVEL - Completion - ▼
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+649.0	Brown to light brown Sandy SILT, some clay, trace f-c gravel with roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit on 04/13/2021
			1			
	+647.5	Light brown Silty f-c SAND, trace f-c gravel, trace clay (moist) [SM]	2	S-2	GRAB	Start of boulders. Very few boulders. Easy excavation.
			3			
			4			
			5			
			6	S-3	GRAB	
			7			
			8			
			9			
			10			
			11			
	+644.0	Brown Silty f-c SAND, trace clay, trace angular to round small to large (3" to 24") reddish brown to gray BOULDERS (moist) [SM]	12			
			13			
	+636.0	End of test pit at 13ft.	14			End test pit at 11:05 AM on 24/13/2021. No water seepage observed. Backfilled with excavated material.
			15			

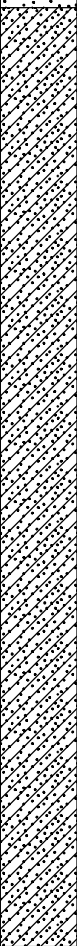
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LOG OF TEST PIT LTP-12

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 690 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First - ▽ WATER LEVEL - Completion - ▼
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+690.0	Brown to light brown Silty f-c SAND, trace f-c gravel, ttrace clay (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 10:05 AM on 04/13/2021
	+689.0	Tannish gray Clayey f-c SAND, some silt, trace f-c gravel with small to very large (3" to 30") bluish gray BOULDERS (moist) [SC]	1	S-3	GRAB	Start of boulder layer. Very hard excavating. Large boulder (3" to 30").
			2			
			3			
			4	S-2	GRAB	
			5			
			6			
			7			
			8			
			9			
			10			
	+680.0	Tannish gray Silty f-c SAND, some f-c gravel, trace clay (moist) [TILL]	10	S-4	GRAB	
			11			
			12			
	+677.0	End of test pit at 13ft.	13			End test pit at 10:20 AM on 04/13/2021. No water seepage observed. Backfilled with excavated material.
			14			
			15			

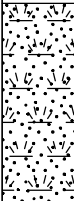
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LOG OF TEST PIT LTP-13

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 645 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 12 ft	WATER LEVEL - First 7 ft  WATER LEVEL - Completion 7 ft 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+645.0	Brown to light brown Silty f-c SAND, some clay, trace f-c gravel, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 2:05 PM on 04/13/2021.
			1			
	+643.0	Light brown Silty f-c SAND, some clay, trace f-c gravel (moist) [SM]	2	S-2	GRAB	Start of small to large boulders. Hard excavating around boulders.
	+642.0	Light brown Silty f-c SAND, some clay, trace f-c gravel with small to large (3" to 32") rounded dark gray to reddish brown BOULDERS (moist) [SM]	3	S-3	GRAB	
			4			
			5			
			6			
		Tan CLAY, some silt, some f-m sand, trace f-c gravel (wet) [CL] LL = 23, PL = 15, PI = 8 wc = 14.6%	7			Water seepage observed at 7 ft.
			8			
	+637.0		9	S-4	GRAB	Hard excavation.
			10	BULK-1	GRAB	
		End test pit at 12ft.	11			End test pit at 2:25 PM on 04/13/2021. Backfilled with excavated material.
	+633.0		12			
			13			
			14			
			15			

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LOG OF TEST PIT LTP-14

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 688 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 12 ft	WATER LEVEL - First - ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion - ▴
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+688.0	Brown Silty f-c SAND, some clay, trace f-c gravel, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 12:30 PM on 04/13/2021
	+687.0	Brown Silty f-c SAND, some f-c gravel, trace clay, trace roots (moist) [SM]	1	S-2	GRAB	
			2			
	+685.0	Brown Silty f-c SAND, some f-c gravel, trace clay with cobbles and large (12" to 24") rounded bluish gray to reddish brown BOULDERS (moist) [SM]	3	S-3	GRAB	
			4			
			5			
			6			
			7			
			8			
			9			
	+678.0	Tan Silty f-c SAND, some clay, trace f-c gravel (moist) [TILL]	10	S-4	GRAB	Start of boulder. Large boulders. Hard excavation.
			11			
	+676.0	End test pit at 12ft.	12			
			13			
			14			
			15			

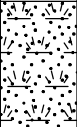
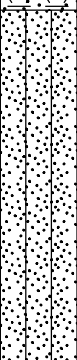
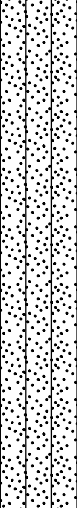
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LOG OF TEST PIT LTP-15

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 684 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First 8 ft ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 8 ft ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+684.0	Brown Silty f-m SAND, some clay, trace f-c gravel, with roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 1:05 PM on 04/13/2021
			1			
	+682.5	Brown Silty f-c SAND, some clay, trace f-c gravel (moist) [SM]	2	S-2	GRAB	
			3			
			4			
			5			
	+679.0	Brown Silty f-c SAND, some f-c gravel, trace clay with small to large (3" to 20") angular to rounded dark gray and bluish gray BOULDERS (moist) [SM]	5	S-3	GRAB	Start boulder layer. Large boulder encountered.
			6			
			7			
			8			
	+674.0	Tan Silty SAND, trace clay, trace f-c gravel (moist) [TILL]	10	S-4	GRAB	Water seepage observed at 8 ft.
			11			
			12			
			13			
	+671.0	End test pit at 13ft.	13			End test pit at 1:24 PM on 04/13/2021. Backfilled with excavated material.
			14			
			15			

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LOG OF TEST PIT LTP-16

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 659 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First 10 ft 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 10 ft 
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+659.0	Brown Silty f-c SAND, some clay, trace f-c gravel, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 1:35 PM on 04/13/2021
	+658.0	Brown Silty f-c SAND, trace clay, trace f-c gravel (moist) [SM]	1	S-2	GRAB	
			2			
	+656.0	Brown Silty f-c SAND, some clay, trace f-c gravel with small to large (3" to 30") angular to round bluish gray BOULDERS (moist) [SM]	3	S-3	GRAB	Start of boulder layer. Small to medium boulders. Hard excavation through boulders.
			4			
			5			
			6			
			7			
			8			
			9			
	+649.0	Tan f-c Sandy CLAY, some silt, trace f-c gravel, trace boulders (wet) [TILL]	10	S-4	GRAB	Hard excavation. Water seepage observed at 10 ft.
			11			
			12			
	+646.0	End test pit at 13ft.	13			End test pit at 1:55 PM on 04/13/2021. Backfilled with excavated material.
			14			
			15			

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LOG OF TEST PIT LTP-17

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 654 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 12 ft	WATER LEVEL - First - ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion - ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+654.0	Brown Sandy SILT, some f-c gravel, trace clay, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 7:45 AM on 04/13/2021
			1			
	+652.5	Tannish gray Silty f-c SAND, trace clay, trace f-c gravel, trace roots (moist) [SM]	2	S-2	GRAB	
			3			
			4			
			5			
			6			
			7			
	+647.0	Tannish gray Silty f-c SAND, some clay, trace f-c gravel with small (3" to 8") angular to rounded purple to light brown BOULDERS (moist) [SM]	8	S-3	GRAB	Start of boulder layer. Hard excavation around boulders only.
			9			
	+645.0	Tannish gray f-c Sandy CLAY, some silt, some f-c gravel, trace boulders (moist) [TILL]	10	S-4	GRAB	
			11			
			12			
	+642.0	End test pit at 12ft.	13			End of test pit at 8:25 AM on 04/13/2021. No water seepage observed. Backfilled with excavated material.
			14			
			15			

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LOG OF TEST PIT LTP-18

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 666 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 13 ft	WATER LEVEL - First 9 ft ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 9 ft ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+666.0	Brown to light brown Silty f-c SAND, some clay, trace f-c gravel, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 9:05 AM on 04/13/2021
	+665.0	Tannish gray Silty f-c SAND, some clay, trace f-c gravel, trace roots (moist) [SM]	1	S-2	GRAB	
	+663.0	Tannish gray Silty f-c SAND, some clay, trace f-c gravel with small to medium (3" to 18") angular to rounded purple to bluish gray BOULDERS (moist) [SM]	3	S-3	GRAB	Start of boulder layer. Hard excavation due to frequent boulders.
			4			
			5			
			6			
			7			
	+657.0	Tannish gray Sandy CLAY, trace f-c gravel, some silt (wet) [TILL]	9	S-4	GRAB	Loose excavation. Water seepage observed at 9 ft.
			10			
			11			
			12			
			13			
	+653.0	End test pit at 13ft.	13			End test pit at 9:25 AM on 04/13/2021. Backfilled with excavated material.
			14			
			15			

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LOG OF TEST PIT LTP-19

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/13/2021
LOCATION Southeast, New York	ELEVATION Approx. el 681 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 12 ft	WATER LEVEL - First 8 ft ▽
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	WATER LEVEL - Completion 8 ft ▼
		LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+681.0	Brown Silty f-c SAND, trace f-c gravel, trace clay, with roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 10:30 AM on 04/13/2021
	+680.0	Light brown Silty f-c SAND, some f-c gravel, trace clay (moist) [SM]	1			
	+679.0	Tannish gray to brownish gray Sandy CLAY, some silt, trace f-c gravel (moist to wet) [CL]	2	S-3	GRAB	
			3			
			4			
	+676.0	Tannish gray to brownish gray Sandy CLAY, some silt, trace f-c gravel with small to large (3" to 24") reddish brown to black angular to rounded BOULDERS (moist to wet) [CL]	5	S-3	GRAB	Start of boulder layer. Hard excavation around boulder only.
			6			
			7			
			8			Water seepage observed at 8 ft.
			9			
			10			
	+671.0	Gray Silty f-c SAND, some clay, trace f-c gravel (wet) [TILL]	10	S-4	GRAB	Hard excavation.
			11			
	+669.0	End test pit at 12ft.	12			End test pit at 10:45 AM on 04/13/2021. Backfilled with excavated material.
			13			
			14			
			15			

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LOG OF TEST PIT LTP-20

Sheet 1 of 1

PROJECT NAME Proposed Commercial Campus at Fields Corner	PROJECT NUMBER 190065201	DATE 04/12/2021
LOCATION Southeast, New York	ELEVATION Approx. el 645 (unknown datum - SESI Report)	
EXCAVATION CONTRACTOR CG Contracting	DEPTH 12 ft	WATER LEVEL - First 7 ft  WATER LEVEL - Completion 7 ft 
EQUIPMENT Kobelco SK 140 SR LC Excavator	FOREMAN Chuck Gallagher	LANGAN PERSONNEL Gopal Goswami

Symbol	ELEV (feet)	DESCRIPTION	Depth Scale	SAMPLE		REMARKS
				Number	Type	
	+645.0	Brown Silty f-c SAND, some clay, some roots (moist) [TOPSOIL]	0	S-1	GRAB	Start test pit at 12:50 PM on 04/12/21.
	+644.0	Gray brown f-c SAND, some clay, some silt, trace f-c gravel (moist) [SM]	1	S-2	GRAB	
			2			
			3			
			4			
	+640.0	Gray brown f-c Sandy CLAY, some silt, trace f-c gravel with small to medium grayish blue to purple (3" to 12") BOULDERS (moist) [CL]	5	S-3	GRAB	Start of Boulder layer. Hard excavation through boulders. Easy excavation once boulders are removed.
			6			
			7			Water seepage observed at 7 ft.
			8			
			9			
	+635.0	Tannish brown Silty CLAY, some f-c sand, trace f-c gravel, trace boulders (wet) [TILL]	10	S-4	GRAB	
			11			
			12			End test pit at 1:20 PM on 04/12/21. Backfilled with excavated material.
			13			
			14			
			15			

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APPENDIX E

Select Photographs of Test Pits

Test Pit LTP-1



Photo 1: View of test pit LTP-1



Photo 2: Alternate view of test pit LTP-1

Test Pit LTP-2



Photo 1: View of test pit LTP-2



Photo 2: Excavated material from test pit LTP-2

Test Pit LTP-3



Photo 1: View of test pit LTP-3



Photo 2: Excavated material from LTP-3

Test Pit LTP-4



Photo 1: Profile view of test pit LTP-4



Photo 2: Excavated material from test pit LTP-4

Test Pit LTP-5



Photo 1: Profile view of test pit LTP-5



Photo 2: Excavated material from test pit LTP-5

Test Pit LTP-6



Photo 1: Profile view of test pit LTP-6



Photo 2: Excavated material from test pit LTP-6

Test Pit LTP-7



Photo 1: Profile view of test pit LTP-7



Photo 2: Excavated material from test pit LTP-7

Test Pit LTP-8



Photo 1: View of test pit LTP-8



Photo 2: Profile view of test pit LTP-8

Test Pit LTP-9



Photo 1: View of test pit LTP-9



Photo 2: Alternate view of test pit LTP-9

Test Pit LTP-10



Photo 1: View of test pit LTP-10



Photo 2: Alternate view of test pit LTP-10

Test pit LTP-11



Photo 1: View of test pit LTP-11



Photo 1: Alternate view of test pit LTP-11

Test Pit LTP-12



Photo 1: View of test pit LTP-12



Photo 2: Profile view of test pit LTP-12

Test Pit LTP-13



Photo 1: View of test pit LTP-13



Photo 2: Excavated material from LTP-13

Test Pit LTP-14



Photo 1: View of test pit LTP-14



Photo 2: Excavated material from test pit LTP-14

Test Pit LTP-15



Photo 1: View of test pit LTP-15



Photo 2: Excavated material from LTP-15

Test Pit LTP-16



Photo 1: View of test pit LTP-16



Photo 2: Excavated material from LTP-16

Test Pit LTP-17



Photo 1: View of test pit LTP-17



Photo 2: Alternate view of test pit LTP-17

Test Pit LTP-18



Photo 1: Profile view of test pit LTP-18



Photo 2: Alternate view of test pit LTP-18

Test Pit LTP-19



Photo 1: View of test pit LTP-19



Photo 2: Excavated material from LTP-19

Test Pit LTP-20



Photo 1: View of test pit LTP-20



Photo 2: Alternate view of test pit LTP-20

APPENDIX F

2021 Langan Laboratory Testing Results

Langan Engineering #190065201
LEG Brewster
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS							REMARKS
			WATER CONTENT (%)	LIQUID LIMIT (-)	PLASTIC LIMIT (-)	PLAS. INDEX (-)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	ORGANIC CONTENT (burnoff) (%)	
AB-1	S-4	6-8	14.5				CL	56		
AB-2	S-2	2-4	14.4						1.1	
AB-2	S-8	20-22	9.3	22	14	8	CL			
BB-1	S-5	8-10	12.6				SC	42		
BB-3	S-6	10-12	12.7	19	13	6	SC-SM	47		
BB-5	S-1	0-2	20.4						2.4	
BB-5	S-2	2-4	11.7						1.1	
BB-5	S-5	8-10	12.7	20	15	5	SC-SM	43		
BB-7	S-5	8-10	12.6				SC	44		
SLB-2	S-1	0-2	37.4						6.6	
SLB-4	S-1	0-2	21.4						2.0	
SLB-4	S-5	8-10	14.0				SC	49		
SLB-5	S-3	4-6	12.8				SC	49.9		
SLB-7	S-6	10-12	13.3	21	14	7	SC-SM	46		
SLB-8	S-5	8-10	13.1	20	13	7	SC-SM	46		
SLB-9	S-3	4-6	12.3				SC	42		
SLB-10	S-3	4-6	13.1				SC	48	0.7	
SLB-11	S-5	8-10	11.9	22	15	7	CL-ML			
SLB-21	S-4	6-8	14.7	25	15	10	CL	60.6		
SLB-22	S-7	15-17	14.2	25	14	11	CL			
SLB-28	S-2	2-4	12.2				SC	45	1.0	
SLB-29	S-3	4-6	13.3				CL	50		
SLB-30	S-2	2-4	14.8	18	17	1	SM	41		

Note: (1) USCS symbol based on visual observation and Sieve and Atterberg limits reported.

Langan Engineering #190065201
LEG Brewster
LABORATORY TESTING DATA SUMMARY

BORING NO.	SAMPLE NO.	DEPTH	IDENTIFICATION TESTS						COMPACTION			CBR			REMARKS
			WATER CONTENT (%)	LIQUID LIMIT (-)	PLASTIC LIMIT (-)	PLAS. INDEX (-)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)				PREPARATION		CBR @ 0.1-inch (-)	
									ASTM STD.	OPT. WATER CONTENT (%)	MAX . DRY UNIT WGT. (pcf)	WATER CONTENT (%)	DRY UNIT WGT. (pcf)		
LTP-1	Bulk-1	8-10	13.5	22	15	7	SC-SM	47				6.8	129.6	35.0	Exp. Index
LTP-2	Bulk-1	12-13							D1557B	7.7	135.2				
LTP-7	Bulk-1	9-10	11.1				SM	38				7.3	129.0	47.3	
LTP-8	Bulk-1	8-10	12.0				SM	35	D1557B	8.9	131.8				
LTP-13	Bulk-1	9-10	14.6	23	15	8	SC					7.1	129.2	33.2	Exp. Index

Note: (1) USCS symbol based on visual observation and Sieve and Atterberg limits reported.

COMPACTION CURVE

Test Method: ASTM D1557

Compaction Procedure: B

Specimen Preparation Method: Moist

Type of Rammer: Mechanical

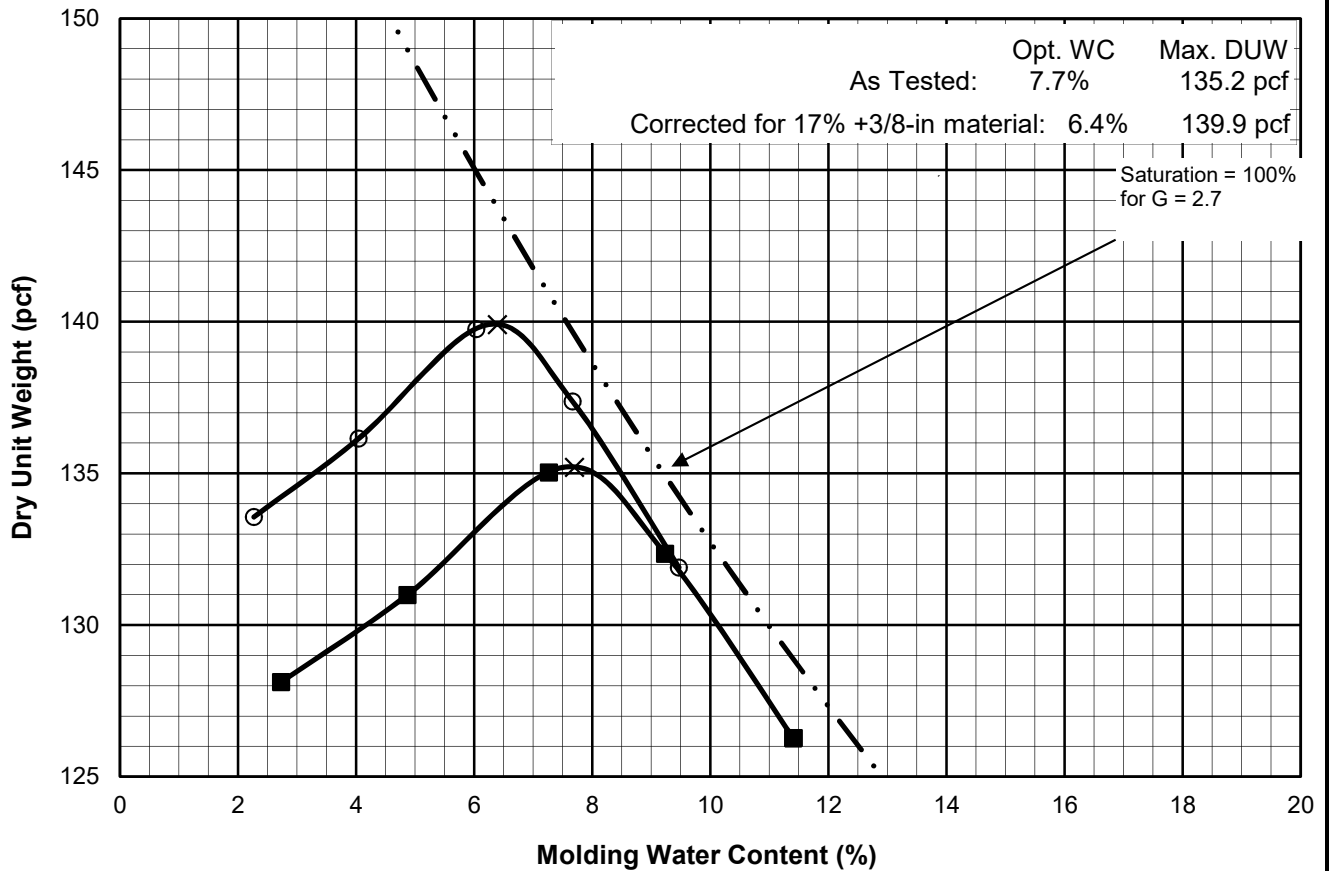
Rammer Face: Circular

NOTATION:

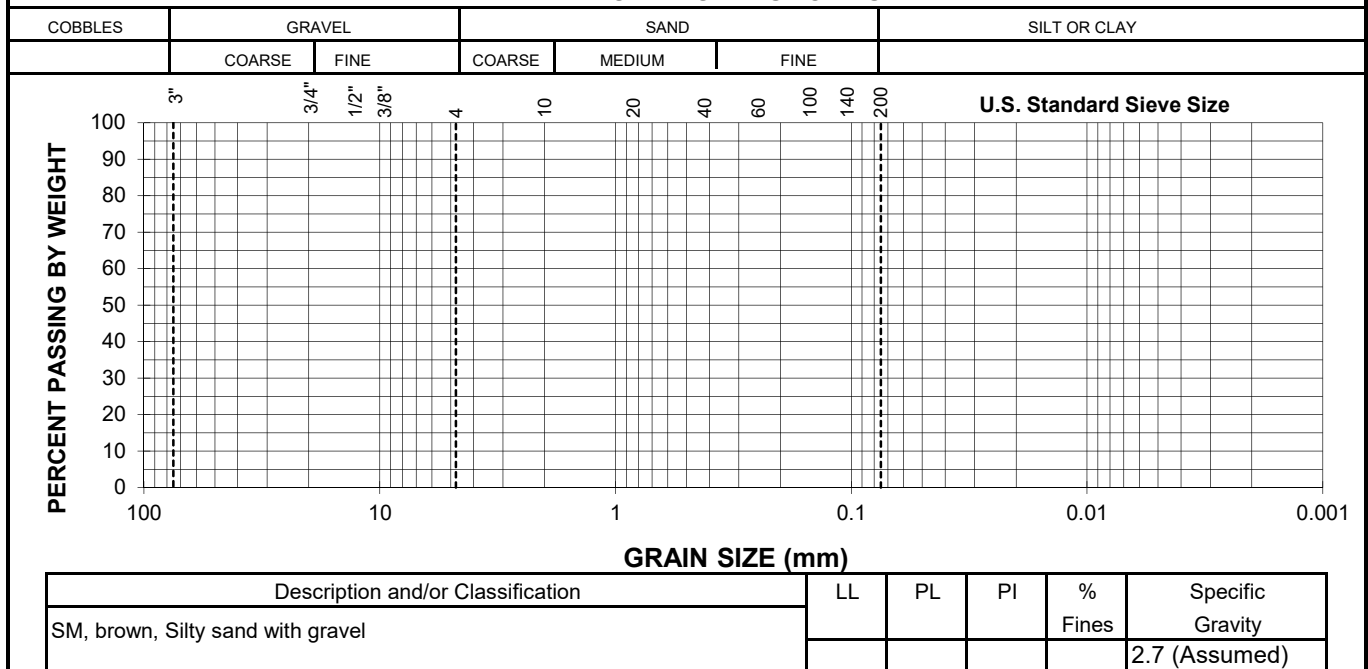
○ Representative of entire sample

■ Compaction Test specimen

X Selected Optimum Point



PARTICLE-SIZE DISTRIBUTION CURVE



LEG Brewster

ID LTP-2

Sample Bulk 1 Depth 12-13 ft

Langan Engineering

Project No. 190065201

TerraSense, LLC

Project No. 7920-130

COMPACTION AND INDEX
PROPERTY DATA

COMPACTION CURVE

Test Method: ASTM D1557

Compaction Procedure: **B**

Specimen Preparation Method: **Moist**

Type of Rammer: **Mechanical**

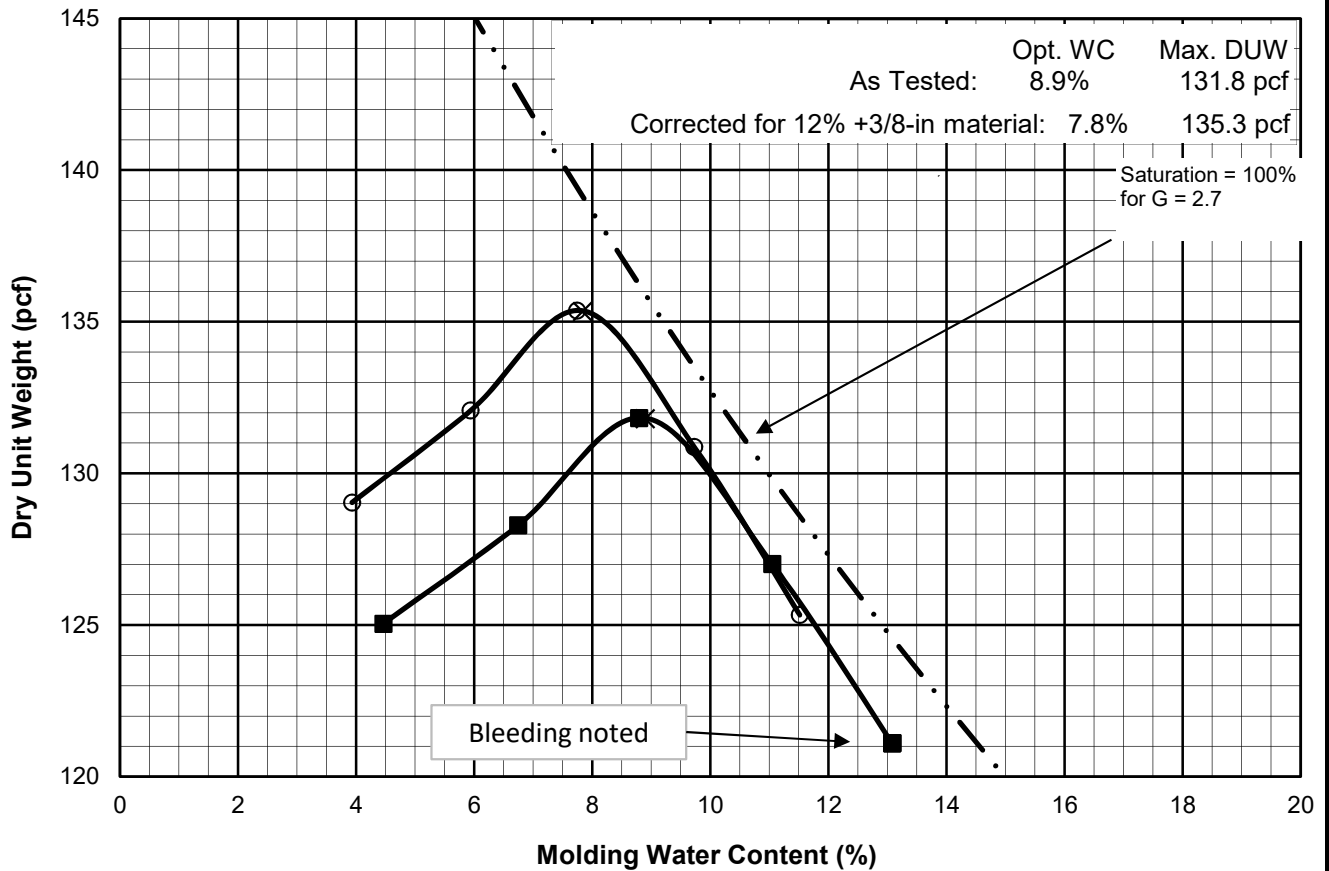
Rammer Face: **Circular**

NOTATION:

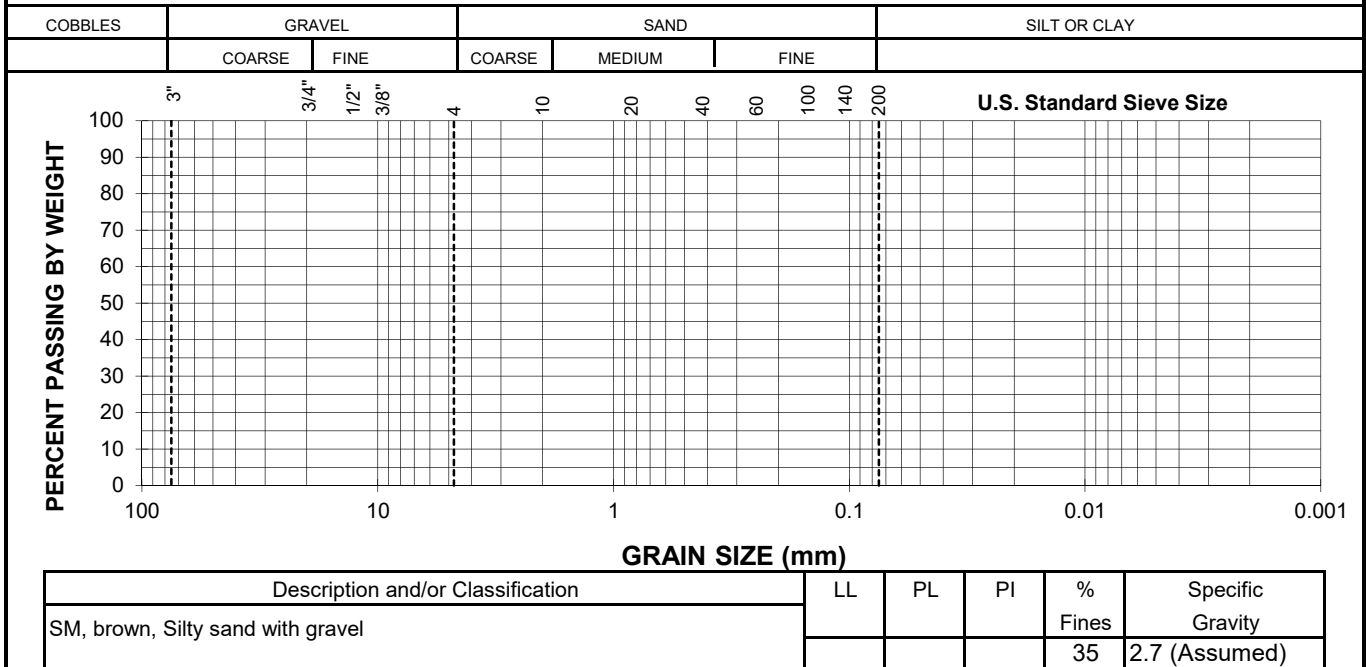
○ Representative of entire sample

■ Compaction Test specimen

X Selected Optimum Point



PARTICLE-SIZE DISTRIBUTION CURVE



LEG Brewster

ID LTP-8
Sample Bulk 1 Depth 8-10 ft

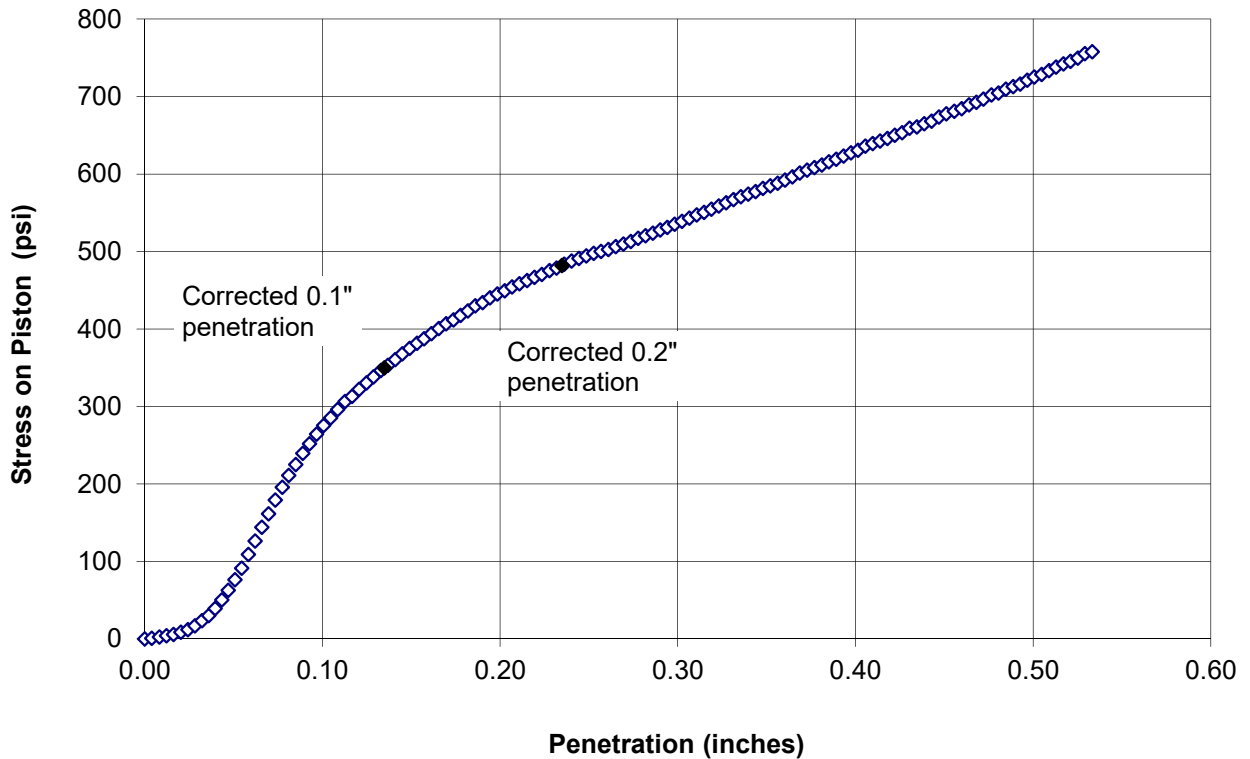
Langan Engineering

Project No. 190065201

TerraSense, LLC

Project No. 7920-130

COMPACTION AND INDEX
PROPERTY DATA



TEST SUMMARY

	Bearing Ratio at <u>0.1"</u>	Bearing Ratio at <u>0.2"</u>	Surcharge Used <u>lbs</u>	Penetration Rate <u>inch/min</u>
Specimen Soaked	35.0	32.1	10	0.05

SAMPLE INFORMATION

Boring: LTP-1
Sample: Bulk-1
Depth: 8-10 ft

Compaction water content = 6.8 %
Compaction dry density = 129.6 pcf

SPECIMEN INFORMATION

Height: 4.6 inch
Diameter: 6.0 inch
Volume: 0.0748 ft³

Final water content = 12.4 %
Final dry density = 128.6 pcf

Sample swelled 0.8% after soaking for 4 days

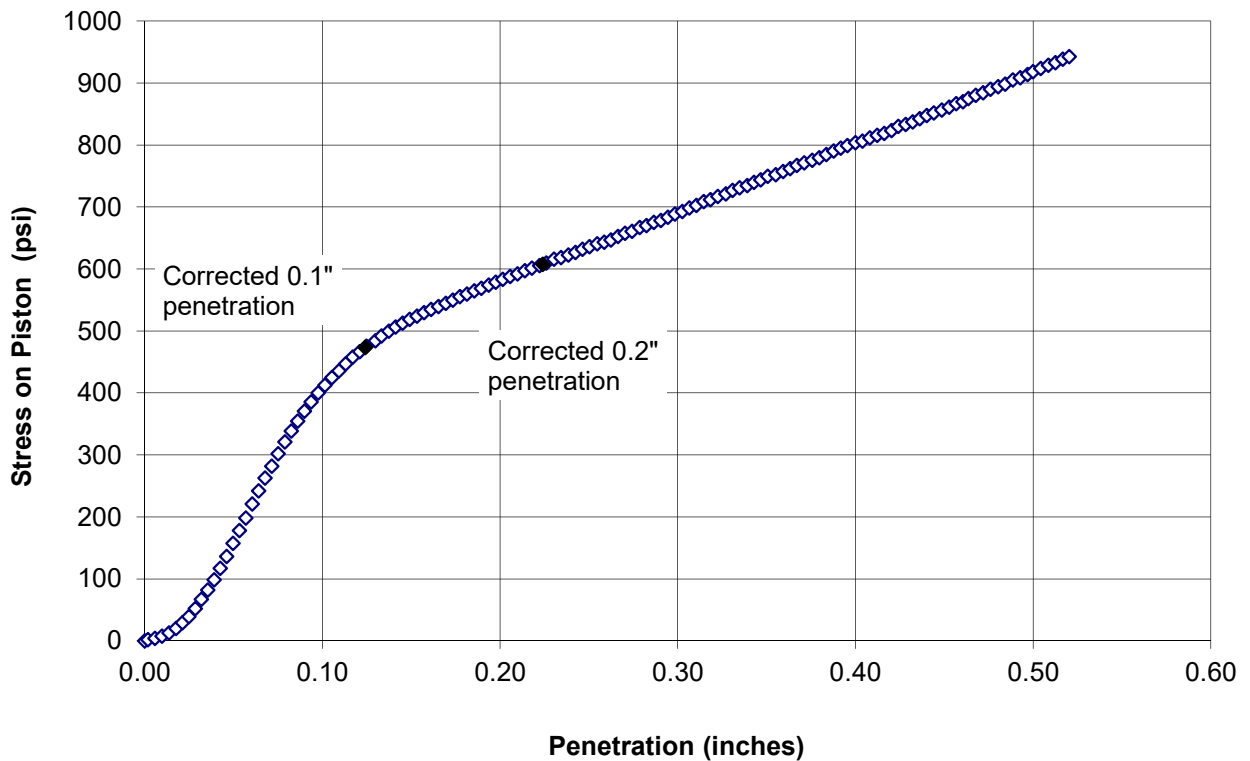
Remarks: Specimen compacted at 96% of Modified effort maximum dry density,
~ optimum water content

Tested by: RT

Test Date: Jun 01, 2021

Checked By: GET

LEG Brewster		CALIFORNIA BEARING RATIO TEST ASTM D1883	
Langan Engineering		Project No. 190065201	June 2021
TerraSense, LLC		Project No. 7920-130	



TEST SUMMARY

	Bearing Ratio at <u>0.1"</u>	Bearing Ratio at <u>0.2"</u>	Surcharge Used <u>lbs</u>	Penetration Rate <u>inch/min</u>
Specimen Soaked	47.3	40.5	10	0.05

SAMPLE INFORMATION

Boring: LTP-7
Sample: Bulk-1
Depth: 9-10 ft

Compaction water content = 7.3 %
Compaction dry density = 129.0 pcf

SPECIMEN INFORMATION

Height: 4.6 inch
Diameter: 6.0 inch
Volume: 0.0749 ft³

Final water content = 10.5 %
Final dry density = 128.8 pcf

Sample swelled 0.2% after soaking for 4 days

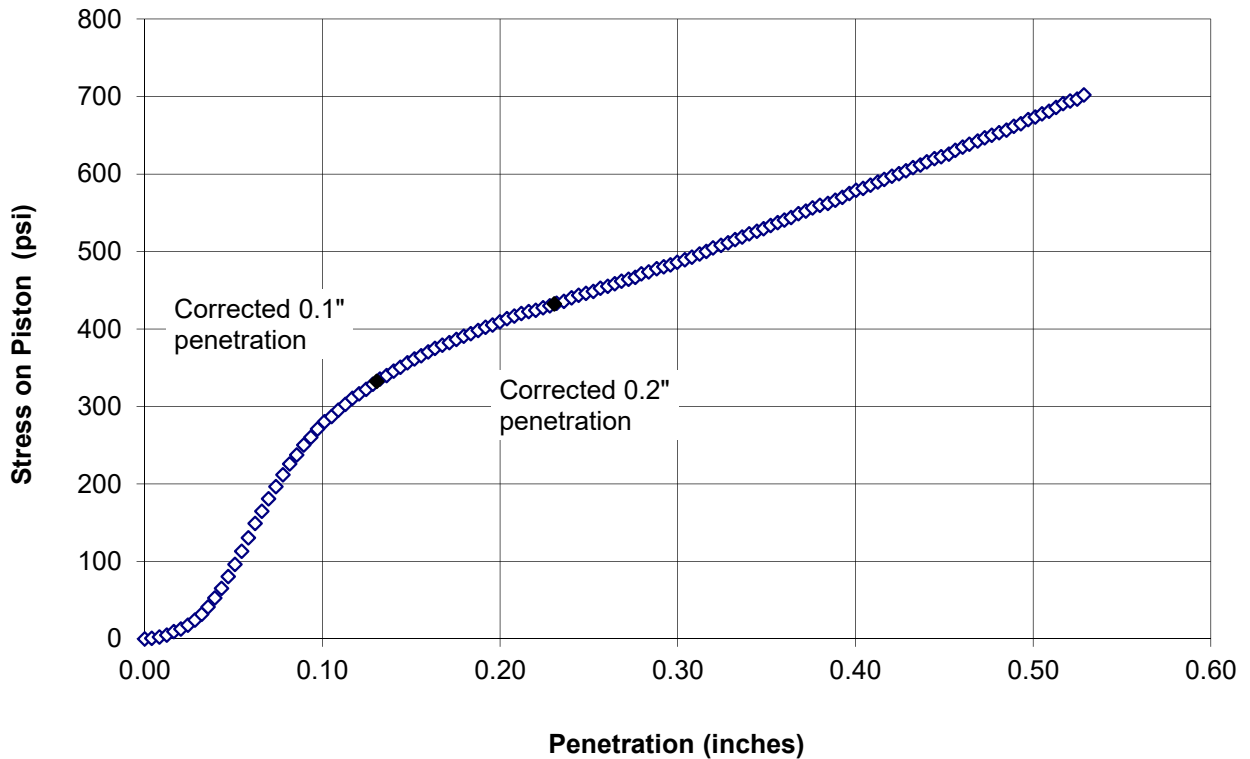
Remarks: Specimen compacted at 95% of Modified effort maximum dry density,
~ optimum water content

Tested by: RT

Test Date: Jun 01, 2021

Checked By: GET

LEG Brewster		CALIFORNIA BEARING RATIO TEST	
		ASTM D1883	
Langan Engineering		Project No. 190065201	June 2021
TerraSense, LLC		Project No. 7920-130	



TEST SUMMARY

	Bearing Ratio at 0.1"	Bearing Ratio at 0.2"	Surcharge Used lbs	Penetration Rate inch/min
Specimen Soaked	33.2	28.8	10	0.05

SAMPLE INFORMATION

Boring: LTP-13
Sample: Bulk-1
Depth: 9-10 ft

Compaction water content = 7.1 %
Compaction dry density = 129.2 pcf

SPECIMEN INFORMATION

Height: 4.6 inch
Diameter: 6.0 inch
Volume: 0.0746 ft³

Final water content = 12.7 %
Final dry density = 128.5 pcf

Sample swelled 0.5% after soaking for 4 days

Remarks: Specimen compacted at 95% of Modified effort maximum dry density, ~ optimum water content

Tested by: RT

Test Date: Jun 01, 2021

Checked By: GET

LEG Brewster		CALIFORNIA BEARING RATIO TEST ASTM D1883	
Langan Engineering		Project No. 190065201	June 2021
TerraSense, LLC		Project No. 7920-130	

Ring #: 1		Ring Area: 81.07 cm ²		G: 2.7 (assumed)																																								
Trial 1		Water Content		Final	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th colspan="3">Readings</th></tr> <tr> <th>H0</th> <th>HI</th> <th>HF</th> </tr> <tr> <td>0.000</td> <td>1.000</td> <td>1.000</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr> <td>Average</td> <td>1.000</td> <td>1.000</td> </tr> <tr> <td>Height</td> <td>1.000</td> <td>1.000</td> </tr> <tr> <td>Dial</td> <td> </td> <td> </td> </tr> <tr><td colspan="3"> </td></tr> <tr> <td>Saturation</td> <td>87.7</td> <td> </td> </tr> <tr> <td colspan="3">Expansion Index EI₅₀</td> </tr> </table>	Readings			H0	HI	HF	0.000	1.000	1.000													Average	1.000	1.000	Height	1.000	1.000	Dial						Saturation	87.7		Expansion Index EI ₅₀		
Readings																																												
H0	HI	HF																																										
0.000	1.000	1.000																																										
Average	1.000	1.000																																										
Height	1.000	1.000																																										
Dial																																												
Saturation	87.7																																											
Expansion Index EI ₅₀																																												
Start Date	5/29/2021	Initial	Final	Excess																																								
Tare#	757																																											
W+Tare	333.7																																											
D+Tare	321.24																																											
Tare	216.01																																											
water content (%)	11.84																																											
571.92-583.76	Ring + Soil	654.34																																										
Ring	198.68																																											
Wet Wt.	455.66																																											
Dry Wt.	407.4																																											
Total Density (pcf)	138.14																																											
Dry Density Density (pcf)	123.52																																											
Trial 2		Water Content		Final	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th colspan="3">Readings</th></tr> <tr> <th>H0</th> <th>HI</th> <th>HF</th> </tr> <tr> <td>0.000</td> <td>1.000</td> <td>1.026</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr> <td>Average</td> <td>1.000</td> <td>1.026</td> </tr> <tr> <td>Height</td> <td>1.000</td> <td>1.026</td> </tr> <tr> <td>Dial</td> <td>0.18</td> <td>0.1537</td> </tr> <tr><td colspan="3"> </td></tr> <tr> <td>Saturation</td> <td>40.0</td> <td>36.3</td> </tr> <tr> <td colspan="3">Expansion Index EI₅₀ 26</td> </tr> </table>	Readings			H0	HI	HF	0.000	1.000	1.026													Average	1.000	1.026	Height	1.000	1.026	Dial	0.18	0.1537				Saturation	40.0	36.3	Expansion Index EI ₅₀ 26		
Readings																																												
H0	HI	HF																																										
0.000	1.000	1.026																																										
Average	1.000	1.026																																										
Height	1.000	1.026																																										
Dial	0.18	0.1537																																										
Saturation	40.0	36.3																																										
Expansion Index EI ₅₀ 26																																												
Start Date	6/1/2021	Initial	Final	Excess																																								
Tare#	x31	x31																																										
W+Tare	143.74	185.19																																										
D+Tare	136.82	175.78																																										
Tare	36.45	36.49																																										
water content (%)	6.89	6.76																																										
626.93-636.34	Ring + Soil	604.11	604.11																																									
Ring	198.68	198.68																																										
Wet Wt.	405.43	405.43																																										
Dry Wt.	379.3	379.8																																										
Total Density (pcf)	122.91	119.76																																										
Dry Density Density (pcf)	114.99	112.18																																										
Trial 4		Water Content		Final	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th colspan="3">Readings</th></tr> <tr> <th>H0</th> <th>HI</th> <th>HF</th> </tr> <tr> <td>0.000</td> <td>1.000</td> <td>0.998</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr> <td>Average</td> <td>1.000</td> <td>0.998</td> </tr> <tr> <td>Height</td> <td>1.000</td> <td>0.998</td> </tr> <tr> <td>Dial</td> <td>0.199</td> <td>0.2012</td> </tr> <tr><td colspan="3"> </td></tr> <tr> <td>Saturation</td> <td>50.7</td> <td>90.1</td> </tr> <tr> <td colspan="3">Expansion Index EI₅₀ -2</td> </tr> </table>	Readings			H0	HI	HF	0.000	1.000	0.998													Average	1.000	0.998	Height	1.000	0.998	Dial	0.199	0.2012				Saturation	50.7	90.1	Expansion Index EI ₅₀ -2		
Readings																																												
H0	HI	HF																																										
0.000	1.000	0.998																																										
Average	1.000	0.998																																										
Height	1.000	0.998																																										
Dial	0.199	0.2012																																										
Saturation	50.7	90.1																																										
Expansion Index EI ₅₀ -2																																												
Start Date	6/3/202	Initial	Final	Excess																																								
Tare#	1b20	P4																																										
W+Tare	137.72	679.53																																										
D+Tare	130.30	626.70	214.23																																									
Tare	32.92	232.46	212.69																																									
water content (%)	7.62	13.40																																										
617.53-627.42	Ring + Soil	624.44	647.50																																									
Ring	198.68	198.68																																										
Wet Wt.	425.76	448.82																																										
Dry Wt.	395.6	395.8																																										
Total Density (pcf)	129.08	136.37																																										
Dry Density Density (pcf)	119.94	120.25																																										
Potential Expansion Classification by ASTM D4829: Very Low																																												
Langan Engineering Project # 190065201		LEG Brewster		Potential Expansion Classification ASTM D4829																																								
TerraSense, LLC Project # 7920-130				Boring: LTP-01 Sample: Bulk 1 Depth: 8-10																																								

Ring #: 1		Ring Area: 81.07 cm ²		G: 2.7 (assumed)		
Trial 1		Water Content		Final	Readings	
Start Date	5/29/2021	Initial	Final	Excess	H0	HI
	Tare#	246			0.000	1.000
	W+Tare	330.57				
	D+Tare	316.66				
	Tare	216.28				
	water content (%)	13.86				
554.43-566.83	Ring + Soil	642.46			Average	1.000
	Ring	198.68			Height	1.000
	Wet Wt.	443.78			Dial	
	Dry Wt.	389.8				
	Total Density (pcf)	134.54				
	Dry Density Density (pcf)	118.17			Saturation	87.7
					Expansion Index El ₅₀	
Trial 2		Water Content		Final	Readings	
Start Date	6/1/2021	Initial	Final	Excess	H0	HI
	Tare#	lb10	LB10		0.000	1.000
	W+Tare	144.97	152.90			1.026
	D+Tare	135.75	143.26			
	Tare	33.21	33.02			
	water content (%)	8.99	8.74			
601.13-611.80	Ring + Soil	630.29	630.29		Average	1.000
	Ring	198.68	198.68		Height	1.000
	Wet Wt.	431.61	431.61		Dial	0.18
	Dry Wt.	396.0	396.9			0.1537
	Total Density (pcf)	130.85	127.50			
	Dry Density Density (pcf)	120.06	117.24		Saturation	60.1
					Expansion Index	El ₅₀ 26
Trial 5		Water Content		Final	Readings	
Start Date	6/5/2021	Initial	Final	Excess	H0	HI
	Tare#	X1	S10		0.000	1.000
	W+Tare	158.15	569.36			1.002
	D+Tare	149.23	515.59	218.2		
	Tare	36.38	130.11	216.7		
	water content (%)	7.90	13.95			
613.98-624.05	Ring + Soil	616.74	630.29		Average	1.000
	Ring	198.68	198.68		Height	1.000
	Wet Wt.	418.06	431.61		Dial	0.12
	Dry Wt.	387.4	378.8			0.1181
	Total Density (pcf)	126.74	130.60			
	Dry Density Density (pcf)	117.46	114.61		Saturation	49.1
					Expansion Index	El ₅₀ 2
Potential Expansion Classification by ASTM D4829: Very Low						
Langan Engineering Project # 190065201		LEG Brewster		Potential Expansion Classification ASTM D4829		
TerraSense, LLC Project # 7920-130				Boring: LTP-13 Sample: Bulk 1 Section: -#4 Depth: 9-10		

APPENDIX G

Pavement Design Calculations

**LIGHT DUTY (CAR PARKING)
ASPHALT PAVEMENT DESIGN REQUIREMENTS FOR
A CBR VALUE = 5**

Pavement Design Requirements:

For a pavement design life of 20 Years, use the anticipated Traffic Data for Design

● **Anticipated Traffic Data**

Anticipated Traffic Data for Pavement:

2,000 Vehicles/Day

Anticipated Traffic Breakdown
for Pavement Areas:

2,000 Cars/day

● **AASHTO Vehicle Factors:**

AASHTO Car Factor =

0.00209

● **FOR HEAVY DUTY PAVEMENT DESIGN AREAS**

Equivalent Single Axle Loads ($ESAL_{CARS}$) = 1,200 Cars/Day x 365 Days/Year x 20 Years * 0.00209

$ESAL_{CARS}$ = 30,514 Equivalent Single Axle Loads

$ESAL_{TOTAL}$ = 30,514 Equivalent Single Axle Loads

LANGAN

PROJECT:

Proposed Commercial Campus at Fields Corner

**Light Duty
(Car Parking)**

Southeast

New York

Job # 190065201

Date: 6/4/2021

Sheet 1/3

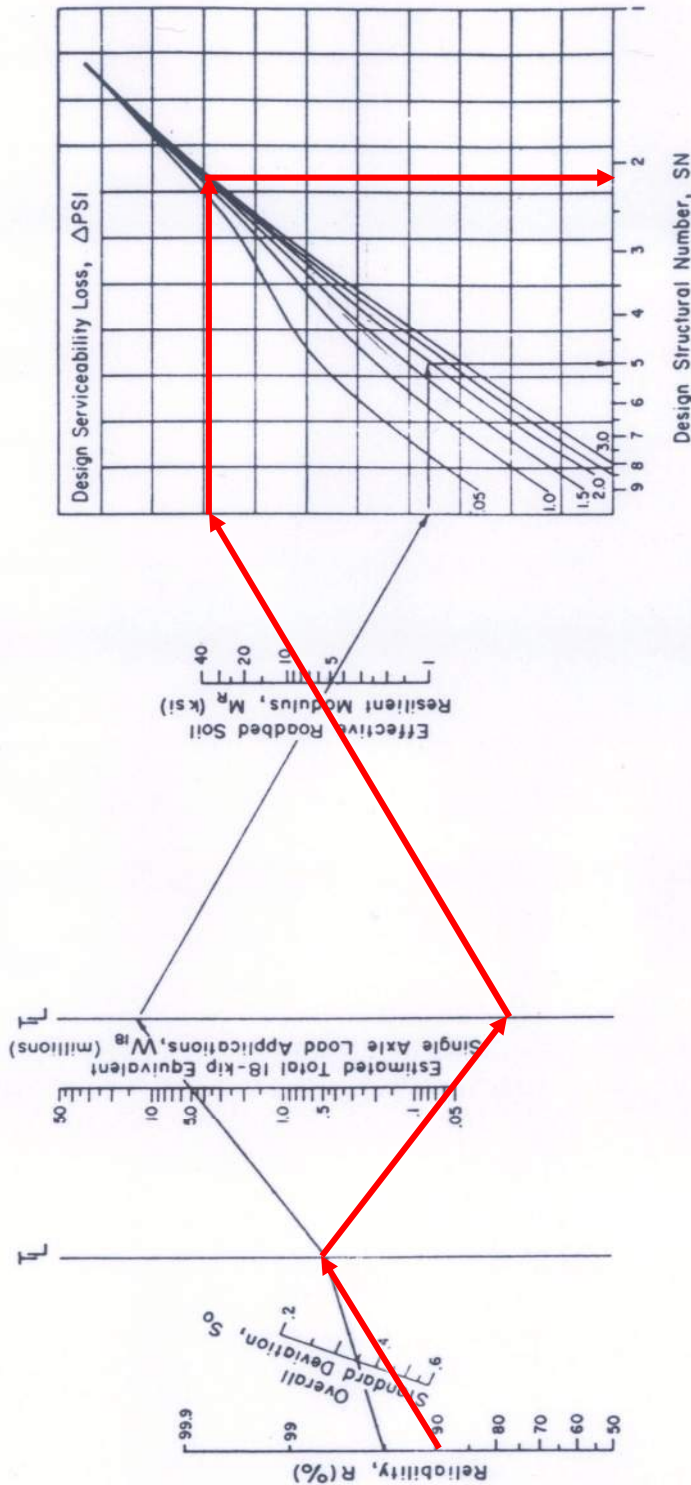


Figure 11.25 Design chart for flexible pavements based on mean values for each input (1 ksi = 6.9 MPa). (From the *AASHTO Guide for Design of Pavement Structures*. Copyright 1986. American Association of State Highway and Transportation Officials, Washington, DC. Used by permission.)

LANGAN

PROJECT: Proposed Commercial Campus at Fields Corner	
Light Duty (Car Parking)	
Southeast	New York
Job #	190065201
Date:	6/4/2021
Sheet 2/3	

LIGHT DUTY ASPHALT PAVEMENT DESIGN

Design Criteria :

Design Life =
 Terminal Serviceability =
 Reliability =
 Initial Serviceability =
 Standard Deviation =
 CBR =
 Equivalent Single Axle Loads =

20	Years
2.5	
90	percent
4.2	
0.45	
5	
30,514	

Estimate Resilient Modulus (M_R)
 $M_R = (2,555) \times (CBR^{0.64}) = 7,157$

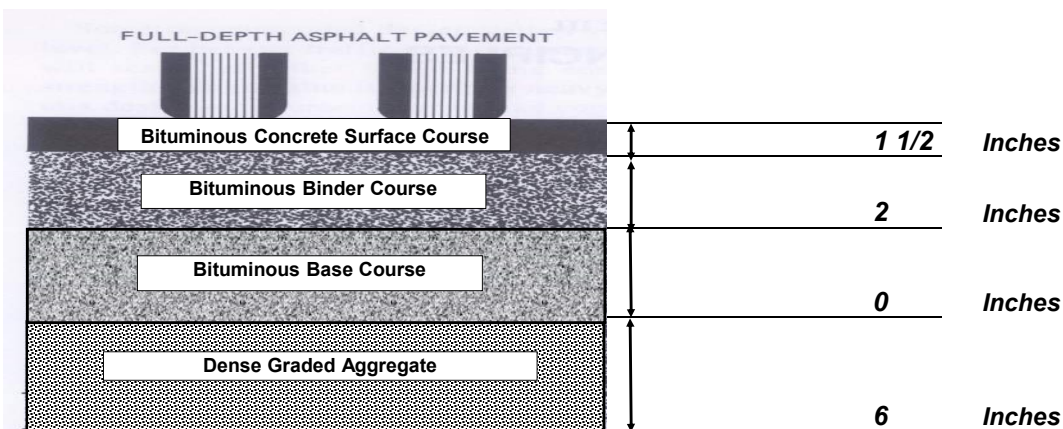
From the AASHTO Design Chart, $SN_{Required} = 2.2$ (See Sheet 2)

Langan Minimum Recommended Pavement Section:

Thickness	Material		AASHTO Coefficient		
1 1/2 inches	Bituminous Concrete Surface Course	x	0.44	=	0.66
2 inches	Bituminous Binder Course	x	0.44	=	0.88
inches	Bituminous Base Course	x	0.4	=	0.00
6 inches	Dense Graded Aggregate	x	0.11	=	0.66
Recommended SN=					2.20

Check whether the Recommended SN is greater than or equal to the Required SN

Recommended SN		Required SN	CHECK
2.20	>/=	2.2	OK



LANGAN

PROJECT: Proposed Commercial Campus at Fields Corner	
Light Duty (Car Parking)	
Southeast	New York
Job #	190065201
Date:	6/4/2021
Sheet 3/3	

**HEAVY DUTY (MINOR ACCESS DRIVES AND TRUCK COURTS)
ASPHALT PAVEMENT DESIGN REQUIREMENTS FOR
A CBR VALUE = 5**

Pavement Design Requirements:

For a pavement design life of 20 Years, use the anticipated Traffic Data for Design

● **Anticipated Traffic Data**

Anticipated Traffic Data for Pavement:

750 Vehicles/Day

**Anticipated Traffic Breakdown
for Pavement Areas:**

250 Trucks/day
500 Cars/day

● **AASHTO Vehicle Factors:**

Assuming 75 kips/Truck:

2 tandem axles (32 kips/axle)
1 front axle (12 kips/axle)

AASHTO Truck Factor = $2 * (0.875) + (0.189) =$

1.94

AASHTO Car Factor =

0.00209

● **FOR HEAVY DUTY PAVEMENT DESIGN AREAS**

Equivalent Single Axle Loads ($ESAL_{TRUCKS}$) = 200 Trucks/Day x 365 Days/Year x 20 Years * 1.94

$ESAL_{TRUCKS} =$ **3,538,675 Equivalent Single Axle Loads**

Equivalent Single Axle Loads ($ESAL_{CARS}$) = 400 Cars/Day x 365 Days/Year x 20 Years * 0.00209

$ESAL_{CARS} =$ **7,629 Equivalent Single Axle Loads**

<u>$ESAL_{TOTAL} =$</u> 3,546,304 Equivalent Single Axle Loads
--

LANGAN

PROJECT:

**Proposed Commercial Campus at Fields Corner
Heavy Duty
(Minor Access Drives and Truck Courts)**

Southeast

New York

Job #

190065201

Date:

6/4/2021

Sheet 1/3

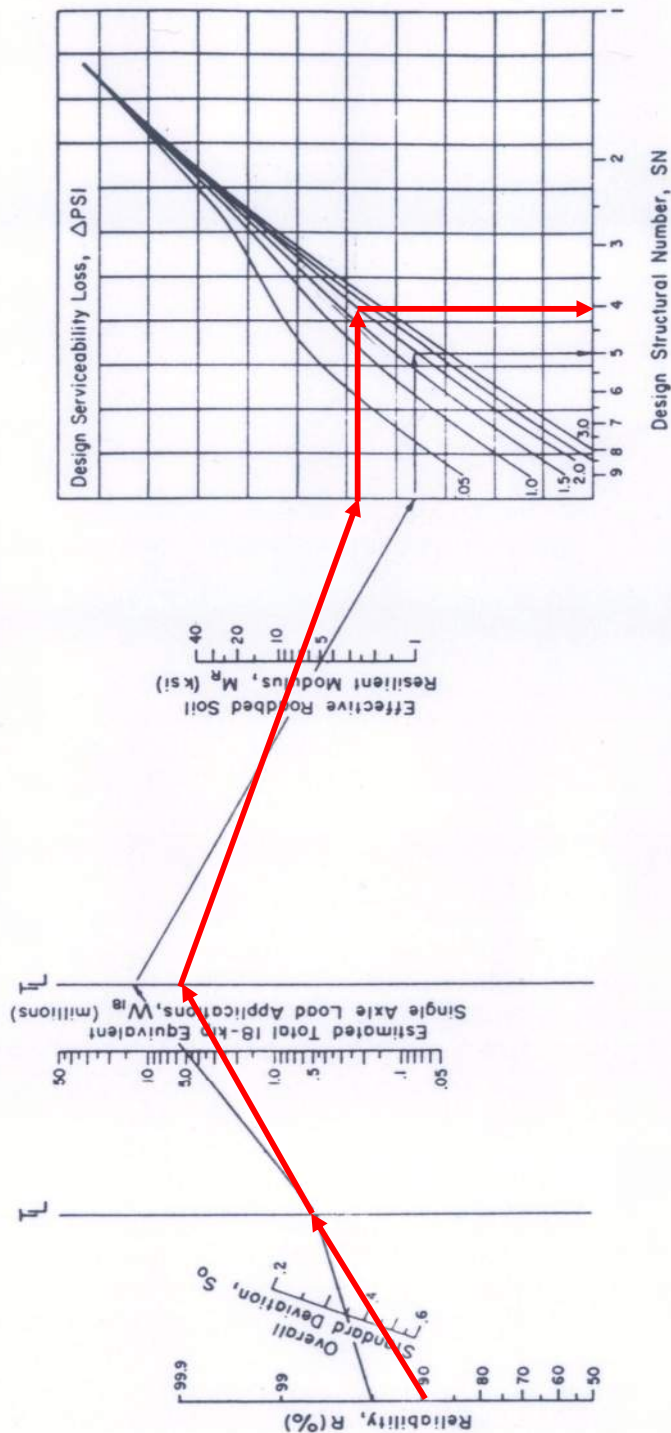


Figure 11.25 Design chart for flexible pavements based on mean values for each input (1 ksi = 6.9 MPa). (From the *AASHTO Guide for Design of Pavement Structures*. Copyright 1986. American Association of State Highway and Transportation Officials, Washington, DC. Used by permission.)

LANGAN

PROJECT:

Proposed Commercial Campus at Fields Corner
Heavy Duty (Minor
Access Drives and Truck Courts)

Southeast

New York

Job # 190065201

Date: 6/4/2021

Sheet 2/3

HEAVY DUTY (MINOR ACCESS DRIVES AND TRUCK COURTS) ASPHALT PAVEMENT DESIGN

Design Criteria :

Design Life =
Terminal Serviceability =
Reliability =
Initial Serviceability =
Standard Deviation =
CBR =
Equivalent Single Axle Loads =

20	Years
2.5	
90	percent
4.2	
0.45	
5	
3,546,304	

Estimate Resilient Modulus (M_R)

$$M_R = (2,555) \times (CBR^{0.64}) = 7,157$$

From the AASHTO Design Chart, $SN_{Required} =$

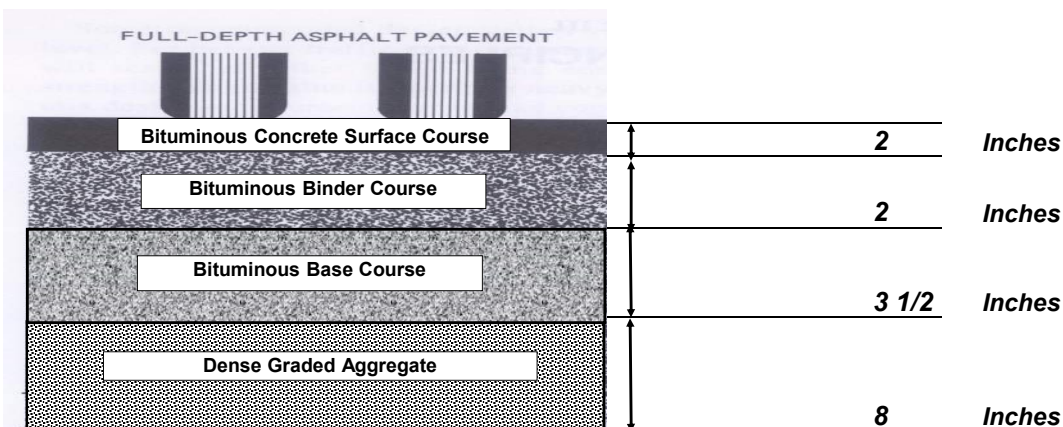
4.0 (See Sheet 2)

Langan Minimum Recommended Pavement Section:

Thickness	Material	AASHTO Coefficient
2 inches	Bituminous Concrete Surface Course	x 0.44 = 0.88
2 inches	Bituminous Binder Course	x 0.44 = 0.88
3 1/2 inches	Bituminous Base Course	x 0.4 = 1.40
8 inches	Dense Graded Aggregate	x 0.11 = 0.88
Recommended $SN =$ 4.04		

Check whether the Recommended SN is greater than or equal to the Required SN

Recommended SN	Required SN	CHECK
4.04	4.0	OK



LANGAN

PROJECT: Proposed Commercial Campus at Fields Corner Heavy Duty (Minor Access Drives and Truck Courts)	
Southeast	New York
Job #	190065201
Date:	6/4/2021
Sheet 3/3	

**HEAVY DUTY (MAIN ACCESS DRIVE)
ASPHALT PAVEMENT DESIGN REQUIREMENTS FOR
A CBR VALUE = 5**

Pavement Design Requirements:

For a pavement design life of 20 Years, use the anticipated Traffic Data for Design

● **Anticipated Traffic Data**

Anticipated Traffic Data for Pavement:

4,000 Vehicles/Day

**Anticipated Traffic Breakdown
for Pavement Areas:**

510 Trucks/day
3,490 Cars/day

● **AASHTO Vehicle Factors:**

Assuming 75 kips/Truck:

2 tandem axles (32 kips/axle)
1 front axle (12 kips/axle)

AASHTO Truck Factor = $2 * (0.875) + (0.189) =$

1.94

AASHTO Car Factor =

0.00209

● **FOR HEAVY DUTY PAVEMENT DESIGN AREAS**

Equivalent Single Axle Loads ($ESAL_{TRUCKS}$) = 500 Trucks/Day x 365 Days/Year x 20 Years * 1.94

$ESAL_{TRUCKS} =$ **7,218,897 Equivalent Single Axle Loads**

Equivalent Single Axle Loads ($ESAL_{CARS}$) = 1,200 Cars/Day x 365 Days/Year x 20 Years * 0.00209

$ESAL_{CARS} =$ **53,247 Equivalent Single Axle Loads**

$ESAL_{TOTAL} =$ **7,272,144 Equivalent Single Axle Loads**

LANGAN

PROJECT:

Proposed Commercial Campus at Fields Corner

**Heavy Duty
(Main Access Drive)**

Southeast

New York

Job #

190065201

Date:

6/4/2021

Sheet 1/3

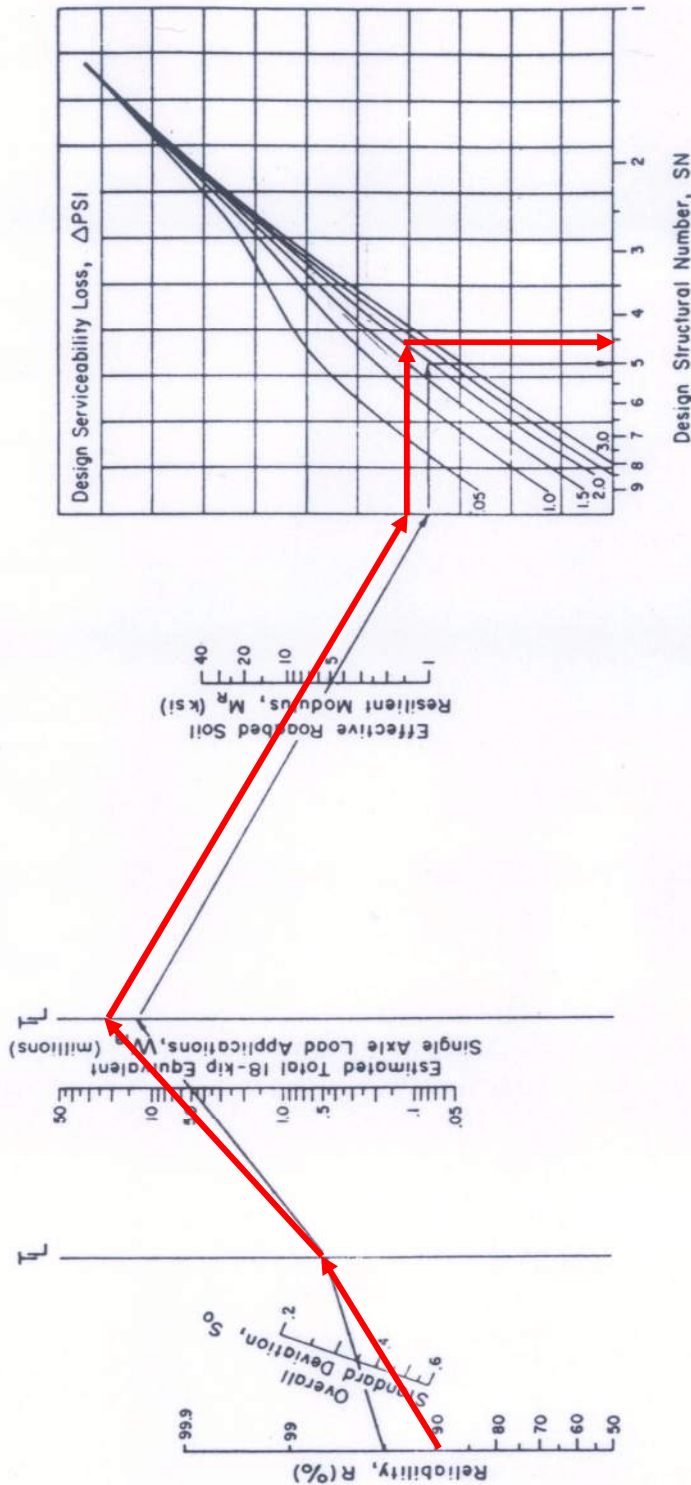


Figure 11.25 Design chart for flexible pavements based on mean values for each input (1 ksi = 6.9 MPa). (From the *AASHTO Guide for Design of Pavement Structures*. Copyright 1986. American Association of State Highway and Transportation Officials, Washington, DC. Used by permission.)

LANGAN

PROJECT: Proposed Commercial Campus at Fields Corner	
Heavy Duty (Main Access Drive)	
Southeast	New York
Job #	190065201
Date:	6/4/2021
Sheet 2/3	

HEAVY DUTY (MAIN ACCESS DRIVE) ASPHALT PAVEMENT DESIGN

Design Criteria :

Design Life =
Terminal Serviceability =
Reliability =
Initial Serviceability =
Standard Deviation =
CBR =
Equivalent Single Axle Loads =

20	Years
2.5	
90	percent
4.2	
0.45	
5	
7,272,144	

Estimate Resilient Modulus (M_R)

$$M_R = (2,555) \times (CBR^{0.64}) = 7,157$$

From the AASHTO Design Chart, $SN_{Required} =$

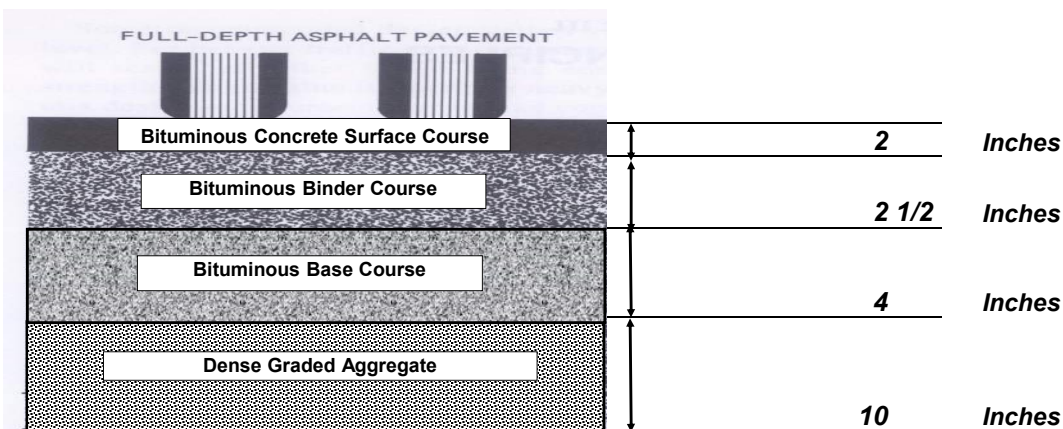
4.5 (See Sheet 2)

Langan Minimum Recommended Pavement Section:

Thickness	Material	AASHTO Coefficient
2 inches	Bituminous Concrete Surface Course	x 0.44 = 0.88
2 1/2 inches	Bituminous Binder Course	x 0.44 = 1.10
4 inches	Bituminous Base Course	x 0.4 = 1.60
10 inches	Dense Graded Aggregate	x 0.11 = 1.10
Recommended $SN =$ 4.68		

Check whether the Recommended SN is greater than or equal to the Required SN

Recommended SN	Required SN	CHECK
4.68	4.5	OK

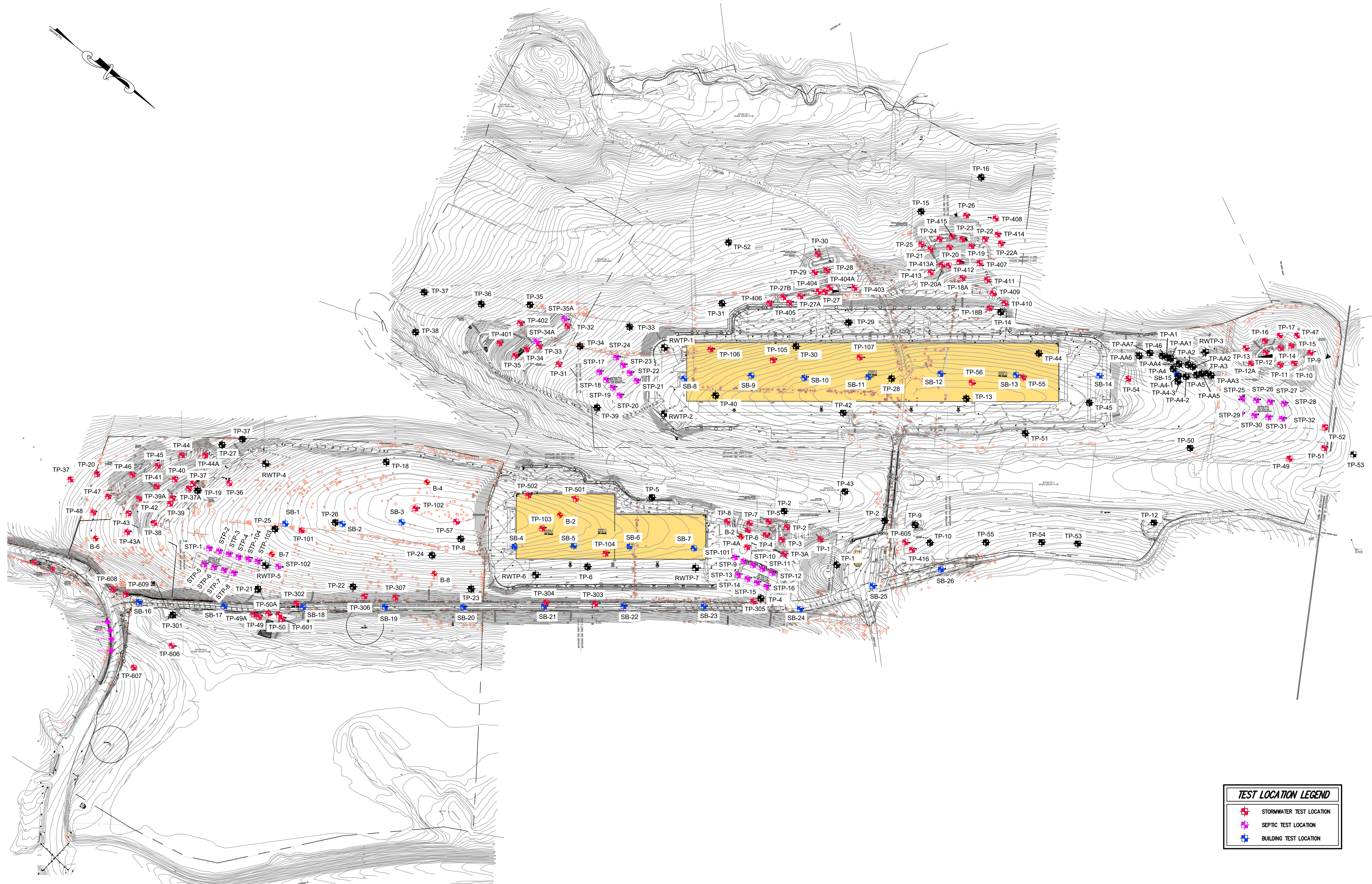


LANGAN

PROJECT: Proposed Commercial Campus at Fields Corner Heavy Duty (Main Access Drive)	
Southeast	New York
Job #	190065201
Date:	6/4/2021
Sheet 3/3	

ATTACHMENT A

SESI Boring and Test Pit Logs, Location Plan and Lab Testing Results



Path: \\ACAD\9999\9999 BORING AND TEST PIT LOCATION PLAN 2020-06-25.DWG 06/26/20 10:08:14AM, jenny, LAYOUT:FIG=1

REFERENCE
SITE INFORMATION AND SOIL TESTS TAKEN FROM "SOIL TEST LOCATION PLAN" PREPARED BY
JMC SITE DEVELOPMENT CONSULTANTS, LLC. DATED 02/06/2018, REV. 2/28/2018.

TEST LOCATION LEGEND

	STORMWATER TEST LOCATION
	SEPTIC TEST LOCATION
	BUILDING TEST LOCATION

BORING AND TEST PIT LOCATION PLAN

1 of 1

[illegible]

SESI
CONSULTING
ENGINEERS D.P.C.

SOILS / FOUNDATIONS
SITE DESIGN
ENVIRONMENTAL

12A MAPLE AVE. PINE BROOK, N.J. 07058 PH: 973-808-9050

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center			BORING NO.		SB-1					
			LOCATION:		Southeast, New York			JOB NO.		9999					
			METHOD:		Hollow Stem Auger			GROUND ELEVATION:		650.0'					
BORING BY:			GBI		DATE STARTED:		3/23/2018		GROUNDWATER TABLE DEPTH						
INSPECTOR:			MZ		DATE COMPLETED:		3/23/2018		0 Hr.	8±	Date 3/23/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5	S-1	8"	0		2	3			5	8" Topsoil					
				2				2	1						
	S-2	14"	2		5	7			15	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with occasional Cobbles					
				4				8	7						
10	S-3	20"	5		11	8			20	Same...					
				7				12	9						
	S-4	12"	7		8	14			31	Same...					
				9				17	20						
16	S-5	20"	10		9	10			27	Same...					
				12				17	20						
20	S-6	20"	15		28	38			81	Same...					
				17				44	39						
25	S-7	NR	20		29	53			93	No Recovery					
				22				40	40						
30															
35															
40															

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 1/2 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1 in	
Core Size	1 in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-2					
				LOCATION:		Southeast, New York		JOB NO.		9999					
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		663.0'					
BORING BY: GBI				DATE STARTED:		3/23/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR: MZ				DATE COMPLETED:		3/23/2018		0 Hr.	10±	Date	3/23/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5	S-1	8"	0		2	2			4	Topsoil Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with occasional Cobbles					
				2			2	6							
	S-2	12"	2		10	14			64						
				4			50/3"	-							
10	S-3	14"	5		6	6			14	Same...					
				7			8	9							
	S-4	18"	7		15	15			25						
				9			10	9							
15	S-5	6"	10		12	26			46	Same...					
				12			20	20							
	S-6	8"	12		24	50/3"			-						
				14			-	-							
20										BORING COMPLETED AT 13± FEET					
25															
30															
35															
40															

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1½ in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	1 in	engineers recommendations contained in the report from which these logs were extracted.
Core Size	1 in	Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 3

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted. Pb: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
Nominal I.D. of Split Barrel Sampler	1% In	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	In	

Page 1 of 1

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-4					
				LOCATION:		Southeast, New York		JOB NO.		9999					
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		658.0'					
BORING BY: GBI				DATE STARTED:		3/23/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR: MZ				DATE COMPLETED:		3/23/2018		0 Hr.	10'	Date	3/23/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0											USCS				
5	S-1	12"	0		2	2			5	Topsoil					
				2				3							
	S-2	8"	2		8	11			61	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with occasional Cobbles					
				4				50/3"	-						
10	S-3	5"	5		6	6			12	Same... with Root fibers					
				7				6	6						
	S-4	8"	7		9	9			23	Same...					
				9				14	13						
15	S-5	20"	10		3	12			26	Same.....					
				12				14	13						
20	S-6	18"	15		21	23			44	Same... with Cobbles					
				17				21	23						
25															
30															
35															
40															

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1 1/2 in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	1 in	engineers recommendations contained in the report from which these logs were extracted.
Core Size	1 in	Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 5

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-5					
				LOCATION:		Southeast, New York		JOB NO.		9999					
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		658.0'					
BORING BY: GBI				DATE STARTED:		3/23/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR: MZ				DATE COMPLETED:		3/23/2018		0 Hr.	NE	Date	3/23/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5	S-1	6"	0		3	2			5	Topsoil					
				2				3	8						
	S-2	14"	2		6	12			24	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with occasional Cobbles					
10				4				12	11						
	S-3	14"	5		9	8			17	Same...					
				7				9	8						
15	S-4	14"	7		10	13			28	Same... with Dark Brown/Black Sand					
				9				15	12						
	S-5	24"	10		11	14			33	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel					
20				12				19	18						
	S-6	NR	15		12	14			34	No Recovery					
25				17				20	38						
30															
35															
40															

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1% In	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	In	engineers recommendations contained in the report from which these logs were extracted.
Core Size	In	Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-6							
				LOCATION:		Southeast, New York		JOB NO.		9999							
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		652.0'							
BORING BY:				GBI		DATE STARTED:		3/23/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR:				MZ		DATE COMPLETED:		3/23/2018		0 Hr.	15±	Date	3/23/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol USCS						
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24									
0																	
5	S-1	4"	0		6	5			11	Topsoil							
				2				6	6								
	S-2	14"	2		7	5			11	Light Brown Clayey Silt, and coarse to fine Sand, trace fine Gravel, with Cobbles							
				4				6	8	(-200) = 49.0% W.C. = 13.1%							
10	S-3	18"	5		4	7			11	Same...							
				7				4	7								
	S-4	15"	7		8	6			11	Same...							
				9				5	11								
15	S-5	16"	10		6	9			22	Light Brown Clayey SILT, some coarse to fine Sand, trace Gravel, with Cobbles							
				12				13	16								
20	S-6	6"	15		13	16			37	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with Cobbles							
				17				21	22								
25																	
30																	
35																	
40																	

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1% In	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	In	engineers recommendations contained in the report from which these logs were extracted.
Core Size	In	Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center			BORING NO.		SB-7					
				LOCATION:		Southeast, New York			JOB NO.		9999					
				METHOD:		Hollow Stem Auger			GROUND ELEVATION:		847.0'					
BORING BY: GBI				DATE STARTED:		3/22/2018		GROUNDWATER TABLE DEPTH								
INSPECTOR: MZ				DATE COMPLETED:		3/22/2018		0 Hr.		7½	Date	3/22/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION					Symbol	
			FROM	TO												
0			(ft)	(ft)	0/6	6/12	12/18	18/24								
5	S-1	12"	0		1	2			6	Topsoil						
				2			4	5								
	S-2	16"	2		4	6			12	Light Brown Clayey SILT, little coarse to fine Sand, trace						
				4			6	5		Gravel, with Cobbles						
10	S-3	20"	5		4	11			25	Light Brown/Gray Clayey SILT, little coarse to fine Sand,						
				7			14	16		trace Gravel, with Cobbles						
	S-4	20"	7		10	13			63	Light Brown Clayey SILT, little coarse to fine Sand, trace						
				9			50/3"	-		Gravel, with Cobbles						
15	S-5	14"	10		29	48			106	Same...						
				12			58	22								
20	S-6	16"	15		12	11			36	Same...						
				17			25	31								
25	S-7	16"	20		23	12			28	Light Brown/Gray Clayey SILT, little coarse to fine Sand,						
				22			16	27		trace Gravel, with Cobbles						
										BORING COMPLETED AT 22± FEET						
30																
35																
40																

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1 in	
Core Size	1 in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center			BORING NO.		SB-8				
				LOCATION:		Southeast, New York			JOB NO.		9999				
				METHOD:		Hollow Stem Auger			GROUND ELEVATION:		660.0'				
BORING BY: GBI				DATE STARTED:		3/22/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR: MZ				DATE COMPLETED:		3/22/2018		0 Hr.	10':	Date	3/22/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION					Symbol
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5	S-1	12"	0		3	5			10	Topsoil					
				2			5	5							
	S-2	14"	2		5	12			28	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with Cobbles					
				4			16	17							
10	S-3	12"	5		7	9			19	Same... (mottled)					
				7			10	10							
	S-4	14"	7		10	17			30	Same...					
				9			13	17							
15	S-5	7"	10		27	50/3"			-	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with Cobbles					
				12			-	-							
20	S-6	3"	15		50/3"	-			-	Light Brown Clayey Silt, some coarse to fine gravel, little coarse to fine Sand					
				17			-	-							
										BORING COMPLETED AT 17± FEET ON PROBABLE BOULDER					
25															
30															
35															
40															

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ In	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	In	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 9

[illegible]

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ in	
Weight of Hammer on Drive Pipe	300 lb	
Weight of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	In	Fp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-10								
				LOCATION:		Southeast, New York		JOB NO.		9999								
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		681.0'								
BORING BY: GBI				DATE STARTED:		3/19/2018		GROUNDWATER TABLE DEPTH										
INSPECTOR: MZ				DATE COMPLETED:		3/19/2018		0 Hr.	10±	Date	3/19/18	24 Hr.	N/A	Date	N/A			
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION					Symbol			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							USCS			
0										2" Topsoil								
5	S-1	12"	0		2	3			7	Light Brown Clayey SILT, some coarse to fine Sand, trace Gravel								
				2			4	9										
	S-2	22	2		9	10			24									
				4			14	15		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with Cobbles								
10	S-3	12"	5		8	8			16	Same...								
				7			8	7										
	S-4	22"	7		6	6			13									
				9			7	6		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with Cobbles								
15	S-5	9"	10		39	23			53	Same...								
				12			30	29										
20	S-6	6"	15		13	24			54	BORING COMPLETED AT 22± FEET								
				17			30	34										
25	S-7	14"	20		7	14			31	Gray/Green Clayey SILT, little coarse to fine Sand, trace Gravel								
				22			17	18										
30																		
35																		
40																		

Nominal I.D. of Hole	1 1/2 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 1/2 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1 in	
Core Size	1 in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-11						
				LOCATION:		Southeast, New York		JOB NO.		9999						
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		682.0'						
BORING BY: GBI				DATE STARTED:		3/19/2018		GROUNDWATER TABLE DEPTH								
INSPECTOR: MZ				DATE COMPLETED:		3/19/2018		0 Hr.	10±	Date	3/19/18	24 Hr.	N/A	Date	N/A	
DEPTH (ft)	SAMPLE No.	REC	DEPTH		Blows on Spoon				N	SOIL DESCRIPTION AND STRATIFICATION					Symbol	
0			(In)	(ft)	(ft)	0/6	6/12	12/18								18/24
5	S-1	9"	0		2	5			9	2" Topsoil						
				2				4	3							
	S-2	10"	2		8	11			20	Light Brown SILT, some coarse to fine SAND, trace Gravel						
				4				9	9							
10	S-3	14"	4		5	8			20	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel						
				6				12	13		Same...					
	S-4	20"	6		14	11			22							
				8				11	6							
15	S-5	14"	8		24	14			20	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel						
				10				6	11		Same...					
	S-6	6"	10		60	50/2"			-							
				12				-	-							
20																
	S-7	12"	15		18	19			39	Light Brown Clayey SILT, some coarse to fine Sand, little Gravel						
				17				20	26							
25	S-8	1"	19		50/3"	-			-	Light Brown Clayey SILT, trace Sand, trace Gravel with Cobbles						
				20				-	-	BORING COMPLETED AT 19.1± FEET						
30																
35																
40																

Nominal I.D. of Hole	1"	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½"	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1"	
Core Size	1"	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 12

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center			BORING NO.		SB-12				
				LOCATION:		Southeast, New York			JOB NO.		9999				
				METHOD:		Hollow Stem Auger			GROUND ELEVATION:		686.0'				
BORING BY: GBI				DATE STARTED:		3/22/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR: MZ				DATE COMPLETED:		3/22/2018		0 Hr.	5±	Date	3/22/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION					Symbol USCS
0			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
5	S-1	12"	0		2	2			4	Topsoil					
				2				2	3						
	S-2	12"	2		4	5			10	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel					
				4				5	8						
10	S-3	16"	5		5	6			12	Same...					
				7				6	7						
	S-4	10"	7		10	11			25	Light Brown Clayey SILT, some coarse to fine Sand, trace Gravel, with occasional Cobbles					
				9				14	13						
15	S-5	11"	10		20	18			38	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel					
				12				20	17						
20	S-6	14	15		19	22			42	Same...					
				17				20	21						
25	S-7	12"	20		45	48			96	Same...					
				22				48	51						
	S-8	3"	22		50/4"	-			-	Same... with Cobbles					
				24				-	-	BORING COMPLETED AT 22.5± FEET					
30															
35															
40															

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ In	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	In	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 13

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-13		
				LOCATION:		Southeast, New York		JOB NO.		9999		
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		684.0'		
BORING BY: GBI				DATE STARTED:		3/22/2018		GROUNDWATER TABLE DEPTH				
INSPECTOR: MZ				DATE COMPLETED:		3/22/2018		0 Hr. 10±		Date 3/22/18	24 Hr. N/A	Date N/A
DEPTH (ft)	SAMPLE No.	REC	DEPTH		Blows on Spoon				N	SOIL DESCRIPTION AND STRATIFICATION		Symbol
0		(In)	FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24	(bl/ft)			USCS
5	S-1	8"	0		2	3			6	Topsoil		
				2			3	3				
	S-2	12"	2		2	7			16	Light Brown Clayey SILT, little coarse to fine Sand, trace		
				4			9	13		Gravel		
10	S-3	10	5		25	15			32	Same...		
				7			17	18				
	S-4	NR	7		19	21			43	No Recovery		
				9			22	27				
15	S-5	8"	10		13	23			67	Light Brown Clayey SILT, some coarse to fine Sand, trace		
				12			44	50		Gravel, with Cobbles		
	S-6	6"	15		67	58			125	Light Brown Clayey SILT, some coarse to fine Sand, trace		
				17			67	69		Gravel, with Cobbles		
20	S-7	9"	20		60	100/3"			-	Light Brown Clayey SILT, little coarse to fine Sand, trace		
				22			-	-		Gravel		
										BORING COMPLETED AT 22± FEET		
25												
30												
35												
40												

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1% in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size	in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 14

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center				BORING NO.		SB-14					
			LOCATION:		Southeast, New York				JOB NO.		9999					
			METHOD:		Hollow Stem Auger				GROUND ELEVATION:		674.0'					
BORING BY:			GBI		DATE STARTED:		3/22/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR:			MZ		DATE COMPLETED:		3/22/2018		0 Hr.	9.5±	Date	3/22/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (b/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol USCS					
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24								
0	S-1	10"	0		2	3			5	Topsoil						
				2				2								
	S-2	12"	2		8	9			18	Light Brown Clayey SILT, little coarse to fine Sand, trace						
				4				9	11	Gravel, with occasional Cobbles						
5																
	S-3	24"	5		5	6			15	Same...						
				7				9	10							
	S-4	20"	7		6	9			20	Same...						
10				9				11	13							
	S-5	15"	10		10	8			16	Same...						
				12				8	16							
15																
20																
25																
30																
35																
40																

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1% in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size	in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center				BORING NO.		SB-15	
			LOCATION:		Southeast, New York				JOB NO.		9999	
			METHOD:		Hollow Stem Auger				GROUND ELEVATION:		861.0'	
BORING BY:			GBI		DATE STARTED:		3/22/2018		GROUNDWATER TABLE DEPTH			
INSPECTOR:			MZ		DATE COMPLETED:		3/22/2018		0 Hr. 9±		Date 3/22/18 24 Hr. N/A Date N/A	
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol USCS	
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24				
0												
5	S-1	18"	0		2	3			6	Topsoil		
				2			3	8				
	S-2	12"	2		6	9			25	Light Brown coarse to fine SAND, and Silt, little medium to fine Gravel, with occasional Cobbles		
				4			16	19				
10	S-3	22"	5		7	7			14	Same...		
				7			7	9				
	S-4	24"	7		7	8			16	Same...		
				9			8	9		(-200) = 35.9% W.C. = 14.2%		
15	S-5	18"	10		6	15			35	Same...		
				12			20	24				
20												
25												
30												
35												
40												

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size	in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-16					
				LOCATION:		Southeast, New York		JOB NO.		9999					
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		554					
BORING BY: GBI				DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH							
INSPECTOR: MZ				DATE COMPLETED:		3/20/2018		0 Hr.	9±	Date	3/20/18	24 Hr.	N/A	Date	N/A
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5	S-1	12	0		52	44			78	1" Asphalt, 4" Subbase					
				2			54	29		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel, with Cobbles					
10	S-2	20"	5		34	25			54	Light Brown Clayey Silt, some coarse to fine Sand, little medium to fine Gravel (-200) = 48.9% W.C. = 9.1%					
				7			29	28							
	S-3	10"	7		48	41			91	Same...					
				9			50	44							
15										BORING COMPLETED 9± FEET					
20															
25															
30															
35															
40															

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1½ In	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	In	engineers recommendations contained in the report from which these logs were extracted.
Core Size	In	Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
Approximate Change in Strata:		Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 17

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-18		
			LOCATION:		Southeast, New York		JOB NO.		9999		
			METHOD:		Hollow Stem Auger		GROUND ELEVATION:		598'±		
BORING BY:			GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH		
INSPECTOR:			MZ		DATE COMPLETED:		3/20/2018		0 Hr. 8'± Date 3/20/18 24 Hr. N/A Date N/A		
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol USCS
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24			
0											
	S-1	12"	0		38	31			59	Fill: 1" Asphalt, 6" Stone Subbase	
				2				28	17	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
5											
	S-2	8"	5		8	8			21	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
				7				13	27		
	S-3	12"	7		9	14			30	Same...	
				9				16	16		
10											
15											
20											
25											
30											
35											
40											

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 1/2 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1 in	
Core Size	1 in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted. Pb: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
Nominal I.D. of Split Barrel Sampler	1 1/2 In	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	in	

Page 1 of 1

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-20	
				LOCATION:		Southeast, New York		JOB NO.		9999	
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		607±	
BORING BY:				GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH	
INSPECTOR:				MZ		DATE COMPLETED:		3/20/2018		0 Hr. 9± Date 3/20/18 24 Hr. N/A Date N/A	
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol USCS
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24			
0											
5	S-1	16"	0		20	7			15	Fill: 1" Asphalt; 6" Subbase	
				2			8	7		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
10	S-2	16"	5		8	50			85	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
				7			35	8			
	S-3	12"	7		8	8			20	Same...	
				9			12	29			
15										BORING COMPLETED AT 9± FEET	
20											
25											
30											
35											
40											

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1% In	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	In	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS				PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-21	
				LOCATION:		Southeast, New York		JOB NO.		9999	
				METHOD:		Hollow Stem Auger		GROUND ELEVATION:		610'±	
BORING BY:				GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH	
INSPECTOR:				MZ		DATE COMPLETED:		3/20/2018		0 Hr. NE Date 3/20/18 24 Hr. N/A Date N/A	
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol USCS
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24			
0											
	S-1	18"	0		5	8			11	Fill: 4" Subbase	
				2				3	4	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
5											
	S-2	20	5		8	6			13	Same...	
				7				7	10		
	S-3	18	7		9	12			35	Same...	
				9				23	30		
10											
15											
20											
25											
30											
35											
40											

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 1/2 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1 in	
Core Size	1 in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 22

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-22		
			LOCATION:		Southeast, New York		JOB NO.		9999		
			METHOD:		Hollow Stem Auger		GROUND ELEVATION:		610		
BORING BY:			GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH		
INSPECTOR:			MZ		DATE COMPLETED:		3/20/2018		0 Hr.	NE	
									Date	3/20/18	
									24 Hr.	N/A	
									Date	N/A	
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH FROM (ft)	TO (ft)	Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	
0					0/6	6/12	12/18	18/24			Symbol
											USCS
	S-1	14	0		20	15			22	Fill: Gray coarse to fine GRAVEL, some coarse to fine Sand, little Silt	
				2			7	11		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
5											
	S-2	10"	5		4	5			11	Same...	
				7			6	7			
	S-3	20"	7		15	10			24	Same...	
				9			14	20			
10										BORING COMPLETED AT 9½ FEET	
15											
20											
25											
30											
35											
40											

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client.
Nominal I.D. of Split Barrel Sampler	1½ in	It is made available to authorized users only that they may have access to the same information available
Weight/type of Hammer on Drive Pipe	300 lb	to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations
Weight/type of Hammer on Split Barrel	140 lb	or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical
Drop of Hammer on Drive Pipe	in	engineers recommendations contained in the report from which these logs were extracted.
Core Size	in	Fp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 23

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-23		
			LOCATION:		Southeast, New York		JOB NO.		9999		
			METHOD:		Hollow Stem Auger		GROUND ELEVATION:		613'+		
BORING BY:			GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH		
INSPECTOR:			MZ		DATE COMPLETED:		3/20/2018		0 Hr.	8'±	
									Date	3/20/18	
									24 Hr.	N/A	
									Date	N/A	
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH FROM (ft)	TO (ft)	Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	
0					0/6	6/12	12/18	18/24		USCS	
5	S-1	18"	0		33	22			35	1" Asphalt; 5" Subbase	
				2			13	12		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
10	S-2	18"	5		12	12			24	Same...	
				7			12	15			
	S-3	16"	7		12	11			23	Same...	
				9			12	13			
15										BORING COMPLETED AT 9± FEET	
20											
25											
30											
35											
40											

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1% In	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	In	Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 24

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-24		
			LOCATION:		Southeast, New York		JOB NO.		9999		
			METHOD:		Hollow Stem Auger		GROUND ELEVATION:		642'±		
BORING BY:			GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH		
INSPECTOR:			MZ		DATE COMPLETED:		3/20/2018		0 Hr.	NE	
									Date	3/20/18	
									24 Hr.	N/A	
									Date	N/A	
DEPTH (ft)	SAMPLE No.	REC (In)	DEPTH FROM (ft)	TO (ft)	Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	
0					0/6	6/12	12/18	18/24			Symbol
											USCS
	S-1	20"	0		30	22			40	6" Subbase	
				2			18	14		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
5											
	S-2	20"	5		14	21			32	Same...	
				7			11	18			
	S-3	24"	7		13	14			28	Same...	
				9			14	16			
10										BORING COMPLETED AT 9± FEET	
15											
20											
25											
30											
35											
40											

Nominal I.D. of Hole	In	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ In	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	In	
Core Size	In	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

FIGURE 25

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center			BORING NO.		SB-25				
			LOCATION:		Southeast, New York			JOB NO.		9999				
			METHOD:		Hollow Stem Auger			GROUND ELEVATION:		664'+				
BORING BY:			GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH					
INSPECTOR:			MZ		DATE COMPLETED:		3/20/2018		0 Hr.	7±	Date 3/20/18	24 Hr.	N/A	Date N/A
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH		Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	Symbol USCS			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
0														
5	S-1	20"	0		19	20			35	Fill: 5" Subbase				
				2			15	8		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel				
10	S-2	16"	5		4	12			26	Same...				
				7			14	8						
	S-3	8"	7		6	8			16	Same...				
				9			8	9						
15										BORING COMPLETED AT 9± FEET				
20														
25														
30														
35														
40														

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1 in	
Core Size	1 in	

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

SESI CONSULTING ENGINEERS			PROJECT NAME:		Proposed Logistics Center		BORING NO.		SB-26		
			LOCATION:		Southeast, New York		JOB NO.		9999		
			METHOD:		Hollow Stem Auger		GROUND ELEVATION:		674'±		
BORING BY:			GBI		DATE STARTED:		3/20/2018		GROUNDWATER TABLE DEPTH		
INSPECTOR:			MZ		DATE COMPLETED:		3/20/2018		0 Hr.	7±	
									Date	3/20/18	
									24 Hr.	N/A	
									Date	N/A	
DEPTH (ft)	SAMPLE No.	REC (in)	DEPTH FROM (ft)	TO (ft)	Blows on Spoon				N (bl/ft)	SOIL DESCRIPTION AND STRATIFICATION	
0					0/6	6/12	12/18	18/24		USCS	
5	S-1	18"	0		26	21			31	Fill: Subbase	
				2			10	20		Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel	
10	S-2	20"	5		6	7			28	Same...	
				7			18	20			
	S-3	12"	7		43	48			88	Same...	
				9			40	37			
15										BORING COMPLETED AT 9± FEET	
20											
25											
30											
35											
40											

Nominal I.D. of Hole	1 in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1½ in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	1 in	
Core Size	1 in	Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: _____

Soil descriptions represent a field identification after D. M. Burmister unless otherwise noted.

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-1
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>649±'</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Light seepage @ 2.5±'; Seepage @ 3.5±'</u>		DATE EXCAVATED	<u>3/5/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6-inch Topsoil	
1 — —	Light Brown Clayey SILT, and coarse to fine Sand, trace Gravel, with occasional cobbles	
2 — —	(USCS : CL)	Medium-Stiff
3 — —	Same as above with mottled Clayey SILT and occasional cobbles	Medium-Stiff
4 — —	(USCS: CL)	
5 — —		
6 — —	End of Test Pit at 5.5± Feet	
7 — —		
8 — —		
9 — —		
10 — —		
11 — —		
12 — —		
13 — —		
14 — —		

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Figure 28

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-2
LOCATION SEE FIGURE 1	APPROX. ELEV. 643±'	INSPECTED BY	RR
WATER OBSERVATION	Seepage @ 2', 4', Heavy @ 7±'	DATE EXCAVATED	3/5/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3-inch Topsoil	
1 —	Light Brown Clayey SILT, and coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : CL)	Medium-Stiff
2 —	Light Brown mottled Clayey SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : CL)	Medium Stiff
3 —		
4 —		
5 —		
6 —		
7 —	End of Test Pit at 7± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

Figure 29

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO.	TP-3
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>646±'</u>		INSPECTED BY	<u>RR</u>
WATER OBSERVATION		<u>Heavy seepage @ 2±'</u>		DATE EXCAVATED	<u>3/5/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3-Inch Topsoil	
1 —	Light Brown Clayey Silt, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : CL)	Medium-Stiff
2 —	Light Brown mottled Clayey Silt, little coarse to fine Sand, trace Gravel, with occasional cobbles (USCS :CL)	Medium Stiff
3 —		
4 —		
5 —		to
6 —		Stiff
7 —	End of Test Pit at 6.75± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

Figure 30

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-3A
LOCATION SEE FIGURE 1	APPROX. ELEV. 647 ±	INSPECTED BY	RR
WATER OBSERVATION Seepage at 3'		DATE EXCAVATED	4/7/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light Brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
2 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Medium Stiff
3 —	...Same Mottled Clayey Silt with weathered Rock or Boulder	Medium Stiff
4 —		
5 —		
6 —		
7 —	End of Test Pit at 7 ± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS D.P.C.

Figure 31

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-4
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>638 ± '</u>	INSPECTED BY	MZ
WATER OBSERVATION <u>Seepage @ 2.5±', Heavy seepage @ 4±'</u>		DATE EXCAVATED <u>3/5/2018</u>		
DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY		
0 — —	4-Inch Topsoil			
1 — — 2 — —	Brown Clayey Silt, some coarse to fine Sand, trace Gravel (USCS : CL)	Medium-Stiff		
3 — — 4 — — 5 — — 6 — —	Light Brown Clayey SILT, little coarse to fine Sand, trace Gravel with occasional cobble (USCS : CL)	Medium Stiff to Stiff		
7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 6.8± Feet			

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Figure 32

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-4A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>647 ±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 22"</u>		DATE EXCAVATED	4/7/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Light brown SILT, and coarse to fine Sand, trace coarse to fine Gravel with Cobbles	Medium Stiff
2 —	Brown Clayey SILT (Mottled), and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Stiff
3 —		
4 —		
5 —		
6 —		
7 —	Same... with Gray Clayey Silt and possible weathered Bedrock or Boulder	Hard
8 —		
9 —		
10 —	End of Test Pit at 9 ± Feet	
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS D.P.C.

Figure 33

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-5
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>641±'</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Light Seepage @ 22"/ @ 4±'</u>		DATE EXCAVATED <u>3/5/2018</u>		
DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY		
0 — —	5-inch Topsoil			
1 — —	Light Brown Clayey SILT, some coarse to fine Sand, trace Gravel (USCS : (CL)	Medium Stiff		
2 — —	Light Brown mottled Clayey SILT, little coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : CL)	Medium Stiff		
3 — —				
4 — —	Light Brown Clayey Silt, some coarse to fine Sand, little coarse to fine Gravel Light Brown Clayey Silt, some coarse to fine Sand, trace medium to fine Gravel with occasional cobbles and boulder (USCS : CL)	Medium Stiff		
5 — —				
6 — —				
7 — —				
8 — —				
9 — —				
10 — —	End of Test Pit at 9.8± Feet			
11 — —				
12 — —				
13 — —				
14 — —				

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Figure 34

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-6
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>645±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage @ 1.5±'; Heavy seepage 4±'</u>	DATE EXCAVATED <u>3/5/2018</u>		

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4-inch Topsoil	
1 —	Brown Clayey SILT, some coarse to fine Sand, trace Gravel (USCS : CL)	Medium-Stiff
2 —	Dark Brown Clayey Silt, little coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : CL)	Medium Stiff to Stiff
3 —		
4 —		
5 —		
6 —		
7 —		
8 —	End of Test Pit at 8.1± Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

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Figure 35

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-7
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>643±'</u>	INSPECTED BY	<u>JQ/RR</u>
WATER OBSERVATION <u>Seepage @ 2±' Heavy @ 5±'</u>		DATE EXCAVATED	<u>3/5/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3-inch Topsoil	
1 —	Light Brown Clayey SILT, some coarse to fine Sand, trace coarse to fine Gravel with occasional cobbles (USCS : CL)	Medium-Stiff
2 —		
3 —	Light Brown mottled Clayey SILT, little coarse to fine Sand, trace coarse to fine Gravel with occasional cobbles and boulders (USCS : CL)	Medium-Stiff
4 —		
5 —		to
6 —		
7 —		
8 —		Stiff
9 —	End of Test Pit @ 8.5± Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

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Figure 36

SESI CONSULTING ENGINEERS

Figure 37

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP-9
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>625'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Light seepage at 6'±</u>		DATE EXCAVATED	<u>3/5/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
1 —	Light-brown coarse to fine SAND, and Silt, trace medium to fine Gravel (USCS : SM)	Medium Dense
2 —	Light-brown coarse to fine SAND, some Silt, little medium to fine Gravel with occasional cobbles (USCS :SM)	Medium Dense
3 —		
4 —		
5 —		
6 —		
7 —	End of Test Pit at 6.75± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Figure 38

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 10
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>629'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>24-hour water reading = 13±"</u> <u>Light seepage at 2'±, Heavy seepage at 4'±</u>		DATE EXCAVATED	<u>3/5/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light-brown coarse to fine SAND, and Clayey Silt, trace medium to fine Gravel, with occasional cobbles (USCS : SM)	Medium Dense
2 —		
3 —		
4 —		
5 —		
6 —		
7 —	End of Test Pit at 6.5± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Figure 39

NOTE:

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CONSULTING

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 12
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>629'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 26±"; 24-hour reading = 3±"</u>		DATE EXCAVATED	<u>3/5/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	6" Topsoil	
1 —	Light-brown mottled Clayey SILT, some coarse to fine Sand, trace Gravel with occassional cobbles (USCS : CL)	Medlum Stiff
2 —		
3 —		
4 —		
5 —		
6 —		
7 —		
8 —	End of Test Pit at 7.5± Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Figure 41

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-12A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>677 ±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 2'</u>		DATE EXCAVATED	<u>4/7/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	1' Topsoil	
1 — — 2 — —	Light brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
3 — — 4 — — 5 — — 6 — — 7 — — 8 — — 9 — — 10 —	Brown mottled Clayey SILT, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Stiff
11 — — 12 — — 13 — — 14 —	End of Test Pit at 10 ± Feet	

SESI CONSULTING ENGINEERS D.P.C.

Figure 42

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 13
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>627'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 3'± to 3.5'±</u>		DATE EXCAVATED	<u>3/5/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-3" Topsoil	
1 —	Light-brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occassional cobbles (USCS : SM)	Medium Dense
2 —		
3 —		
4 —	Same as above with mottled Clayey Silt	Medium Dense
5 —		
6 —		
7 —	End of Test Pit at 7± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Figure 43

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 14
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>633'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 7.5'±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — — 2 — —	Light-brown coarse to fine SAND, some Silt, little coarse to fine Gravel, with occassional cobbles (USCS : SM/SC)	Medium Dense
3 — — 4 — — 5 — — 6 — — 7 — — 8 — —	Light-brown coarse to fine SAND, some clayey Silt, little coarse to fine Gravel, with occassional cobbles (USCS : SM/SC)	Medium Dense
9 — — 10 — — 11 — — 12 — — 13 — — 14 — —	End of Test Pit at 8.5± Feet	

NOTE:

Figure 44

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 15
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>631'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 7'±</u>	DATE EXCAVATED		3/6/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — — 2 — — 3 — —	Light-brown coarse to fine SAND, some clayey Silt, little medium to fine Gravel, with occasional cobbles (USCS : SM) W.C. = 13.8% (-200) = 34.2%	Medium Dense
4 — — 5 — — 6 — — 7 — —	Light-brown coarse to fine SAND, some clayey Silt, little medium to fine Gravel, with occasional cobbles (USCS : SM)	Medium Dense
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 — —	Same as above with mottled Clayey Silt and occasional Boulder (USCS: SM)	Medium Stiff
	End of Test Pit at 7± Feet	

NOTE:

Figure 45

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 16
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>629'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 6'11"±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — —	6" Topsoil	
1 — — 2 — — 3 — — 4 — —	Light-brown coarse to fine SAND, some Silt, little coarse to fine Gravel with occassional cobbles (USCS : SM)	Medium Dense
5 — — 6 — — 7 — —	Same as above with some mottled Clayey Silt, with occassional cobbles and boulders (USCS : SM/SC)	Medium Dense
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7.5± Feet	

NOTE:

Figure 46

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 17
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>630'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>NE</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — — 2 — —	Light-brown/Orange SILT, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles (USCS : CL)	Medium Stiff
3 — — 4 — — 5 — — 6 — — 7 — —	Light-brown mottled SILT, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles and boulders (USCS : CL)	Medium Stiff
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7.5± Feet	

NOTE:

Figure 47

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 18
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>628'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 2'±, Heavy at 3'±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	7" Topsoil	
1 — — 2 — —	Light-brown Clayey SILT, some medium to fine Sand, trace Gravel (USCS : CL)	Medium Stiff
3 — — 4 — — 5 — — 6 — —	Light-brown mottled Clayey SILT, some coarse to fine Sand, little coarse to fine Gravel, with occassional cobbles (USCS : CL)	Medium Stiff
7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 6.75± Feet	

NOTE:

Figure 48

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO.		TP-18A	
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>659 ±</u>		INSPECTED BY		<u>RR</u>	
WATER OBSERVATION		<u>Seepage at 8'</u>		DATE EXCAVATED		<u>4/7/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	5" Topsoil	
1 — — 2 — —	Light brown SILT, some coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
3 — — 4 — — 5 — —	Brown Clayey Silt, some coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Medium Stiff
6 — — 7 — — 8 — — 9 — — 10 — —	...Same (Mottled)	Medium Stiff
11 — — 12 — — 13 — — 14 — —	End of Test Pit at 10 ± Feet	

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Figure 49

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-18B
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>645 ±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 9'</u>		DATE EXCAVATED	<u>4/7/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —		
2 —	Light brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
3 —		
4 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Medium Stiff to Stiff
5 —		
6 —	...Same (Mottled Silt with weathered Mica Schist)	Stiff
7 —		
8 —		
9 —		
10 —	End of Test Pit at 10 ± Feet	
11 —		
12 —		
13 —		
14 —		

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Figure 50

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 19
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>619'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 30"±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Light-brown coarse to fine SAND, some Silt, little coarse to fine Gravel, with occasional cobbles (USCS : CL)	Medium Dense
2 —	Light-brown coarse to fine SAND, some mottled Silt, little coarse to fine Gravel, with occasional cobbles (USCS : CL)	Medium Dense
3 —		
4 —		
5 —		
6 —		
7 —	End of Test Pit at 6.25± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Figure 51

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 20
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>618'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Light seepage at 4'±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — — 2 — —	Light-brown SILT, some coarse to fine Sand, little medium to fine Gravel, with occasional cobbles (USCS : CL)	Medium Stiff
3 — — 4 — — 5 — — 6 — — 7 — —	Light-brown mottled SILT, some coarse to fine Sand, little medium to fine Gravel, with occasional cobbles (USCS : CL)	Medium Stiff
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7.3± Feet	

NOTE:

Figure 52

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-20A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>577 ±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION	<u>Seepage at 6'</u>	DATE EXCAVATED	<u>4/7/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
— 1 — —	Light brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
2 — — 3 — — 4 — — 5 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Medium Stiff
— 6 — — 7 — — 8 — — 9 —	...Same Mottled (Observed decomposed Mica Schist)	Medium Stiff to Stiff
— 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9 ± Feet	

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Figure 53

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 21
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>618'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Light seepage at 5'9"±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil	
— 1 —	Light-brown/yellow coarse to fine SAND, some Silt, trace Gravel (USCS : SM)	Medium Dense
— 2 — — 3 —	Light-brown Clayey SILT, some coarse to fine Sand, little medium to fine Gravel with occassional cobbles (USCS : CL)	Medium Stiff
— 4 — — 5 — — 6 — — 7 —	Light-brown mottled Clayey SILT, some coarse to fine Sand, little medium to fine Gravel with occassional cobbles (USCS : CL)	Medium Stiff
— 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7.6± Feet	

NOTE:

Figure 54

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 22
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>616'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Light seepage at 1'8"±; Heavy at 5'±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — — 2 — —	Light-brown coarse to fine SAND, some Silt, little coarse to fine Gravel with occasslonal cobbles (USCS : SM)	Medium Dense
3 — — 4 — — 5 — — 6 — — 7 — — 8 — —	Light-brown mottled Clayey SILT, some coarse to fine Sand, little coarse to fine Gravel with occasslonal cobbles (USCS : CL)	Medium Stiff
9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 8.1± Feet	

NOTE:

Figure 55

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-22A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>582 ±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Heavy Seepage at 8'</u>		DATE EXCAVATED	4/7/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
—	Light brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
1 —		
—		
2 —		
—	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Medium Stiff
3 —		
—		
4 —		
5 —	...Same (Mottled Silt)	Medium Stiff To Stiff
—		
6 —		
—		
7 —		
—		
8 —	End of Test Pit at 10 ± Feet	
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

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Figure 56

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 23
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>615'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 5'3"±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
— 1 — —	Light-brown coarse to fine SAND, some Silt, little coarse to fine Gravel (USCS : SM)	Medium Dense
2 — — 3 — —		
4 — — 5 — — 6 — — 7 — —	Light-brown coarse to fine SAND, some mottled Silt, little coarse to fine Gravel, with occasional cobbles and boulders (USCS : SM)	Medium Dense
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7.3± Feet	

NOTE:

Figure 57

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 24
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>614'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 4'±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—	Light-brown/yellow Clayey SILT, some coarse to fine SAND, trace Gravel	Medium Stiff
1 —	(USCS : CL)	
—		
2 —	Light-brown coarse to fine SAND, some Silt, little medium to fine	Medium Dense
—	Gravel with occassional cobbles (USCS : SM)	
3 —	Light-brown mottled Clayey SILT, some coarse to fine Sand, little	Medium Stiff
—	medium to fine Gravel, with occassional cobbles and boulders	
4 —	(USCS : CL)	
—		
5 —		
—		
6 —		
—		
7 —		
—	End of Test Pit at 7± Feet	
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE:

Figure 58

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 25
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>615'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 4.5'±</u>		DATE EXCAVATED	3/6/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — — 2 —	Light-brown/yellow coarse to fine SAND, some Silt, trace Gravel (USCS : SM)	Medium Dense
3 — — 4 — — 5 — — 6 — —	Light-brown coarse to fine SAND, some mottled Silt, trace Gravel, with occasional cobbles (USCS : SM)	Medium Dense to Dense
7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 6.4± Feet	

NOTE:

Figure 59

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 26
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>602'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 6'1"±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	3" Topsoil	
1 — —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occassional cobbles (USCS : CL)	Medium Stiff
2 — — 3 — — 4 — — 5 — — 6 — — 7 — —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with high frequency of boulders (USCS : CL)	Medium Stiff
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7.25± Feet	

NOTE:

Figure 60

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 27
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>636'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 6.5'±</u>		DATE EXCAVATED	<u>4/16/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light-brown SILT, and coarse to fine Sand, trace Gravel, with cobbles and boulders (USCS : CL)	Medium Stiff
2 —	Brown SILT, and coarse to fine Sand, trace Gravel, with cobbles and boulders (USCS : CL)	Medium Stiff
3 —		
4 —		
5 —	Same mottled SILT	Medium Stiff
6 —		
7 —		
8 —	End of Test Pit at 8± Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Figure 61

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-27A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>635 ±</u>	INSPECTED BY	RR
WATER OBSERVATION	<u>NE</u>	DATE EXCAVATED	<u>4/7/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — 1 — — 2 — — 3 — — 4 — — 5 — — 6 — — 7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	Topsoli with Light Brown SILT, and coarse to fine Sand, trace Gravel with occasional Cobbles	
	Light Brown SILT, and coarse to fine Sand, light coarse to fine Gravel with Cobbles and Boulders	Medium Stiff
	Brown Clayey SILT, and coarse to fine Sand, light coarse to fine Gravel with Cobbles and Boulders (Weathered Boulders/Bedrock)	Stiff
	... Same (Mottled Silt)	
	End of Test Pit at 9 ± Feet	

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Figure 62

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-27B
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>629 ±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 10'</u>		DATE EXCAVATED	<u>4/7/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	Topsoll	
1 —	Light brown SILT, some coarse to fine Sand, trace Gravel with Cobbles and Boulders	Medium Stiff
2 —		
3 —		
4 —		
5 —	Brown Clayey SILT, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders (Weathered Rock/Boulder)	
6 —		
7 —	... Same (Mottled Silt)	Stiff
8 —		
9 —		
10 —		
11 —	End of Test Pit at 10 ± Feet	
12 —		
13 —		
14 —		

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Figure 63

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 28
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>621'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 21"±; Heavy at 4.5'±</u>		DATE EXCAVATED	<u>3/6/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
— 1 — —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occassional cobbles (USCS : CL)	Medium Dense
2 — — 3 — — 4 — — 5 — — 6 — — 7 —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occassional cobbles (USCS : CL)	Medium Stiff
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7± Feet	

NOTE:

Figure 64

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 29
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>621'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 3.5'±</u>		DATE EXCAVATED	<u>4/16/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
— 1 —	Yellow-brown SILT, and coarse to fine Sand, trace Gravel, with cobbles (USCS : CL)	Medium Stiff
— 2 — — 3 — — 4 —	Brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and occasional boulders (USCS: CL)	Medium Stiff
— 5 — — 6 — — 7 — — 8 —	Same mottled SILT	Medium Stiff
— 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 8± Feet	

NOTE:

Figure 65

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 30
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>612'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 2'±</u>		DATE EXCAVATED	<u>4/16/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—		
1 —	Light-brown SILT, and coarse to fine Sand, trace Gravel, with cobbles (USCS : CL)	Medium Stiff
—		
2 —	Brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with cobbles (USCS: CL)	Medium Stiff
—		
3 —	Same mottled SILT	
—		
4 —		Medium Stiff
—		
5 —		
—		
6 —	Brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with cobbles (gravel frequency increased with depth)	Medium Stiff
—		
7 —		
—		
8 —		
—		
9 —	End of Test Pit at 8± Feet	
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE:

Figure 66

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 31
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>618'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 7.5'±</u>		DATE EXCAVATED	<u>4/17/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
— 1 —	Yellow-brown SILT, and coarse to fine Sand, trace Gravel, with cobbles (USCS : CL)	Medium Stiff
— 2 — — 3 — — 4 —	Light-brown SILT and coarse to fine Sand, little Sand, little coarse to fine Gravel, with cobbles (USCS : CL)	Medium Stiff
— 5 — — 6 — — 7 — — 8 — — 9 — — 10 —	Light-brown mottled SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles (USCS : CL)	Medium Stiff
— 11 — — 12 — — 13 — — 14 —	End of Test Pit at 10± Feet	

NOTE:

Figure 67

PROJECT NO. 9999	PROJECT Southeast, NY	TEST PIT NO.	TP- 32
LOCATION SEE FIGURE 1	APPROX. ELEV. 602'±	INSPECTED BY	JQ
WATER OBSERVATION Seepage at 5'±		DATE EXCAVATED	4/17/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — —	Light-brown/yellow-brown SILT, and coarse to fine Sand, trace Gravel (USCS : CL)	Medium Stiff
2 — —		
3 — —	Light-brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles (USCS : CL)	Medium Stiff
4 — —	Light-brown mottled SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles (USCS : CL)	Medium Stiff
5 — —		
6 — —		
7 — —		
8 — —		
9 — —		
10 — —		
11 — —	End of Test Pit at 10± Feet	
12 — —		
13 — —		
14 — —		

NOTE:

Figure 68

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-33
LOCATION SEE FIGURE 1	APPROX. ELEV. 603'±	INSPECTED BY	JQ/RR
WATER OBSERVATION Seepage at 7'±		DATE EXCAVATED	4/17/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—	Yellow-brown/Light-brown SILT, and coarse to fine Sand, trace Gravel	
1 —		
—	Light-brown SILT, and coarse to fine Sand, little coarse to fine	
2 —	Gravel, with occasional cobbles	
—	Infiltration Rate at el. 601 = 22 in/hr	
3 —		
—		
4 —		
—		
5 —	Light-brown mottled SILT, and coarse to fine Sand, little coarse	
—	to fine Gravel, with occasional cobbles	
6 —		
—		
7 —		
—		
8 —		
—	End of Test Pit at 8± Feet	
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

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Figure 69

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-34
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>600'±</u>	INSPECTED BY	<u>JQ/RR</u>
WATER OBSERVATION <u>Seepage at 7'±</u>		DATE EXCAVATED	<u>4/17/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
— 1 —	Yellow-brown/Light-brown SILT, and coarse to fine Sand, trace Gravel	
— 2 — — 3 — — 4 — — 5 — — 6 —	Infiltration Rate at el. 598.5 = 30.6 in/hr Light-brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	
— 7 — — 8 — — 9 — — 10 —	Light-brown mottled SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	
— 11 — — 12 — — 13 — — 14 —	End of Test Pit at 10± Feet	

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Figure 70

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-35
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>599'±</u>	INSPECTED BY	<u>JQ/RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	<u>4/17/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4-5" Topsoil	
—		
1 —	Yellow-brown/Light-brown Sand, some Silt, little coarse to fine Gravel	
—		
2 —	Light-brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	
—		
3 —		
—		
4 —		
—		
5 —	Infiltration Rate at El. 595= 29.5 in/hr	
—		
6 —		
—		
7 —	Light-brown mottled SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —	End of Test Pit at 10± Feet	
—		
12 —		
—		
13 —		
—		
14 —		

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Figure 71

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-36
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>623'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 2'±</u>		DATE EXCAVATED	<u>5/1/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	Medium Stiff
1 —	Brown clayey Silt, some coarse to fine Sand, trace Gravel with occasional cobbles and boulders	
2 —	Same... Mottled Silt	Medium Stiff
3 —		
4 —		
5 —		
6 —		
7 —	End of Test Pit at 7± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

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Figure 72

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-37
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>607'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 6.5'±</u>		DATE EXCAVATED	<u>4/31/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	Medium Stiff
1 —	Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobbles	
2 —		
3 —	Brown Silt, and coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	Medium Stiff
4 —		
5 —	Infiltration Rate at El. 604 = 4.5 in/hr	
6 —	Same... Mottled Silt	Medium Stiff
7 —		
8 —		
9 —		
10 —	End of Test Pit at 9± Feet	
11 —		
12 —		
13 —		
14 —		

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Figure 73

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-38
LOCATION SEE FIGURE 1	APPROX. ELEV. 600'±	INSPECTED BY	RR
WATER OBSERVATION Seepage at 4'±		DATE EXCAVATED	4/31/18

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobbles and boulders	Medium Stiff
2 —	Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	Medium Stiff
3 —	Infiltration Rate at El. 604 = 16.5 in/hr	
4 —	Same... Mottled Silt	Medium Stiff
5 —		
6 —		
7 —	End of Test Pit at 7'±	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

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Figure 74

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-39
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>608'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 4'± / standing water at 7'±</u>		DATE EXCAVATED	<u>4/31/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobbles Infiltration at El.606 = 30.6 in/hr	Medium Stiff
2 —		
3 —	Brown clayey Silt, and coarse to fine Sand, trace Gravel with occasional cobbles and boulders	Medium Stiff
4 —	Same... Mottled Silt	Medium Stiff
5 —		
6 —		
7 —		
8 —	End of Test Pit at 8± Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

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Figure 75

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-40
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>598'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 9'±</u>		DATE EXCAVATED	<u>4/31/18</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—	Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobbles	Medium Stiff
1 —		
—	Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	Medium Stiff
2 —		
—		
3 —		
—	Infiltration Rate at El. 595 = 12 in/hr	
4 —		
—		
5 —		
—	Same... Mottled Silt	Medium Stiff
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—	End of Test Pit at 9± Feet	
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

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Figure 76

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-41
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>596'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 6.5'±</u>		DATE EXCAVATED	<u>4/31/18</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
— 1 —	Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobbles	Medium Stiff
— 2 —		
— 3 —	Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	Medium Stiff
— 4 —	Infiltration Rate at el. 592 = 12in/hr.	
— 5 —		
— 6 —	Same... Mottled Silt	Medium Stiff
— 7 —		
— 8 —		
— 9 —		
— 10 —		
— 11 —	End of Test Pit at 10± Feet	
— 12 —		
— 13 —		
— 14 —		

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Figure 77

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP- 42</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>596'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Seepage at 12"±;</u>		DATE EXCAVATED <u>4/31/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	4" Topsoil	
1 — —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occasslonal cobbles	Medium Stiff
2 — — 3 — — 4 — — 5 — — 6 — — 7 — —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occasslonal cobbles and occasional boulder (USCS : SC/CL)	Medium Stiff to Stiff
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7.5± Feet	

NOTE:

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-43
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>596'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 3.5'±</u>		DATE EXCAVATED	<u>4/31/18</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	Medium Stiff
1 —	Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobbles	
2 —		
3 —	Brown clayey Silt, and coarse to fine Sand with occasional cobbles and boulders	Medium Stiff
4 —	Same... Mottled Silt	Medium Stiff
5 —		
6 —		
7 —	End of Test Pit at 6.5± Feet	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

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Figure 79

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-43A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>603 ±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 4.75'</u>		DATE EXCAVATED	<u>4/7/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—	Light brown SILT	Medium Stiff
1 —		
—		
2 —		
—		
3 —	Brown Clayey Silt	
—		
4 —	...Same (Mottled Silt)	
—		
5 —		
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —	End of Test Pit at 10 ± Feet	
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

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Figure 80

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO.		TP-44	
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>584'±</u>		INSPECTED BY		RR	
WATER OBSERVATION		<u>Seepage at 3'±</u>		DATE EXCAVATED		<u>4/31/18</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	4" Topsoil	
1 — — 2 — —	Light Brown Silt, and coarse to fine Sand, trace Gravel with cobbles	Medium Stiff
3 — — 4 — — 5 — — 6 — — 7 — —	Mottled Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	Medium Stiff
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 7± Feet	

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Figure 81

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-44A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>582 ±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Light Seepage at 3' Heavy Seepage at 7'</u>		DATE EXCAVATED	<u>4/7/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —		
2 —	Light brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
3 —		
4 —		
5 —	Brown Clayey Mottled SILT, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders	Medium Stiff
6 —		
7 —		
8 —	End of Test Pit at 8 ± Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS D.P.C.

Figure 82

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-45
LOCATION SEE FIGURE 1	APPROX. ELEV. 584 ±	INSPECTED BY	RR
WATER OBSERVATION Seepage @ 5±'		DATE EXCAVATED	4/31/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
— 1 —	Light brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
— 2 — — 3 — — 4 —	Brown Clayey Mottled SILT, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders Infiltration Rate at El. 581.5 = 15 in/hr	Medium Stiff
— 5 — — 6 — — 7 — — 8 — — 9 —	Same... (Mottled Silt)	Medium Stiff
— 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 8 ± Feet	

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Figure 83

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	TP- 46
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>581'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 2'3"±; Heavy at 4.0'±</u>		DATE EXCAVATED	<u>3/22/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — — 2 — —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : SC/CL) Infiltration Rate at El. 579 = 13 in/hr	Medium Stiff
3 — — 4 — — 5 — — 6 — — 7 — — 8 — — 9 — —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : SC/CL)	Medium Stiff
10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9.3± Feet	

NOTE:

Figure 84

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.	TP-47
LOCATION SEE FIGURE 1		APPROX. ELEV. 583'±		INSPECTED BY	RR
WATER OBSERVATION		Seepage at 7'±		DATE EXCAVATED	4/31/18

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—	Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobbles	Medium Stiff
1 —		
—		
2 —	Brown clayey Silt, and coarse to fine Sand, trace Gravel with occasional cobbles and boulders	Medium Stiff
—		
3 —		
—		
4 —	Infiltration Rate at El. 581 = 17 in/hr	
—		
5 —		
—	Same... Mottled Silt	Medium Stiff
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—	End of Test Pit at 9± Feet	
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

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Figure 85

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-48
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>581'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 7.5'±</u>		DATE EXCAVATED	4/31/18

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	Medium Stiff
1 —	Light Brown Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	
2 —	Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	
3 —		
4 —		Infiltration Rate at El. 578 = 12 in/hr
5 —	Same... Mottled Silt	Medium Stiff
6 —		
7 —		
8 —		
9 —		
10 —	End of Test Pit at 10± Feet	
11 —		
12 —		
13 —		
14 —		

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Figure 86

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-49
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>586'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 10.5'±</u>		DATE EXCAVATED	<u>5/1/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Fill- Light Brown Silt, and coarse to fine Sand, trace Gravel with occasional cobble, brick, and concrete	
2 —		
3 —		
4 —		
5 —	Fill- Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulders	
6 —		
7 —		
8 —		
9 —	Same... (Bottom of Footing from pervious residence)	Medium Stiff
10 —	Same... Mottled Silt	Stiff
11 —	End of Test Pit at El. 11± Feet	
12 —		
13 —		
14 —		

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Figure 87

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-50
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>588'±</u>	INSPECTED BY	RR
WATER OBSERVATION	<u>N/E</u>	DATE EXCAVATED	<u>5/1/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	4" Topsoil	
1 — — 2 — —	Fill- Light Brown Silt, some coarse to fine Sand, trace Gravel with occasional cobbles (Existing Drain line observed at 2 Feet below Grade)	
3 — — 4 — — 5 — — 6 — — 7 — — 8 — —	Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with cobbles and boulders	Medium Stiff
9 — — 10 — — 11 — —	Same... Mottled Silt	Medium Stiff
12 — — 13 — — 14 —	End of Test Pit at 11+ Feet	

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Figure 88

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-50A
LOCATION SEE FIGURE 1	APPROX. ELEV. 588	INSPECTED BY	RR
WATER OBSERVATION Seepage at 10'±		DATE EXCAVATED	5/2/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Fill- Light Brown Silt, and coarse to fine Sand, trace Gravel with cobbles	Medium Stiff
2 —	6-inch diameter clay pipe at 2' (From previous residence)	
3 —	Light Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with cobbles	Medium Stiff
4 —		
5 —	Brown clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with cobbles	Medium Stiff
6 —		
7 —		
8 —		
9 —	Same... Mottled Silt	Medium Stiff
10 —		
11 —	End of Test Pit at 11± Feet	
12 —		
13 —		
14 —		

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Figure 89

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-51
LOCATION SEE FIGURE 1	APPROX. ELEV. 635.0±	INSPECTED BY	JQ
WATER OBSERVATION Seepage at 7.5±'		DATE EXCAVATED	3/19/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	9" Topsoil	
1 — —	Light Brown/Yellow coarse to fine Sand, and Silt, trace Gravel (USCS: SM)	Medium Dense
2 — —		
3 — —	Light Brown Silt, some coarse to fine Sand, travel Gravel with occassional cobbles (USCS: CL)	Medium Stiff
4 — —		
5 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles (USCS: CL)	Medium Stiff
6 — —		
7 — —		
8 — —		
9 — —		
10 — —		
11 — —	Test Pit Completed at 10± Feet	
12 — —		
13 — —		
14 — —		

NOTE:

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Figure 90

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-52
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>634±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 4±', Heavy seepage at 4.5±'</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light Brown Silt, some coarse to fine Sand, travel Gravel with occassional cobbles (USCS: CL)	Medium Stiff
2 —		
3 —		
4 —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles (USCS: CL)	Medium Stiff
5 —		
6 —		
7 —		
8 —		
9 —		
10 —	Test Pit Completed at 9.5± Feet	
11 —		
12 —		
13 —		
14 —		

NOTE:

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Figure 91

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-53
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>632±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Heavy seepage at 5.5±'</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	6" Topsoil	
1 —	Light Brown/Yellow coarse to fine Sand, some Silt, trace Gravel (USCS: SM)	Medium Dense
2 —	Light Brown Silt, some coarse to fine Sand, trace Gravel with occasional cobbles (USCS: CL)	Medium Stiff
3 —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles (USCS: CL)	Medium Stiff
4 —		
5 —		
6 —		
7 —		
8 —	Test Pit Completed at 9.3± Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

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Figure 92

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-55
LOCATION SEE FIGURE 1	APPROX. ELEV. 686±'	INSPECTED BY	JQ
WATER OBSERVATION NE		DATE EXCAVATED	3/19/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — —	Light Brown/Yellow coarse to fine Sand, and Silt, trace Gravel (USCS: SM)	Medium Dense
2 — —	Light Brown Silt, some coarse to fine Sand, trace Gravel (USCS: CL)	Medium Stiff
3 — —	Light Brown Silt, some coarse to fine Sand, trace Gravel with occassional cobbles (USCS: CL)	Medium Stiff
4 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles (USCS: CL)	Medium Stiff
5 — —		
6 — —		
7 — —		
8 — —		
9 — —		
10 — —	Test Pit Completed at 10.3±'	
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

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Figure 94

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-56
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>688±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 10±'</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	4" Topsoil	
1 — — 2 — — 3 — — 4 — —	Light Brown/Gray Silt, some coarse to fine Sand, trace Gravel with occasional cobbles (USCS: CL)	Medium Stiff
5 — — 6 — — 7 — — 8 — — 9 — — 10 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles (USCS: CL)	Medium Stiff
11 — — 12 — — 13 — — 14 — —	Test Pit Complete at 10.3±'	

NOTE:

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Figure 95

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-57
LOCATION SEE FIGURE 1	APPROX. ELEV. 672+'	INSPECTED BY	JQ
WATER OBSERVATION 7' 0" seepage		DATE EXCAVATED	3/28/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light Brown/Yellow coarse to fine Sand and Silt, trace Gravel	Medium Dense
2 —	Light Brown Silt, some coarse to fine sand, little coarse to fine Gravel with occasional cobbles	Medium Stiff
3 —		
4 —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles	Medium Stiff
5 —		
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	TEST PIT COMPLETED AT 11' 3"	
12 —		
13 —		
14 —		

NOTE:

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Figure 96

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-101</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>652+'</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>4' 0" seepage</u>		DATE EXCAVATED <u>5/1/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Light brown Silt, and coarse to fine Sand, trace Gravel, with occasional cobbles	Medium Stiff
2 —		
3 —		
4 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and boulders	Medium Stiff
5 —		
6 —		
7 —		
8 —		
9 —		
10 —	TEST PIT COMPLETED AT 10.0 FEET	
11 —		
12 —		
13 —		
14 —		

NOTE:

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Figure 97

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-102
LOCATION SEE FIGURE 1	APPROX. ELEV. 671±'	INSPECTED BY	RR
WATER OBSERVATION NE		DATE EXCAVATED	5/1/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light brown Silt, and coarse to fine Sand, trace Gravel, with occasional cobbles	Medium Stiff
2 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and occasional boulders	Medium Stiff
3 —		
4 —		
5 —		
6 —		
7 —		
8 —		
9 —		
10 —	TEST PIT COMPLETED AT 10.0 FEET	
11 —		
12 —		
13 —		
14 —		

NOTE:

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Figure 98

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-103</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>667.5±'</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Seepage at 8'0"</u>		DATE EXCAVATED <u>5/2/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	6-7" Topsoil	
1 —	Light brown Silt, and coarse to fine Sand, trace Gravel, with cobbles	Medium Stiff
2 —		
3 —		
4 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and occassional boulders	Medium Stiff
5 —		
6 —		
7 —	... Same as above, mottled Silt	Medium Stiff
8 —		
9 —		
10 —	TEST PIT COMPLETED AT 10.0 FEET	
11 —		
12 —		
13 —		
14 —		

NOTE:

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Figure 99

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-104
LOCATION SEE FIGURE 1	APPROX. ELEV. 660±'	INSPECTED BY	RR
WATER OBSERVATION Seepage at 9'0"		DATE EXCAVATED	5/2/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Light brown Silt, and coarse to fine Sand, trace Gravel, with cobbles	Medium Stiff
2 —		
3 —		
4 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and boulders	Medium Stiff
5 —		
6 —		
7 —		
8 —	... Same as above, mottled Silt	Medium Stiff
9 —	TEST PIT COMPLETED AT 9.5 FEET	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

SESI CONSULTING ENGINEERS

Figure 100

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-105
LOCATION SEE FIGURE 1	APPROX. ELEV. 679±'	INSPECTED BY	RR
WATER OBSERVATION Seepage at 8.75'		DATE EXCAVATED	5/2/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Light brown Silt, and coarse to fine Sand, trace Gravel, with cobbles	Medium Stiff
2 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and boulders	Medium Stiff
3 —		
4 —		
5 —		
6 —	... Same as above, mottled Silt	Medium Stiff
7 —	TEST PIT COMPLETED AT 9.0 FEET	
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

SESI CONSULTING ENGINEERS

Figure 101

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-106
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>671±'</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>NE</u>		DATE EXCAVATED	<u>5/2/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Light brown Silt, and coarse to fine Sand, trace Gravel, with cobbles	Medium Stiff
2 —		
3 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and boulders	Medium Stiff
4 —		
5 —		
6 —		
7 —		
8 —		
9 —	... Same as above, mottled Silt	Medium Stiff
10 —	TEST PIT COMPLETED AT 9.0 FEET	
11 —		
12 —		
13 —		
14 —		

NOTE:

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Figure 102

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-107</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>682+'</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Seepage at 9.0'</u>		DATE EXCAVATED <u>5/2/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Light brown Silt, and coarse to fine Sand, trace Gravel, with cobbles	Medium Stiff
2 —		
3 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel, with cobbles and boulders	Medium Stiff
4 —		
5 —		
6 —		
7 —		
8 —	... Same as above, mottled Silt	Medium Stiff
9 —		
10 —	TEST PIT COMPLETED AT 10.0 FEET	
11 —		
12 —		
13 —		
14 —		

NOTE:

SESI CONSULTING ENGINEERS

Figure 103

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	RWTP- 1
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>651.0'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	<u>4/17/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	6" Topsoil	
1 —	Yellow-brown/light-brown SILT, and coarse to fine Sand, trace Gravel (USCS : CL)	Medium Stiff
2 —		
3 —	Light-brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional Cobbles (USCS : CL)	Medium Stiff
4 —		
5 —	Light-brown mottled SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional Cobbles (USCS : CL)	Medium Stiff
6 —		
7 —		
8 —		
9 —	End of Test Pit at 9 ± Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE: Retaining Wall B1-3

Figure 104

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	RWTP- 2
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655' ±</u>	INSPECTED BY <u>JQ</u>	
WATER OBSERVATION <u>Seepage at 8' ±</u>		DATE EXCAVATED <u>4/17/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
1 —	Yellow-brown/light-brown SILT, and coarse to fine Sand, trace Gravel (USCS : CL)	
2 —	Light-brown SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional Cobbles (USCS : CL)	
3 —		
4 —		Medium Stiff
5 —	Light-brown mottled SILT, and coarse to fine Sand, little coarse to fine Gravel, with occasional Cobbles (USCS : CL)	Medium Stiff
6 —		
7 —	Boulder frequency increased with depth	
8 —		
9 —		
10 —	End of Test Pit at 9 ± Feet	
11 —		
12 —		
13 —		
14 —		

NOTE: Retaining Wall B1-3

Figure 105

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO. <u> </u>	RWTP- 3
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>644'±</u>	INSPECTED BY <u>JQ</u>	
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>4/17/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
—	Yellow-brown/light-brown SILT, and coarse to fine Sand, trace	Medium Stiff
1 —	Gravel (USCS : CL)	
—		Medium Stiff
2 —	Light-brown SILT, and coarse to fine Sand, little coarse to fine	
—	Gravel, with occasional Cobbles (USCS : CL)	
3 —		
—		Medium Stiff
4 —	Light-brown mottled SILT, and coarse to fine Sand, little coarse to	
—	fine Gravel with occasional Cobbles (USCS : CL)	
5 —		
6 —		
—		
7 —	Boulder frequency increased with depth	
—		
8 —		
—		
9 —	-----	
—	End of Test Pit at 9 ± Feet	
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE: Retaining Wall B1-4

Figure 106

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	RWTP- 4
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>622'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 2' ±</u>		DATE EXCAVATED	<u>5/2/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 — — —	Light Brown SILT, and coarse to fine Sand, trace Gravel with Cobbles (USCS : CL)	Medium Stiff
2 — — 3 — — 4 — — 5 — — 6 —	Brown Clayey SILT, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders (USCS : CL)	Medium Stiff
7 — — 8 — — 9 —	Boulders increased frequency with depth	Stiff to Hard
10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9 ± Feet	

NOTE: Retaining Wall B12-1

Figure 107

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO. <u> </u>	RWTP- 5
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>631'±</u>	INSPECTED BY <u>RR</u>	
WATER OBSERVATION <u>Seepage at 9' ±</u>		DATE EXCAVATED <u>5/2/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3-4" Topsoil	
—	Light Brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
1 —	(USCS : CL)	
—		
2 —		
—		
3 —	Brown Clayey SILT, and coarse to fine Sand, little coarse to fine Gravel	
—	with Cobbles and Boulders (USCS : CL)	
4 —		
—		
5 —		Medium Stiff
—		
6 —		
—		
7 —		
—		
8 —	...Same (Mottled Silt)	Medium Stiff
—		
9 —		
—		
10 —		
—	End of Test Pit at 10 ± Feet	
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE: Retaining Wall B12-1

Figure 108

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	RWTP- 6
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>640'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	<u>5/2/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 — — —	Light Brown SILT, and coarse to fine Sand, trace Gravel with Cobbles (USCS : CL)	Medium Stiff
2 — — —		
3 — — —		
4 — — — 5 — — 6 — — 7 — — 8 — — 9 —	Brown Clayey SILT, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders (USCS : CL)	Medium Stiff to Stiff
10 — — 11 — — 12 — — 13 — — 14 —		
	End of Test Pit at 9 ± Feet	

NOTE: Retaining Wall B12-1

Figure 109

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	RWTP- 7
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>642'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 9' ±</u>		DATE EXCAVATED	<u>5/2/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	5" Topsoil	
—	Light Brown SILT, and coarse to fine Sand, trace Gravel with Cobbles (USCS : CL)	Medium Stiff
1 —		
—		
2 —		
—	Brown Clayey SILT, and coarse to fine Sand, little medium to fine Gravel with Cobbles and Boulders (USCS : CL)	Medium Stiff
3 —		
—		
4 —		
—	... Same (Mottled Silt)	Medium Stiff
5 —		
—		
6 —		
—	End of Test Pit at 11 ± Feet	
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE: Retaining Wall B12-2

Figure 110

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-1
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>626.0±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 2±'; Heavy seepage at 3±'</u>		DATE EXCAVATED	<u>3/28/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—	Light Brown Silt, some coarse to fine Sand, trace Gravel	Medium Stiff
1 —	(USCS: CL)	
—		
2 —	Percolation Rate = 60 min/in @ Elev. 624.1	Medium Stiff
—	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine	
3 —	Gravel with frequent cobbles and occasional Boulder	
—	(USCS: CL)	
4 —		
—		
5 —		to
—		
6 —		
—		
7 —		
—		
8 —		Stiff
—	Test Pit Completed at 8± Feet	
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

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PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-2
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>628.0±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 2±'</u>		DATE EXCAVATED	<u>3/28/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
—	Light Brown Silt, some coarse to fine Sand, little coarse to fine Gravel	Medium Stiff
1 —	with occasional cobbles	
—	(USCS: CL)	
2 —		
—	Percolation Rate: 120 min/in @ Elev. 626	Medium Stiff
3 —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine	
—	Gravel with occasional cobbles	
4 —	(USCS: CL)	
—		
5 —		
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —	Test Pit Completed at 8.5± Feet	
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE:

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Fig. 112

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.	STP-3
LOCATION SEE FIGURE 1		APPROX. ELEV. 632±'		INSPECTED BY	JQ
WATER OBSERVATION Seepage at 6±'		DATE EXCAVATED		3/28/2018	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — —	Light Brown/Yellow coarse to fine Sand, and Silt, trace Gravel (USCS: SM)	Medium Dense
2 — —	Percolation Rate = 40 min/in @ Elv. 630	Medium Stiff
3 — —	Light Brown Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles	
4 — —	(USCS: CL)	Medium Stiff
5 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles and boulders	
6 — —	(USCS: CL)	
7 — —		
8 — —		
9 — —		
10 — —	Test Pit Completed at 9.5± Feet	
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

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Fig. 113

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.		STP-4	
LOCATION SEE FIGURE 1		APPROX. ELEV. 631.0±'		INSPECTED BY		JQ	
WATER OBSERVATION		Seepage at 6'10"±		DATE EXCAVATED		3/28/2018	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — —	Light Brown/Yellow coarse to fine Sand, and Silt, trace Gravel (USCS: SM)	Medium Dense
2 — —	Percolation Rate = 30 min/in @ Elev. 629.1	Medium Stiff
3 — —	Light Brown Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles	
4 — —	(USCS: CL)	
5 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles	Medim Stiff
6 — —		
7 — —		to
8 — —		
9 — —		Stiff
10 — —	Test Pit Completed at 9.1± Feet	
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

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Fig. 114

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	STP- 5
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>618'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 3'4"±</u>	DATE EXCAVATED <u>3/22/2018</u>		

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
1 —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : SC/CL)	Medium Stiff
2 —		
3 —	Percolation Rate = 40 min/in @ Elv. 616 Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : SC/CL)	Medium Stiff
4 —		
5 —		
6 —		
7 —		
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Fig. 115

PROJECT NO. 9999	PROJECT Southeast, NY	TEST PIT NO.	STP- 6
LOCATION SEE FIGURE 1	APPROX. ELEV. 613'±	INSPECTED BY	JQ
WATER OBSERVATION Seepage at 8'10"±		DATE EXCAVATED	3/22/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — — 2 — — 3 — —	Light-brown SILT, and coarse to fine Sand, trace Gravel (USCS : SC/CL) Percolation Rate = 15 min/in @ Elv. 610.9	Medium Stiff
4 — — 5 — — 6 — — 7 — — 8 — — 9 — — 10 — —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : SC/CL)	Medium Stiff
11 — — 12 — — 13 — — 14 — —	End of Test Pit at 10.5± Feet	

NOTE:

Fig. 116

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-7
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>616.0±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 6.5±'</u>		DATE EXCAVATED	<u>3/28/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — — 2 — — 3 — —	Light Brown Silt, and coarse to fine Sand, trace Gravel (USCS: CL) Percolation Rate = 40 min/in @ Elv. 614.0	Medium Stiff
4 — — 5 — — 6 — — 7 — — 8 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles (USCS: CL)	Medium Stiff to Stiff
9 — — 10 — — 11 — — 12 — — 13 — — 14 —	Test Pit Completed at 8.5± Feet	

NOTE:

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Fig. 117

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-8
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>619.0±'</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 6±'</u>		DATE EXCAVATED	<u>3/28/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
—	Light Brown/Yellow medium to fine Sand, and Silt, trace Gravel (USCS: SM)	Medium Dense
1 —		
—	Light Brown Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles (USCS: CL)	Medium Stiff
2 —		
—	Percolation Rate = 120 min/in @ Elv. 617.0	
3 —		
—	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occassional cobbles (USCS: CL)	Medium Stiff
4 —		
—		
5 —		
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—	Test Pit Completed at 9± Feet	
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE:

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Fig. 118

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO.	STP-9
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>644.0±</u>		INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 4±'</u>		DATE EXCAVATED		<u>3/28/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — —	Light Brown Silt, some coarse to fine Sand, trace Gravel (USCS: CL)	Medium Stiff
2 — —	Percolation Rate = 40 min/in @ Elv. 642.0	
3 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles	Medium Stiff
4 — —	(USCS: CL)	
5 — —		
6 — —		
7 — —		
8 — —		
9 — —		
10 — —	Test Pit Completed at 9± Feet	
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

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Fig. 119

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO. <u>STP- 10</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>645'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Light seepage at 4'9"±; Heavy at 5'2"±</u>		DATE EXCAVATED <u>3/22/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — — 2 — — 3 — —	Light-brown SILT, and coarse to fine Sand, trace Gravel (USCS : SC/CL) Percolation Rate = 20 min/in @ Elv. 643.0	Medium Stiff
4 — — 5 — — 6 — — 7 — — 8 — — 9 — —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : SC/CL)	Medium Stiff to Stiff
10 — — 11 — — 12 — — 13 — — 14 — —	End of Test Pit at 9.0± Feet	

NOTE:

Fig. 120

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	STP- 11
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>645'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 7'6"±</u>		DATE EXCAVATED	<u>3/22/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	10" Topsoil	
1 — — 2 — —	Light-brown SILT, and coarse to fine Sand, trace Gravel (USCS : SC/CL) Percolation Rate = 15 min/in @ Elv. 643.0	Medium Stiff
3 — — 4 — — 5 — — 6 — — 7 — — 8 — — 9 — —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles (USCS : SC/CL)	Medium Stiff
10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9.0± Feet	

NOTE:

Fig. 121

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-12
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>645.0±'</u>	INSPECTED BY <u>JQ</u>	
WATER OBSERVATION <u>Seepage at 4±'</u>		DATE EXCAVATED <u>3/28/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — —	Light Brown Silt, and coarse to fine Sand, trace Gravel (USCS: CL)	Medium Stiff
2 — —	Percolation Rate = 60 min/in @ Elev. 643.0 Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles (USCS: CL)	Medium Stiff
3 — —		
4 — —		
5 — —		
6 — —		
7 — —		
8 — —		
9 — —	Test Pit Completed at 8.5± Feet	
10 — —		
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

SESI CONSULTING ENGINEERS

Fig. 122

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-13
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>639.0±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 4±'</u>		DATE EXCAVATED	<u>3/28/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — — 2 — —	Light Brown Silt, some coarse to fine Sand, trace Gravel (USCS: CL) Percolation Rate = 30 min/in @ Elev. 637.0	Medium Stiff
3 — — 4 — — 5 — — 6 — — 7 — — 8 — — 9 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles and boulder (USCS: CL)	Medium Stiff
10 — — 11 — — 12 — — 13 — — 14 —	Test Pit Completed at 9± Feet	

NOTE:

SESI CONSULTING ENGINEERS

Fig. 123

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-14
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>639.0±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 6±'</u>		DATE EXCAVATED	<u>3/28/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — —	Light Brown Silt, and coarse to fine Sand, trace Gravel (USCS: CL)	Medium Stiff
2 — —	Percolation Rate = 10 min/in @ Elv. 637.0	Medium Stiff
3 — —	Light Brown Silt, some coarse to fine Sand, trace Gravel (USCS: CL)	
4 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles	Medium Stiff
5 — —	(USCS: CL)	
6 — —		to
7 — —		
8 — —		
9 — —		Stiff
10 — —	Test Pit Completed at 9.25±'	
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

SESI CONSULTING ENGINEERS

Fig. 124

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	STP-15
LOCATION SEE FIGURE 1	APPROX. ELEV. 639.0±'	INSPECTED BY	JQ
WATER OBSERVATION Light seepage at 4.5±'; Heavy seepage at 7±'		DATE EXCAVATED	3/28/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	9" Topsoil	
1 — — 2 — — 3 — —	Light Brown Silt, and coarse to fine Sand, trace Gravel (USCS: CL) Percolation Rate = 2.3 min/in @ Elev. 637.0	Medium Stiff
4 — — 5 — — 6 — — 7 — — 8 — — 9 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles (USCS: CL)	Medium Stiff to Stiff
10 — — 11 — — 12 — — 13 — — 14 — —	Test Pit Completed at 9± Feet	

NOTE:

SESI CONSULTING ENGINEERS

Fig. 125

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-16
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>638.0±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 3±'</u>		DATE EXCAVATED	<u>3/28/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	4" Topsoil	
1 — —	Light Brown Silt, some coarse to fine Sand, trace Gravel (USCS: CL)	Medium Stiff
2 — — 3 — — 4 — — 5 — — 6 — — 7 — — 8 — — 9 — —	Percolation Rate = 15 min/in @ Elv. 636.0 Light Brown mottled Clayey Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles (USCS: CL)	Medium Stiff
10 — — 11 — — 12 — — 13 — — 14 —	Test Pit Completed at 9± Feet	

NOTE:

SESI CONSULTING ENGINEERS

Fig. 126

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP- 17
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>638'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 7'</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — — 2 — — 3 — — 4 — — 5 —	Light-brown SILT, some medium to fine Sand, trace Gravel Percolation Rate = 30 min/in @ Elev. 636.0	Medium Stiff
6 — — 7 — — 8 — — 9 — — 10 —	Light-brown mottled SILT, some medium to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
11 — — 12 — — 13 — — 14 —	End of Test Pit at 10.1 Feet	

NOTE:

Fig. 127

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. STP- 18
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>640'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Seepage at 7'</u>	DATE EXCAVATED <u>3/19/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — —	Light-brown/yellow SILT, and medium to fine Sand, trace Gravel	Medium Stiff
2 — —	Light-brown SILT, some medium to fine Sand, little coarse to fine Gravel Percolation Rate = 17.1 min/in @ Elv. 638.0	Medium Stiff
3 — —		
4 — —		
5 — —	Light-brown mottled SILT, some medium to fine Sand, little coarse to fine Gravel, with occasional cobbles and boulder	Medium Stiff
6 — —		
7 — —		
8 — —		
9 — —		
10 — —	End of Test Pit at 10.2 Feet	
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

Fig. 128

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP- 19
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>649'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION	<u>8'+</u>	DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — — 2 —	Light-brown/yellow coarse to fine Sand, some Silt, little coarse to fine Gravel, with occasional cobbles and boulders	Medium Dense
3 — — 4 —	Light-brown SILT, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles and boulders Percolation Rate = 17.1 min/in @ Elv. 647.0	Medium Stiff
5 — — 6 — — 7 — — 8 — — 9 — — 10 —	Light-brown coarse to fine Sand, and mottled Silt, little coarse to fine Gravel, with occasional cobbles and boulders	Medium Stiff
11 — — 12 — — 13 — — 14 —	End of Test Pit at 10.5 Feet	

NOTE:

Fig. 129

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO. STP- 20
LOCATION SEE FIGURE 1	APPROX. ELEV. 648'±	INSPECTED BY JQ
WATER OBSERVATION Seepage at 8'5"		DATE EXCAVATED 3/19/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	6" Topsoil	
1 —	Light-brown/yellow medium to fine Sand, and Silt, trace Gravel Percolation Rate = 30 min/in @ Elv. 646.0	Medium Dense
2 —		
3 —		
4 —	Light-brown SILT, and medium to fine Sand, little coarse to fine Gravel	Medium Dense
5 —		
6 —	Light-brown mottled Silt, some medium to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
7 —		
8 —		
9 —		
10 —	End of Test Pit at 10.0 Feet	
11 —		
12 —		
13 —		
14 —		

NOTE:

Fig. 130

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP- 21
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>638'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — 1 —	12" Topsoil	
2 — — 3 —	Light-brown/yellow coarse to fine Sand, and Silt, trace Gravel	Medium Dense
4 — — 5 —	Light-brown SILT, and medium to fine Sand, little coarse to fine Gravel Percolation Rate = 10 min/in @ Elv. 636.0	Medium Stiff
6 — — 7 — — 8 — — 9 —	Light-brown mottled Silt, some medium to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff to Stiff
10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9.5 Feet	

NOTE:

Fig. 131

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>STP- 22</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>646'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Seepage at 9'±</u>		DATE EXCAVATED <u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light-brown SILT, some coarse to fine Sand, trace Gravel with occasional cobbles Percolation Rate = 30 min/in @ Elv. 644.0	Medium Stiff
2 —		
3 —		
4 —		
5 —	Light-brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	End of Test Pit at 10.5 Feet	
12 —		
13 —		
14 —		

NOTE:

Fig. 132

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP- 23
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>644'±</u>	INSPECTED BY <u>JQ</u>	
WATER OBSERVATION <u>Seepage at 8'±</u>		DATE EXCAVATED <u>3/19/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light-brown/yellow SILT, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
2 —	Light-brown SILT, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
3 —	Percolation Rate = 15 min/in @ Elv. 642.0	
4 —	Light-brown mottled SILT, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles and boulders	Medium Stiff
5 —		
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	End of Test Pit at 10.3 Feet	
12 —		
13 —		
14 —		

NOTE:

Fig. 133

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>STP- 24</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>649'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Seepage at 7'4"±</u>		DATE EXCAVATED <u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — —	Light-brown/yellow SILT, some medium to fine Sand, trace Gravel	Medium Stiff
2 — —	Light-brown SILT, some medium to fine Sand, little coarse to fine Gravel, Percolation Rate = 10 min/in @ Elv. 647.0	Medium Stiff
3 — —	Light-brown mottled SILT, some medium to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
4 — —		
5 — —		
6 — —		
7 — —		
8 — —		
9 — —		
10 — —		
11 — —	End of Test Pit at 10.2 Feet	
12 — —		
13 — —		
14 — —		

NOTE:

Fig. 134

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	STP- 25
LOCATION SEE FIGURE 1	APPROX. ELEV. 657'±	INSPECTED BY	JQ
WATER OBSERVATION Seepage at 5'6"±	DATE EXCAVATED 3/19/2018		

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	8" Topsoil	
1 —	Light-brown/yellow coarse to fine SAND, and Silt, little coarse to fine Gravel	Medium Dense
2 —	Percolation Rate = 40 min/in @ Elv. 655.0	
3 —	Light-brown SILT, some coarse to fine Sand, little coarse to fine Gravel, with occassional cobbles	Medium Stiff
4 —		
5 —	Light-brown mottled SILT, some coarse to fine Sand, little coarse to fine Gravel, with occassional cobbles	Medium Stiff
6 —		
7 —		
8 —	End of Test Pit at 8.0 Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Fig. 135

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP- 26
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 6.5'±</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	4" Topsoil	
1 — —	Light-brown SILT, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
2 — —	Percolation Rate = 13.3 min/in @ Elv. 653.0 Brown coarse to fine SAND, some Silt, trace Gravel	Medium Dense
3 — —		
4 — —		
5 — —		
6 — —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles	Medium Stiff
7 — —		
8 — —	End of Test Pit at 8.0 Feet	
9 — —		
10 — —		
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

Fig. 136

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>STP- 27</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>652'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Seepage at 8'±</u>		DATE EXCAVATED <u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occassional cobbles Percolation Rate = 24 min/in @ Elv. 650.0	Medium Stiff
2 —		
3 —		
4 —		
5 —	Light-brown mottled SILT, some coarse to fine Sand, trace Gravel, with occassional cobbles	Medium Stiff
6 —		
7 —		
8 —		
9 —	End of Test Pit at 9.0 Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Fig. 137

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>STP- 28</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>648'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Seepage at 8'±</u>		DATE EXCAVATED <u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — —	Light-brown/yellow coarse to fine SAND, and Silt, trace Gravel	Medium Dense
2 — —	Percolation Rate = 7.2 min/in @ Elev. 646.0 Light-brown SILT, some coarse to fine Sand, little coarse to fine Gravel, with occassional cobbles	Medium Stiff
3 — —		
4 — —		
5 — —	Light-brown mottled SILT, some coarse to fine Sand, little coarse to fine Gravel, with occassional cobbles	Medium Stiff
6 — —		
7 — —		
8 — —	End of Test Pit at 8.5 Feet	
9 — —		
10 — —		
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

Fig. 138

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP- 29
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>657'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 7'±</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles	Medium Dense
2 —	Percolation Rate = 10 min/in @ Elv. 655.0	
3 —	Brown/gray mottled SILT, some coarse to fine Sand, trace Gravel	Medium Stiff
4 —		
5 —		
6 —		
7 —		
8 —		
9 —	End of Test Pit at 8.5 Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Fig. 139

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>STP- 30</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655'±</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Light seepage at 5'5"±; Heavy at 6'±</u>		DATE EXCAVATED <u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	8" Topsoil	
1 — —	Light-brown/yellow coarse to fine SAND, and Silt, trace Gravel	Medium Dense
2 — —	Percolation Rate = 30 min/in @ Elv. 653.0 Light-brown SILT, some coarse to fine Sand, trace Gravel, with occasional cobbles	Medium Stiff
3 — —	Light-brown mottled SILT, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles	Medium Stiff
4 — —		
5 — —		
6 — —		
7 — —		
8 — —		
9 — —	End of Test Pit at 9.0 Feet	
10 — —		
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

Fig. 140

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>STP- 31</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>652'+</u>	INSPECTED BY <u>JQ</u>
WATER OBSERVATION <u>Seepage at 7'±</u>	DATE EXCAVATED <u>3/19/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light-brown/yellow SILT, some coarse to fine Sand, trace Gravel, with occassional cobbles Percolation Rate = 10.9 min/in @ Elv. 650.0	Medium Stiff
2 —		
3 —		
4 —	Light-brown mottled SILT, some coarse to fine Sand, little coarse to fine Gravel, with occassional cobbles	Medium Stiff
5 —		
6 —		
7 —		
8 —		
9 —	End of Test Pit at 9.0 Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

Fig. 141

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP- 32
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>647'±</u>	INSPECTED BY	<u>JQ</u>
WATER OBSERVATION <u>Seepage at 6.5'±</u>		DATE EXCAVATED	<u>3/19/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — —	8" Topsoil	
1 — — —	Light-brown/yellow coarse to fine SAND, and Silt, trace Gravel	Medium Dense
2 — — —	Percolation Rate = 12 min/in @ Elv. 645.0	
3 — — —	Light-brown SILT, some coarse to fine Sand, trace Gravel, with occassional cobbles	Medium Stiff
4 — — —	Light-brown mottled SILT, some coarse to fine Sand, little coarse to fine Gravel, with occassional cobbles	Medium Stiff
5 — — —		
6 — — —		
7 — — —		
8 — — —	End of Test Pit at 8.0 Feet	
9 — — —		
10 — — —		
11 — — —		
12 — — —		
13 — — —		
14 — — —		

NOTE:

Fig. 142

Definitions of Identification Terms for Granular Soils

Our experience has shown that the following field identification system, which is patterned somewhat after the Burmister System, permits a more detailed breakdown of the components within a soil sample than other identification systems allow. It also compels the supervising technician to examine a sample quite closely in order to accurately describe the components within the sample.

Principal Component (All Capitalized)

- GRAVEL More than 50% of the sample by weight is Gravel
- SAND More than 50% of the sample by weight is Sand
- SILT More than 50% of the sample by weight is Silt

Minor Component (Proper Case)

- Gravel Less than 50% of the sample by weight is Gravel
- Sand Less than 50% of the sample by weight is Sand
- Silt Less than 50% of the sample by weight is Silt

Proportion Terms

- and Component ranges from 35% to 50% of the sample by weight
- some Component ranges from 20% to 35% of the sample by weight
- little Component ranges from 10% to 20% of the sample by weight
- trace Component ranges from 0% to 10% of the sample by weight

Size of Soil Components

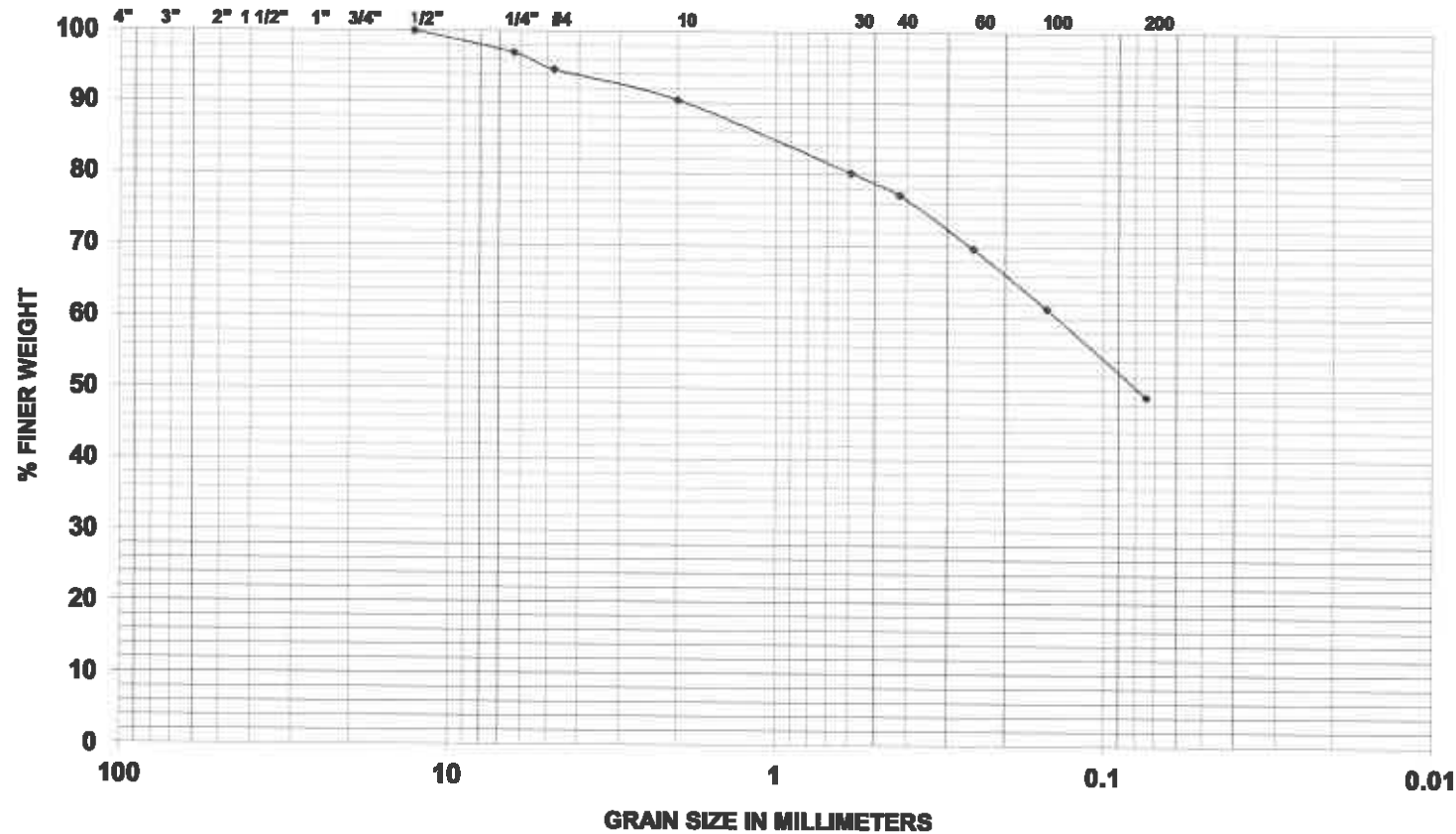
- Gravel
 - Coarse gravel ranges from 3 inches to 1 inch
 - Medium gravel ranges from 1 inch to 3/8 inch
 - Fine gravel ranges from 3/8 inch to No. 10 sieve
- Sand
 - Coarse sand ranges from No. 10 sieve to No. 30 sieve
 - Medium sand ranges from No. 30 sieve to No. 60 sieve
 - Fine sand ranges from No. 60 sieve to No. 200 sieve
- Silt
 - Material which passes the No. 200 sieve
- Clay
 - Material which passes the No. 200 sieve
 - Exhibits varying degrees of plasticity

Gradation Designations

- | | |
|--------------------------|---|
| • Coarse to fine (c-f) | All fractions greater than 10% of the component |
| • Coarse to medium (c-m) | Less than 10% of the component is fine |
| • Medium to fine (m-f) | Less than 10% of the component is coarse |
| • Coarse (c) | Less than 10% of the component is medium and fine |
| • Medium (m) | Less than 10% of the component is coarse and fine |
| • Fine (f) | Less than 10% of the component is coarse and medium |

GRAVEL			SAND			SILT OR CLAY
COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	
	3/4"		2mm		.075mm	

U.S. STANDARD SIEVE SIZES



Symbol	◆	■	▲
Boring	SB-6		
Sample	S-2		
Depth	2-4'		
% +3"			
% Gravel	9.63		
% Sand	41.37		
% Fines	49.00		
% Silt			
% Clay			
Sp.G			
LL			
PL			
PI			
W (%)	13.1		
Particle Size Sieve #	Percent Finer Than		
3"	-		
1 1/2"	-		
1"	-		
3/4"	-		
1/2"	100.00		
1/4"	96.95		
#4	94.57		
#10	90.37		
#30	80.17		
#40	77.12		
#60	69.69		
#100	61.30		
#200	49.00		

PARTICLE SIZE DISTRIBUTION

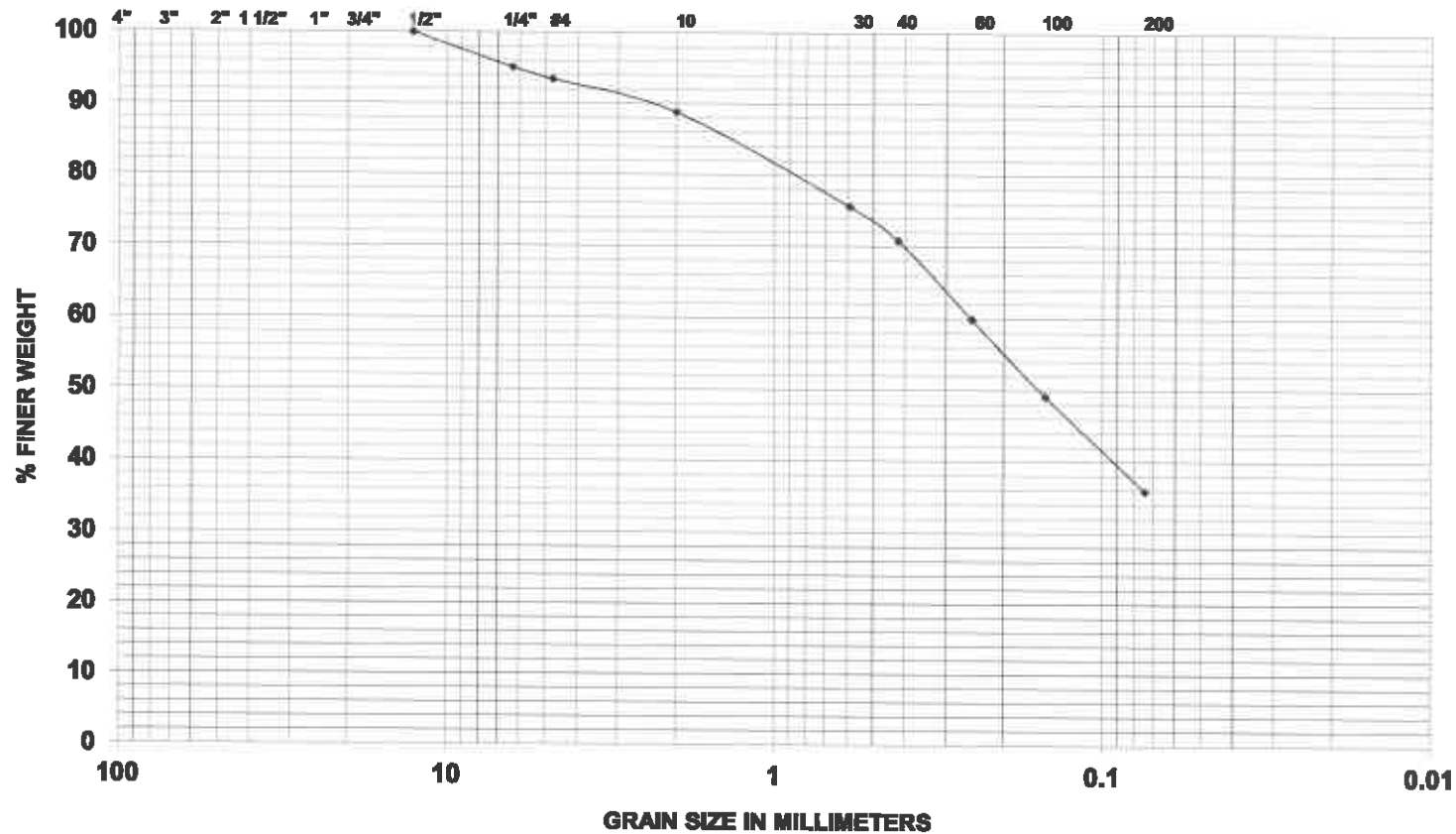
CLIENT:
PROJECT: Proposed Logistics Center
DATE: April 6, 2018
JOB NO. 9999 FIGURE No 144

SYMBOL	DESCRIPTION AND REMARKS
◆	Light Brown Clayey Silt, and coarse to fine Sand, trace fine Gravel
■	
▲	

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GRAVEL			SAND			SILT OR CLAY
COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	
	3/4"		2mm		.075mm	

U.S. STANDARD SIEVE SIZES



Symbol	◆	■	▲
Boring	SB-15		
Sample	S-4		
Depth	2-4'		
% +3"			
% Gravel	11.22		
% Sand	52.90		
% Fines	35.88		
% Silt			
% Clay			
Sp.G			
LL			
PL			
PI			
W (%)	14.2		

Particle Size Sieve #	Percent Finer Than
3"	-
1 1/2"	-
1"	-
3/4"	-
1/2"	100.00
1/4"	95.07
4	93.40
10	88.78
30	75.58
40	70.80
60	58.82
100	48.09
200	35.88

PARTICLE SIZE DISTRIBUTION

CLIENT:	
PROJECT:	Proposed Logistics Center
DATE:	April 6, 2018
JOB NO.	9999
FIGURE No	145

SYMBOL	DESCRIPTION AND REMARKS
◆	Light Brown coarse to fine SAND, and Silt: little medium to fine Gravel
■	
▲	

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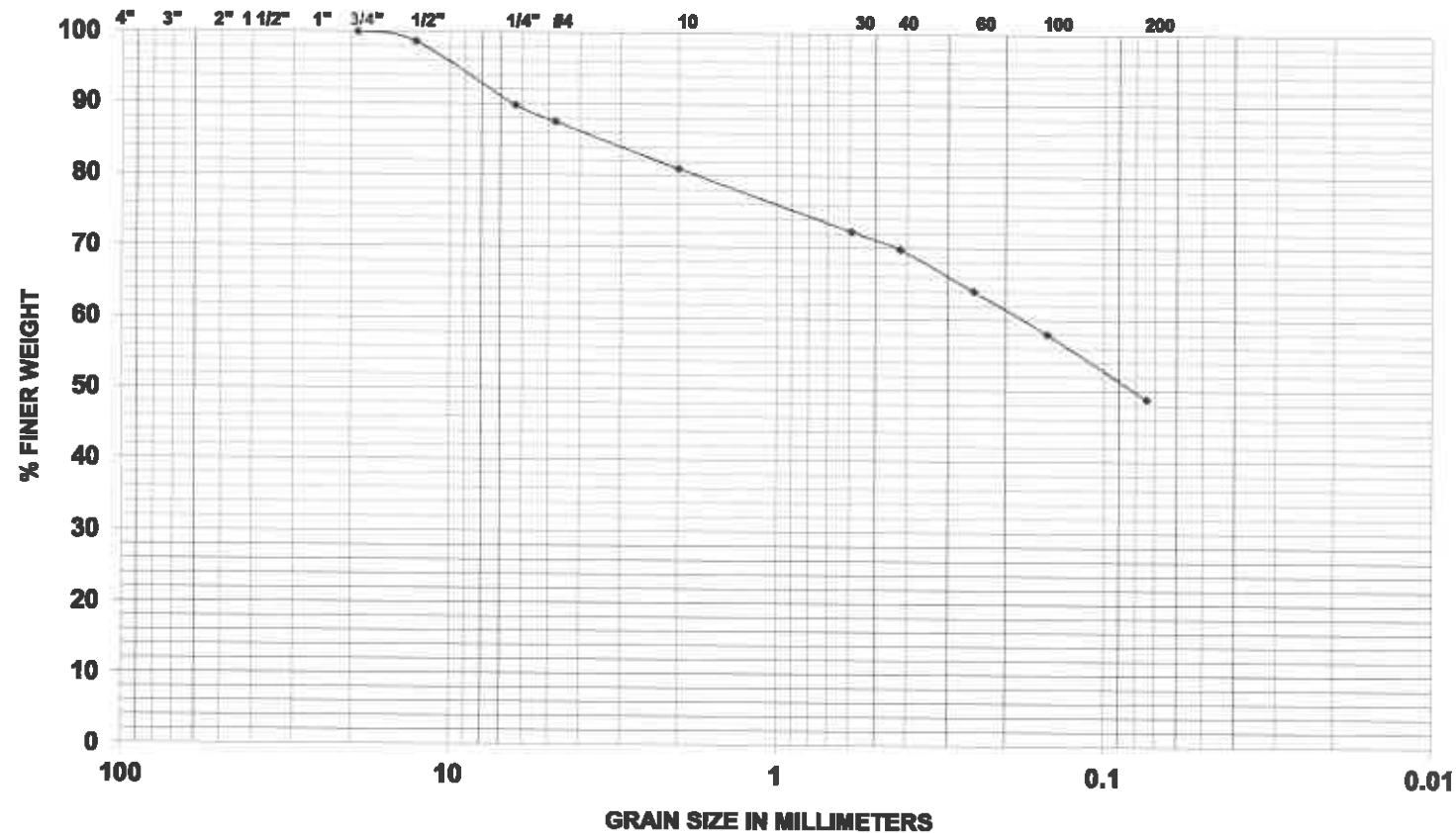
GRAVEL			SAND			SILT OR CLAY
COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	

3/4"

2mm

.075mm

U.S. STANDARD SIEVE SIZES



Symbol	◆	■	▲
Boring	SB-16		
Sample	S-2		
Depth	5-7'		
% +3"			
% Gravel	19.01		
% Sand	32.17		
% Fines	48.82		
% Silt			
% Clay			
Sp.G			
LL			
PL			
PI			
W (%)	9.1		
Particle Size Sieve #	Percent Finer Than		
3"	-		
1 1/2"	-		
1"	-		
3/4"	100.00		
1/2"	98.67		
1/4"	89.79		
#4	87.50		
10	80.99		
30	72.26		
40	69.82		
60	63.98		
100	57.99		
200	48.82		

PARTICLE SIZE DISTRIBUTION

CLIENT:

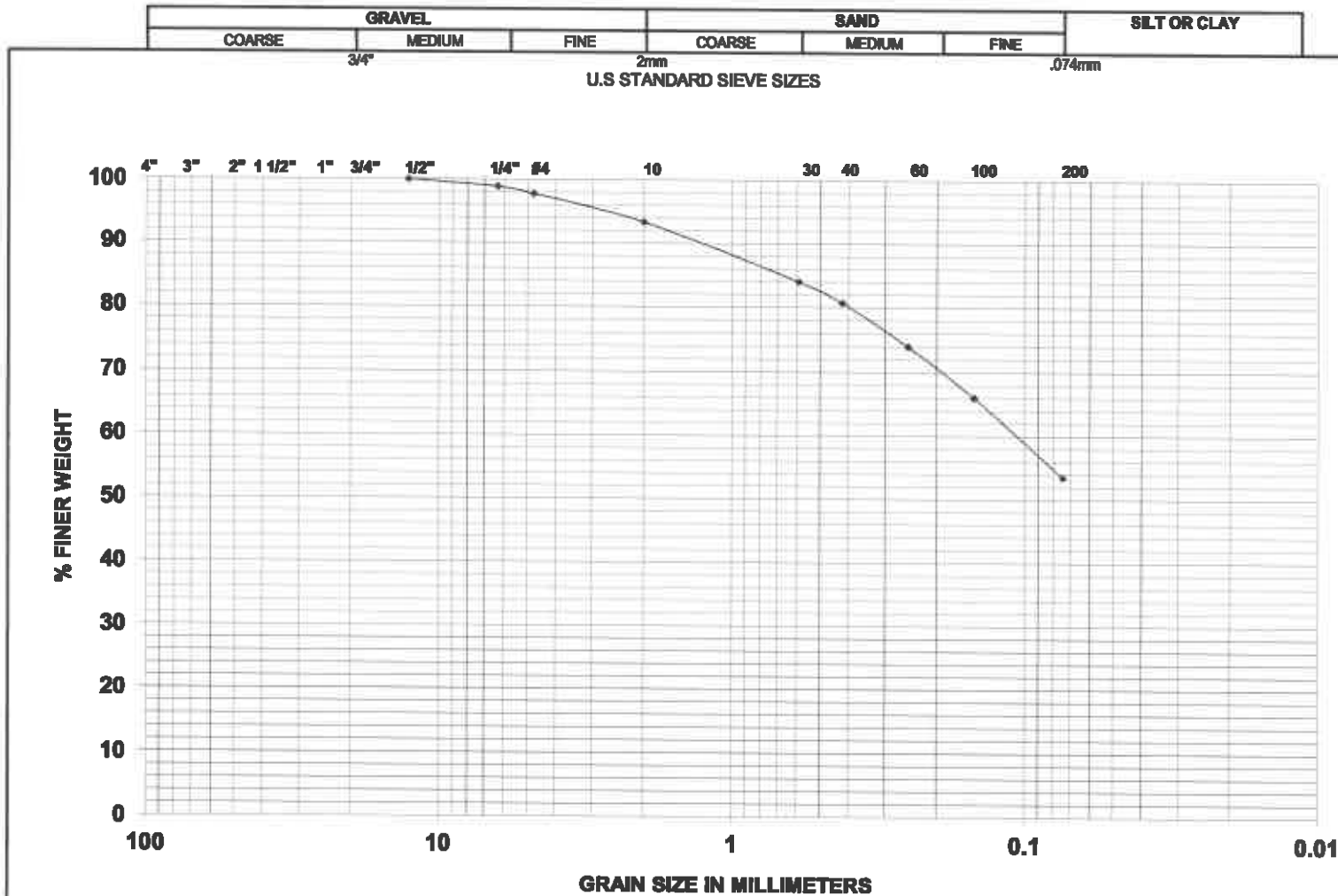
PROJECT: Proposed Logistics Center

DATE: April 6, 2018

JOB NO. 9999 FIGURE No 146

SYMBOL	DESCRIPTION AND REMARKS
◆	Light Brown Silt, some coarse to fine Sand, little medium to fine Gravel
■	
▲	

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Symbol	◆	■	▲
Boring	TP-8		
Sample	S-1		
Depth	0.3-2.5'		
% +3"			
% Gravel	8.69		
% Sand	39.84		
% Fines	53.47		
% Silt			
% Clay			
Sp.G			
LL			
PL			
PI			
W (%)	15%		

Particle Size Sieve #	Percent Finer Than		
3"			
1 1/2"			
1"			
3/4"			
1/2"	100.00		
1/4"	98.87		
#4	97.78		
#10	93.31		
#30	83.99		
#40	80.71		
#60	73.95		
#100	66.05		
#200	53.47		

PARTICLE SIZE DISTRIBUTION

CLIENT: Putnam Seabury Partners, LP
PROJECT: PNLC
DATE: March 6, 2018
JOB NO. 9999 FIGURE No 147

SYMBOL	DESCRIPTION AND REMARKS
◆	Light Brown SILT, and coarse to fine Sand, trace Gravel
■	
▲	

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CONSULTING
ENGINEERS

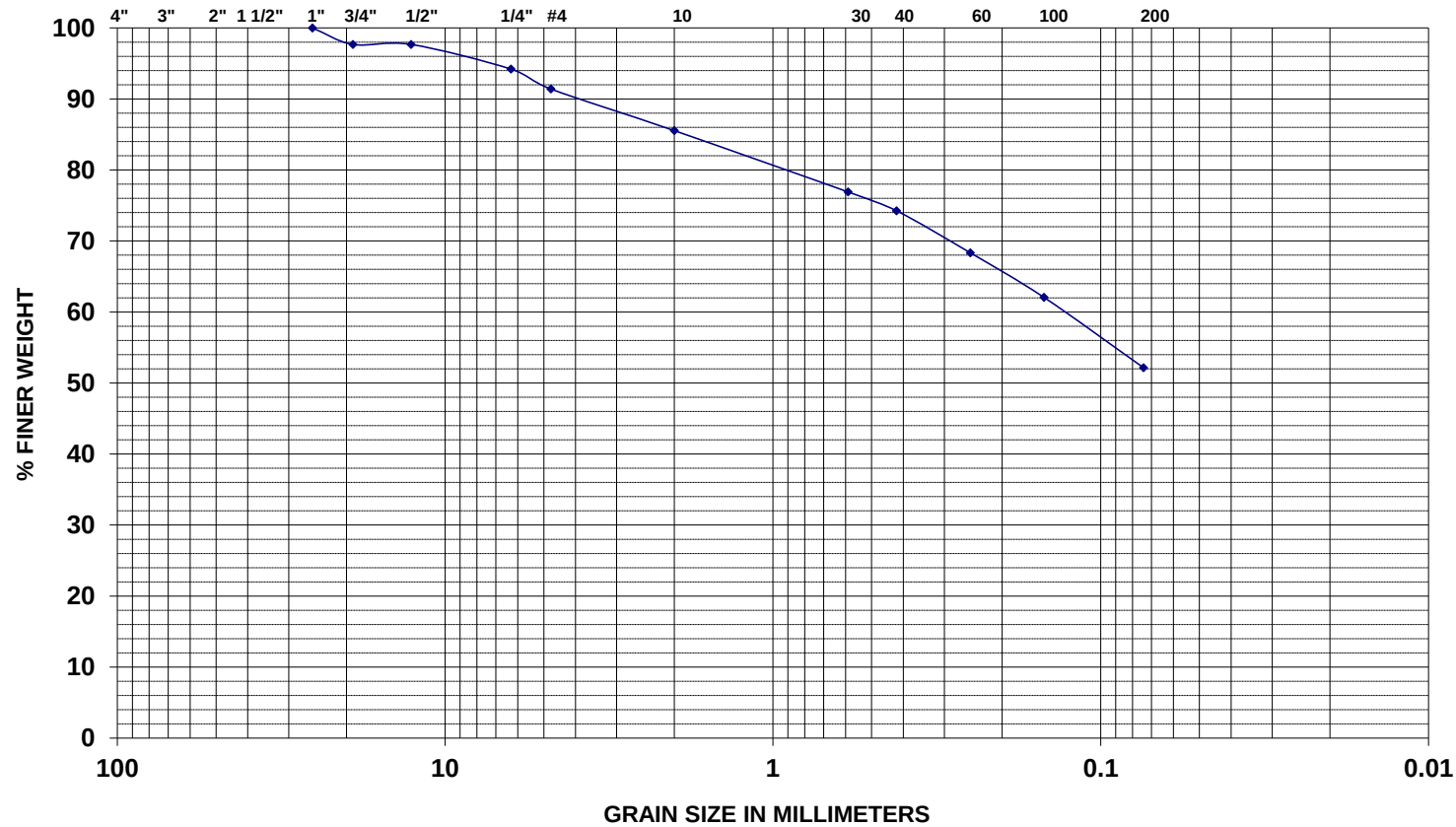
GRAVEL			SAND			SILT OR CLAY
COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE	

3/4"

2mm

.074mm

U.S. STANDARD SIEVE SIZES



Symbol	◆		
Boring	TP-A5		
Sample			
Depth	5.5-8'		
% +3"			
% Gravel	14.46		
% Sand	33.39		
% Fines	52.15		
% Silt			
% Clay			
Sp.G			
LL			
PL			
PI			
W (%)	11.1		
Particle Size Sieve #	Percent Finer Than		
3"	-		
1 1/2"	-		
1"	100.00		
3/4"	97.67		
1/2"	97.67		
1/4"	94.20		
4	91.40		
10	85.54		
30	76.90		
40	74.26		
60	68.33		
100	62.06		
200	52.15		

PARTICLE SIZE DISTRIBUTION

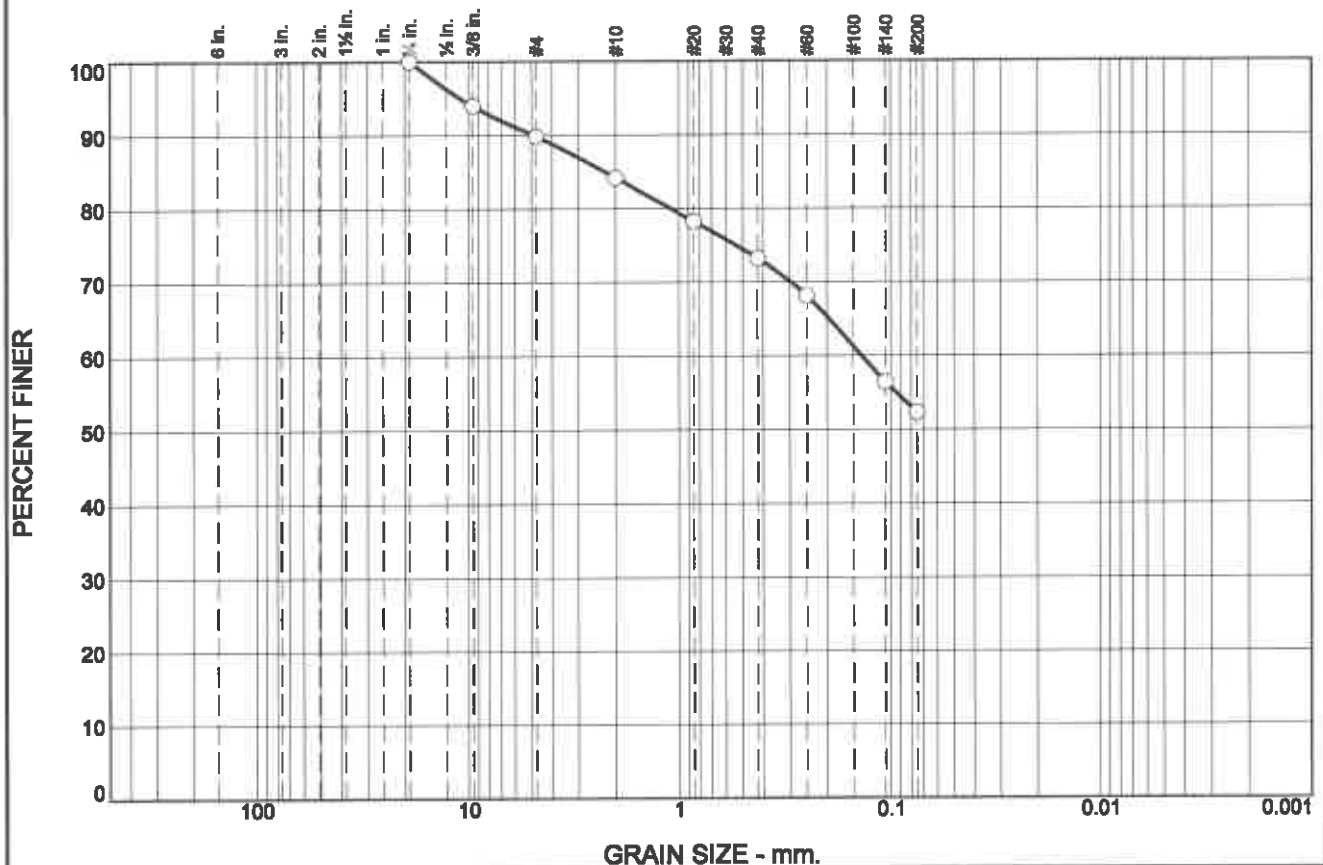
CLIENT: Putnam Seabury Partners, LP
PROJECT: Northeast Interstate Logistics
DATE: November 16, 2019
JOB NO. 9999 FIGURE No 148

SYMBOL	DESCRIPTION AND REMARKS
◆	Brown clayey SILT, some coarse to fine Sand, little fine Gravel

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APPENDIX

GRAIN SIZE DISTRIBUTION REPORT



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	10.2	5.6	11.0	20.9	52.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.75	100.0		
.375	94.0		
#4	89.8		
#10	84.2		
#20	78.2		
#40	73.2		
#60	68.2		
#140	56.5		
#200	52.3		

(no specification provided)

Material Description

Light gray-brown sandy lean clay

Atterberg Limits

PL= 16 LL= 25 PI= 9

Coefficients

D₉₀= 4.9026 D₈₅= 2.2459 D₆₀= 0.1373
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

Classification

USCS= CL AASHTO= A-4(2)

Remarks

Sample washed on #200 sieve
Moisture content=12.9%

Source of Sample: TP-8
Sample Number: S-2

Depth: 2.5-12 ft.

Date: 3-16-2018

SKYLANDS TESTING, LLC

Sparta, NJ

Client: SESI Consulting Engineers
Project: Southeast, NY

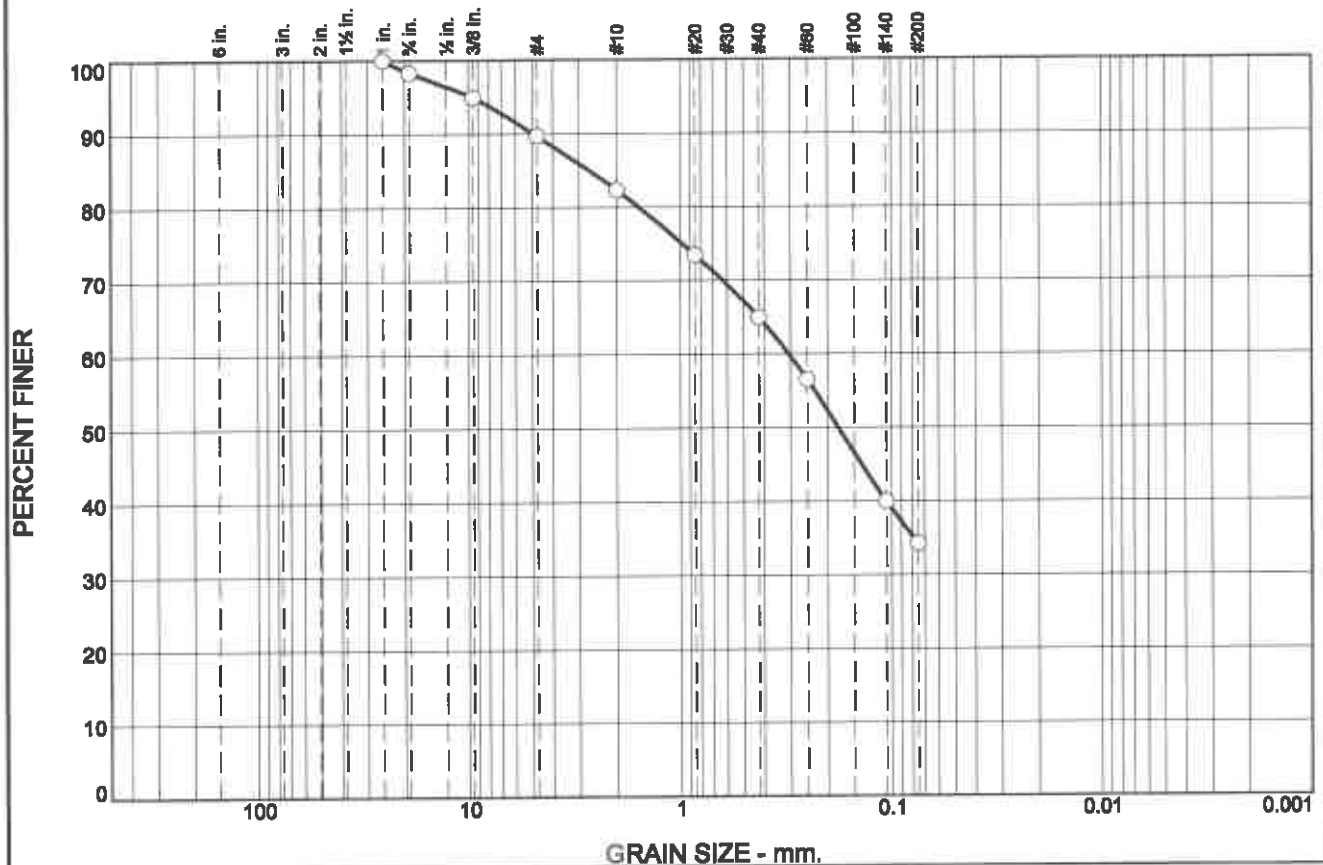
Project No: 18-011

Figure

Tested By: EJS, AB

Checked By: VRS

GRAIN SIZE DISTRIBUTION REPORT



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	1.7	8.6	7.4	17.3	30.8	34.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1	100.0		
.75	98.3		
.375	94.9		
#4	89.7		
#10	82.3		
#20	73.5		
#40	65.0		
#60	56.5		
#140	40.0		
#200	34.2		

(no specification provided)

Material Description

Brown silty sand; w/ trace(-) roots

PL= NP Atterberg Limits LL= PI=

Coefficients

D₉₀= 4.9396 D₈₅= 2.6965 D₆₀= 0.3054

D₅₀= 0.1781 D₃₀= D₁₅=

D₁₀= C_u= C_c=

Classification

USCS= SM AASHTO=

Remarks

Sample washed on #200 sieve
Moisture content=13.8%

Source of Sample: TP-15
Sample Number: S-1

Depth: 1-3 ft.

Date: 3-16-2018

SKYLANDS TESTING, LLC

Client: SESI Consulting Engineers

Project: Southeast, NY

Sparta, NJ

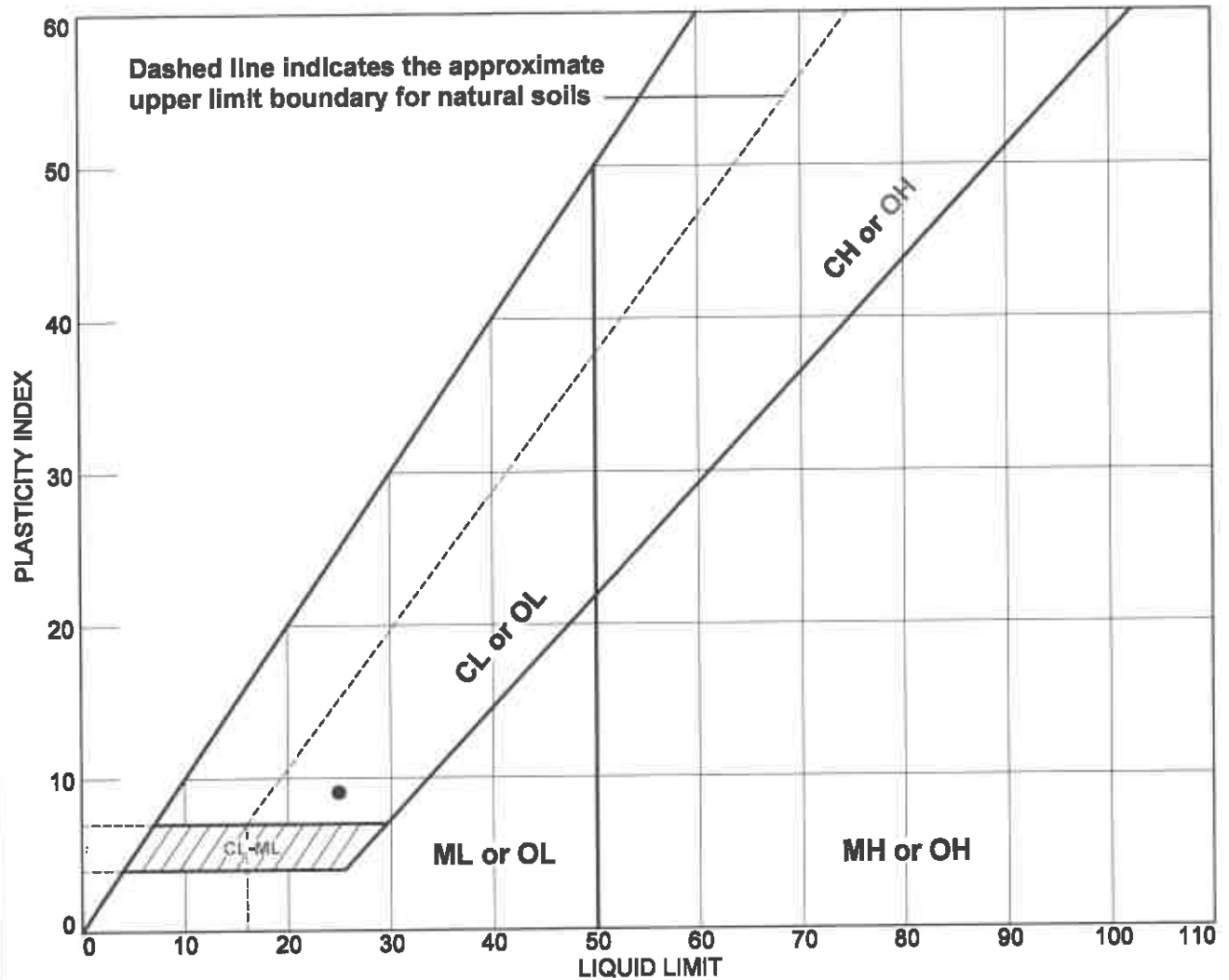
Project No: 18-011

Figure

Tested By: EJS, AB

Checked By: VRS

ATTERBERG LIMITS REPORT



SOIL DATA								
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	TP-8	S-2 ¹	2.4-12 ft.	12.9	16	25	9	CL
■	TP-15	S-1 ¹	1-3 ft.	13.8	NP			SM

Notes: 1 - sample washed on #40

SKYLANDS TESTING, LLC

Sparta, NJ

Client: SESI Consulting Engineers
Project: Southeast, NY

Project No.: 18-011

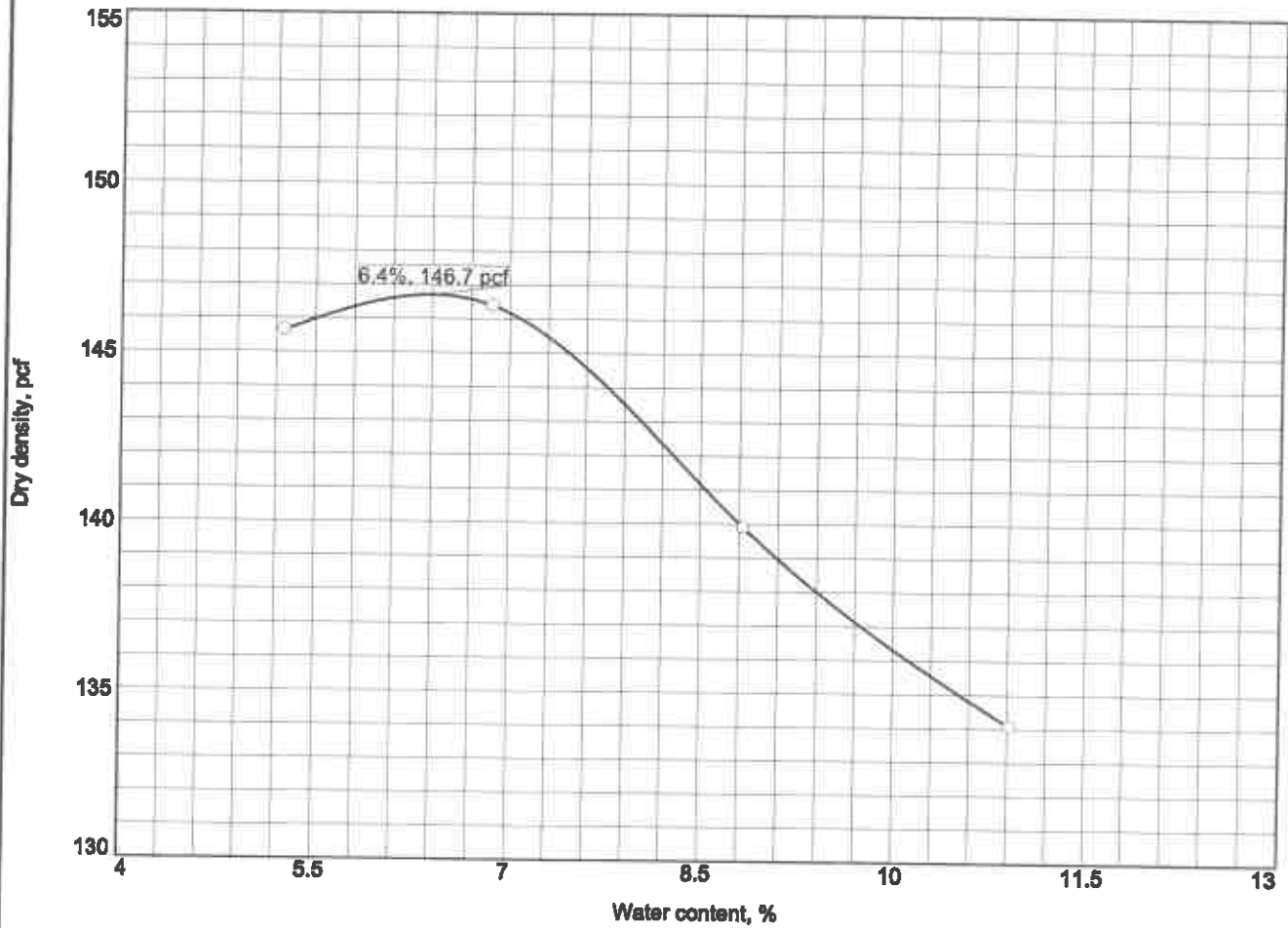
Date: 3-16-2018

Figure

Tested By: EJS

Checked By: VRS

COMPACTION TEST REPORT



Test specification: ASTM D 1557-12 Method B Modified
ASTM D4718-15 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/8 In.	% < No.200
	USCS	AASHTO						
				2.77			22	

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 146.7 pcf	140.7 pcf	Olive cmf Sand little, of Gravel, trace Silt & Clay (visual)
Optimum moisture = 6.4 %	6.4 %	

Project No. 892 Client: SESI Project: Proposed Logistic Center SESI Job#09999 Phase 2 Location: Pugsley Road (S-1)	Remarks: 5-1-18 SG Assumed
RSA Geolab Union, New Jersey	

Figure

Tested By: MF

Checked By: KP

RSA GEOLAB

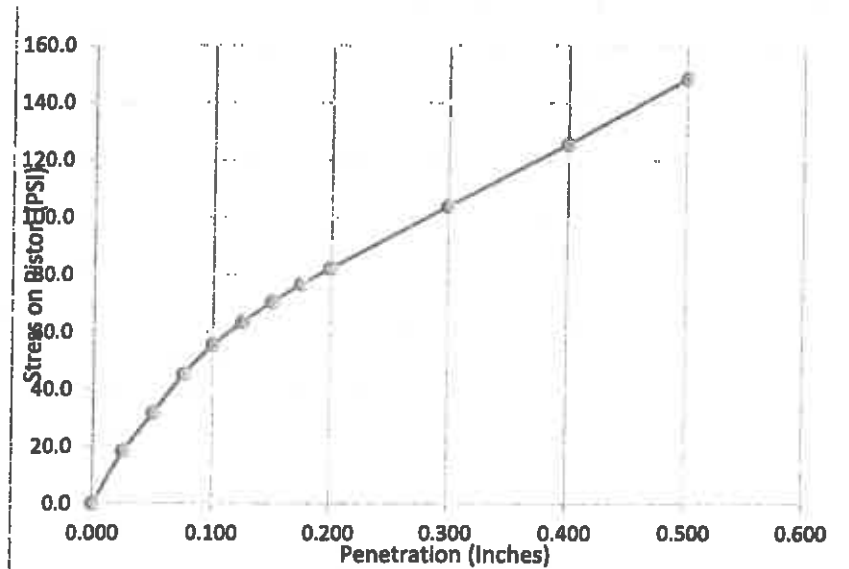
CALIFORNIA BEARING RATIO

Project: Propose Logistics Center Project No.: 892
 SESI Job No. 09999 Phase 2 Lab Log #: 18-086
 Client: SESI Consulting Engineers Date: 5-1-18
 Sample: Pugsley Road (S-1) Blows/Layer: 10

<u>Moisture Content</u>		Dry Density: 126.2 pcf (initial)
Initial: 6.6 %		CBR Soaked Yes
Final: 10.8 %		Soak Period 96 hrs.
Final (Top 1"): 9.7 %		Surcharge W 10 lbs.
		Swell: 0.27 %

Rate of Penetration: 0.05 in./min.

Penetration (inches)	Load lbs.	Corrected Load (lbs)	Stress (psi)	C.B. Ratio
0.000	-8.3	0.0	0.0	
0.025	46.3	54.6	18.3	
0.050	86.2	94.5	31.6	
0.075	126.8	135.1	45.2	
0.100	157.1	165.4	55.4	5.54
0.125	181.5	189.8	63.6	
0.150	202.2	210.5	70.5	
0.175	221.0	229.3	76.8	
0.200	237.2	245.5	82.2	5.48
0.300	302.0	310.3	103.9	
0.400	367.0	375.3	125.7	
0.500	435.4	443.7	148.6	



Tested By: EE Entered By: KH Checked By: KP

EM\NY-GL\CBR\SESI-pugsley10

RSA GEOLAB

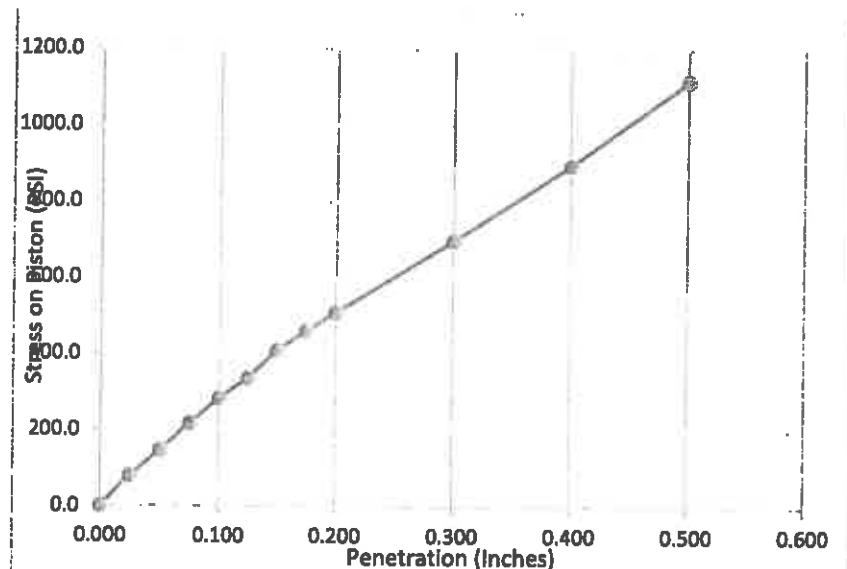
CALIFORNIA BEARING RATIO

Project: Propose Logistics Center Project No.: 892
 SESI Job No. 09999 Phase 2 Lab Log #: 18-086
 Client: SESI Consulting Engineers Date: 5-1-18
 Sample: Pugsley Road (S-1) Blows/Layer: 25

Moisture Content		Dry Density: 135.3 pcf (initial)
Initial:	6.6 %	CBR Soaked: Yes
Final:	8.4 %	Soak Period 96 hrs.
Initial (Top 1"):	8.1 %	Surcharge W: 10 lbs.
		Swell: 0.04 %

Rate of Penetration: 0.05 in./min.

Penetration (inches)	Load lbs.	Corrected Load (lbs)	Stress (psi)	C.B. Ratio
0.000	-8.3	0.0	0.0	
0.025	228.6	236.9	79.3	
0.050	429.6	437.9	146.6	
0.075	642.6	650.9	217.9	
0.100	836.6	844.9	282.9	28.29
0.125	995.6	1003.9	336.1	
0.150	1211.0	1219.3	408.3	
0.175	1370.0	1378.3	461.5	
0.200	1510.0	1518.3	508.4	33.89
0.300	2074.0	2082.3	697.2	
0.400	2665.0	2673.3	895.1	
0.500	3329.0	3337.3	1117.5	



Tested By: EE Entered By: KH Checked By: KP

EM\NY-GL\CBR\SESI-pugsley25

RSA GEOLAB

CALIFORNIA BEARING RATIO

Project: Propose Logistics Center
SESI Job No. 09999 Phase 2

Project No.: 892
Lab Log #: 18-086

Client: SESI Consulting Engineers

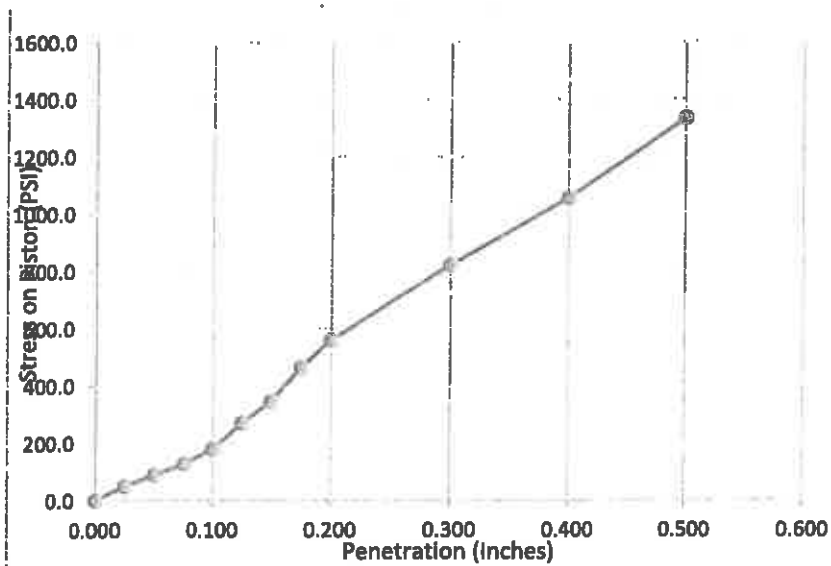
Date: 5-1-18

Sample: Pugsley Road (S-1) Blows/Layer: 56

<u>Moisture Content</u>		Dry Density: 138.9 pcf (initial)
Initial: 6.6 %		CBR Soaked' Yes
Final: 9.6 %		Soak Period 96 hrs.
inal (Top 1"): 7.9 %		Surcharge W 10 lbs.
		Swell: 0.03 %

Rate of Penetration: 0.05 in./min.

Penetration (inches)	Load lbs.	Corrected Load (lbs)	Stress (psi)	C.B. Ratio
0.000	-8.3	0.0	0.0	
0.025	139.0	147.3	49.3	
0.050	255.0	263.3	88.2	
0.075	375.0	383.3	128.3	
0.100	525.0	533.3	178.6	17.86
0.125	796.0	804.3	269.3	
0.150	1022.0	1030.3	345.0	
0.175	1380.0	1388.3	464.9	
0.200	1663.0	1671.3	559.6	37.31
0.300	2445.0	2453.3	821.5	
0.400	3146.0	3154.3	1056.2	
0.500	3975.0	3983.3	1333.8	



Tested By: EE

Entered By: KH

Checked By: KP

EMNY-GL\CBR\SESI-pugsley56

RSA Geolab
Expansion Index of Soils
ASTM D4829

Project: Proposed Logistics Center
SESI Job No. 09999 Phase 2
Client: SESI Consulting Engineers
Sample: TP-16

Proj. No. 892
Date: 5-1-18

Initial Moisture:	<u>8.0</u> %	Ring Wt:	<u>204.94</u> gms.
Initial Wet Wt:	<u>174.68</u> gms.	Initial Ht:	<u>1.000</u> in
Initial Dry Unit Wt:	<u>127.87</u> pcf	Specific Gravity:	<u>2.7</u> (assumed)
Initial Saturation:	<u>51.35</u> %	Final Wt:	<u>182.11</u> gms
		Dry Wt:	<u>164.77</u> gms

Expansion Test Data

Initial Dial Reading:	<u>0.000</u> mm	Final Moisture:	<u>10.5</u> %
Final Dial Reading:	<u>0.548</u> mm		

Expansion Index (EI): 22

Tested by: EE **Entered by:** KH **Checked by:** KP

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-20A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>625 ±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 7' ±</u>		DATE EXCAVATED <u>10/29/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
— 1 — —	Light brown SILT, and coarse to fine Sand, trace Gravel with Cobbles	Medium Stiff
2 — — 3 — — 4 — — 5 —	Brown Clayey Silt, and coarse to fine Sand, little coarse to fine Gravel with Cobbles and Boulders Infiltration Rate at el. 622 = 9 in/hr	Medium Stiff
— 6 — — 7 — — 8 — — 9 —	... Same Mottled (Observed decomposed Mica Schist)	Medium Stiff to Stiff
— 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9 ± Feet	

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PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-27
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>632 ±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>10/29/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2 inch Topsoil	
—	Brown coarse to fine Sand, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
1 —		
—		
2 —		
—		
3 —	Infiltration Rate at el. 629 = 15.0 in/hr	
—		
4 —	Same... Mottled Silt	Medium Dense
—		
5 —		
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—	End of Test Pit at 10 ± Feet	
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999PROJECT Prop. Logistics Center

TEST PIT NO.

TP-27A

LOCATION SEE FIGURE 1APPROX. ELEV. 634 ±INSPECTED BY RR

WATER OBSERVATION

Not EncounteredDATE EXCAVATED 10/29/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2 inch Topsoil	
—		
1 —	Brown coarse to fine Sand, and Silt, little coars to fine Gravel with occasional Cobbles and Boulders	Medium Dense
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —	Infiltration Rate at el. 629.5 = 15.0 in/hr	
—		
6 —	Same... Mottled SILT	Medium Stiff
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —	End of Test Pit at 10 ± Feet	
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-34A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>600 ±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Seepage at 9' ±</u>		DATE EXCAVATED	<u>10/31/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2 inch Topsoil	
—	Brown coarse to fine Sand, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
1 —		
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —		
6 —	Same... Mottled Silt	Medium Dense
—		
7 —		
—		
8 —		
9 —	End of Test Pit at 9 ± Feet	
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 PROJECT Prop. Logistics Center TEST PIT NO. TP-35A
 LOCATION SEE FIGURE 1 APPROX. ELEV. 599 ± INSPECTED BY RR
 WATER OBSERVATION Seepage at 8' ± DATE EXCAVATED 10/31/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2 inch Topsoil	
—		
1 —	Brown coarse to fine Sand, and Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —		
—		
6 —	Same... Mottled Silt	Medium Dense
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —	End of Test Pit at 9.5 ± Feet	
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 **PROJECT** Prop. Logistics Center **TEST PIT NO.** TP-37A
LOCATION SEE FIGURE 1 **APPROX. ELEV.** 607 ± **INSPECTED BY** RR
WATER OBSERVATION Seepage at 6' ± **DATE EXCAVATED** 10/31/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4 inch Topsoil	
—		
1 —	Brown coarse to fine Sand, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —	Same... Mottled Silt	Medium Dense
—		
6 —		
—		
7 —		
—		
8 —		
—	End of Test Pit at 8 ± Feet	
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999PROJECT Prop. Logistics Center

TEST PIT NO.

TP-39ALOCATION SEE FIGURE 1APPROX. ELEV. 608 ±INSPECTED BY RR

WATER OBSERVATION

Seepage at 6.5' ±DATE EXCAVATED 10/31/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3 inch Topsoil	
—		
1 —	Brown Silt, and coarse to fine Sand, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Stiff
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —	Same... Mottled Silt	Medium Stiff
—		
6 —		
—		
7 —		
—	End of Test Pit at 7 ± Feet	
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999

PROJECT Prop. Logistics Center

TEST PIT NO.

TP-49A

LOCATION SEE FIGURE 1

APPROX. ELEV. 588 ±

INSPECTED BY RR

WATER OBSERVATION

Seepage at 8' ±

DATE EXCAVATED 10/31/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3 Inch Topsoil	
—		
1 —	Brown Silt, and coarse to fine Sand, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Stiff
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —	Same... Mottled Silt	Medium Stiff
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—	End of Test Pit at 11 ± Feet	
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999

PROJECT Prop. Logistics Center

TEST PIT NO.

TP-50A

LOCATION SEE FIGURE 1

APPROX. ELEV. 588 ±

INSPECTED BY RR

WATER OBSERVATION

Light Seepage at 8' ±

DATE EXCAVATED 10/31/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — 1 — — 2 — — 3 — — 4 — —	Brown clayey Silt, and coarse to fine Sand, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Stiff
5 — — 6 — — 7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	Same... Mottled clayey Silt	Medium Stiff
	End of Test Pit at 8 ± Feet	

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-301</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>555'±</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>9/14/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
1 —	Fill- Light Brown/Gray coarse to fine Sand, some Silt, little medium to fine Gravel, with occasional cobble, brick, and concrete	Loose
2 —		
3 —	Possible Fill- Light Brown coarse to fine Sand, some Silt, little medium to fine Gravel, with occasional cobbles	Loose
4 —		
5 —	Topsoil	
6 —	Orange brown clayey Silt, some medium to fine Sand, trace Gravel	Medium-Stiff
7 —	Brown medium to fine Sand, some Silt, trace Gravel	Medium-Dense
8 —		
9 —		
10 —	End of Test Pit at 9.0± Feet	
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-302
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>595'±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>9/14/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	Light Brown medium to fine Sand, some Silt, little Gravel, with occasional boulders	Medium-Dense
1		
2		
3	Brown medium to fine Sand, some Silt, little Gravel, with occasional boulder	Medium-Dense
4		
5		
6	End of Test Pit at 5.5± Feet	
7		
8		
9		
10		
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO. <u>TP-303</u>	
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>818'±</u>		INSPECTED BY <u>RR</u>	
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>8/14/2018</u>			

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	Light Brown medium to fine Sand, and Silt, little medium to fine Gravel, with occasional cobbles and boulders	Medium-Dense
1		
2		
3		
4		
5	End of Test Pit at 5± Feet	
6		
7		
8		
9		
10		
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-304
LOCATION SEE FIGURE 1	APPROX. ELEV. 818'±	INSPECTED BY	RR
WATER OBSERVATION Not Encountered		DATE EXCAVATED	9/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	Light Brown medium to fine Sand, some Silt, trace Gravel, with occasional cobbles and boulders	Medium-Dense
—		
1		
—		
2		
—		
3		
—		
4		
—		
5	End of Test Pit at 5± Feet	
—		
6		
—		
7		
—		
8		
—		
9		
—		
10		
—		
11		
—		
12		
—		
13		
—		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-305
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>618'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	8/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	Light Brown medium to fine Sand, some Silt, trace Gravel, with occasional cobbles and boulders	Medium-Dense
—		
1		
—		
2		
—		
3		
—		
4		
—		
5		
—		
6		
7	End of Test Pit at 6± Feet	
—		
8		
—		
9		
—		
10		
—		
11		
—		
12		
—		
13		
—		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-306
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>618'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	9/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-Inches Topsoil	
1 —	Light Brown Silt, some coarse to fine Sand, trace Gravel	Stiff
2 —		
3 —		
4 —	Infiltration Rate = 10 in/hr @ El. 614'±	
5 —		
6 —		
7 —	Light Brown mottled Silt, some medium to fine Sand, little medium to fine Gravel with weathered boulders	Very Stiff
8 —		
9 —	End of Test Pit at 9.0± Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-307</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>616'±</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>9/14/2016</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	Light Brown medium to fine SAND, and Silt, trace Gravel Infiltration Rate= 8 in/hr @ El. 616'±	Medium-Dense
1		
2		
3		
4		
5	Same with some mottled Silt and occasional boulder End of Test Pit at 9± Feet	Dense
6		
7		
8		
9		
10		
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO.	TP-401
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>588.5'±</u>		INSPECTED BY	RR
WATER OBSERVATION		<u>Not Encountered</u>		DATE EXCAVATED	9/17/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-Inch Topsoil	
—		
1 —	Light Brown medium to fine SAND, and Silt, trace Gravel, with occasional cobbles	Medium-Dense
—		
2 —		
—		
3 —	Light Brown to Brown medium to fine SAND, some Silt, trace Gravel, with occasional cobbles and boulders	Medium-Dense
—		to
4 —		Dense
—		
5 —		
—		
6 —	...Same with mottled Silt	
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —	End of Test Pit at 9± Feet	
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>0000</u>		PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-402</u>
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>586.5±</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>8/17/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-Inch Topsoil	
1 —	Light Brown medium to fine Sand, and clayey Silt, trace Gravel, with occasional cobbles and boulders	Medium-Dense
2 —		
3 —	Light Brown to Brown medium to fine SAND, some Silt, trace Gravel, with occasional cobbles and boulders	Medium-Dense
4 —	...Same with mottled Silt	to Dense
5 —		
6 —		
7 —		
8 —		
9 —		
10 —	End of Test Pit at 10± Feet	
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 **PROJECT** Prop. Logistics Center **TEST PIT NO.** TP-403
LOCATION SEE FIGURE 1 **APPROX. ELEV.** 834'± **INSPECTED BY** RR
WATER OBSERVATION Not Encountered **DATE EXCAVATED** 9/17/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3-Inch Topsoil	
1 —	Light Brown clayey Silt, and medium to fine Sand, little medium to fine Gravel, with occasional cobbles and boulders Infiltration Rate = 15 in/hr @ El. 832±'	Medium-Stiff
2 —		
3 —		
4 —		
5 —	Brown medium to fine SAND, some mottled clayey Silt, trace Gravel, with occasional cobbles and boulders	Medium-Dense to Dense
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	End of Test Pit at 11± Feet	
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-404</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>632 ±</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>10/29/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — 1 — — 2 — — 3 — — 4 — —	Brown coarse to fine Sand, and Silt, little coarse to fine Gravel with occasional Cobbles and Boulders Infiltration Rate at el. 629 = 10.25 in/hr	Medium Dense
5 — — 6 — — 7 — — 8 — — 9 — —	Same... Mottled Silt	Medium Dense
10 — — 11 — — 12 — — 13 — — 14 — —	End of Test Pit at 9 ± Feet	

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 PROJECT Prop. Logistics Center TEST PIT NO. TP-404A
 LOCATION SEE FIGURE 1 APPROX. ELEV. 632 INSPECTED BY RR
 WATER OBSERVATION Not Encountered DATE EXCAVATED 10/29/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3-inch topsoil	
—	Brown medium to fine Sand, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
1 —		
—		
2 —		
—	Infiltration Rate at el. 629 = 7 inches/hour	
3 —		
—		
4 —		
—	Same... Mottled Silt	Medium Dense
5 —		
—		
6 —		
—		
7 —		
—		
8 —		
—	End of Test Pit at 9 ± Feet	
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-405
LOCATION SEE FIGURE 1	APPROX. ELEV. 634.75'±	INSPECTED BY	RR
WATER OBSERVATION Not Encountered		DATE EXCAVATED	9/17/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	3-Inch Topsoil	
1	Light Brown clayey Silt, some medium to fine Sand, trace Gravel	Medium-Stiff
2		
3		
4	Infiltration Rate = 6 in/hr @ El. 631.75±'	
5	...Same with mottled clayey Silt	
6		
7		
8		
9		
10	End of Test Pit at 10± Feet	
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Southeast, NY	TEST PIT NO.	TP-408
LOCATION SEE FIGURE 1	APPROX. ELEV. 632'±	INSPECTED BY	RR
WATER OBSERVATION Not Encountered		DATE EXCAVATED	9/17/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	3" Topsoil	
1	Light Brown clayey Silt, some coarse to fine Sand, trace Gravel	Medium Stiff
2		
3		
4	Infiltration Rate = 5 in/hr @ El. 629±'	
5	...Same with mottled clayey Silt	
6		
7		
8		
9		
10	----- End of Test Pit at 10 ± Feet	-----
11		
12		
13		
14		

NOTE:

SESI
CONSULTING

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-407</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>625</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Seepage at 8 Feet ±</u>		DATE EXCAVATED <u>10/29/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3-Inch topsoil	
—	Brown medium to fine Sand, and Silt, little medium to fine Gravel	Medium Dense
1 —		
—		
2 —		
—	Infiltration Rate at el. 622 = 12.0 Inches/hour	
3 —		
—		
4 —		
5 —	Brown Mottled Silt, and medium to fine Sand, little coarse to fine Gravel with boulders and cobbles	Medium Stiff
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —	End of Test Pit at 9 ± Feet	
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	<u>TP-408</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>604 ±</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION	<u>Not Encountered</u>	DATE EXCAVATED	<u>9/17/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-Inch Topsoil	
—	Light Brown clayey SILT, some medium to fine Sand, trace Gravel	Medium Stiff
1 —		
—		
2 —		to
—		
3 —		
—		
4 —	...Same with mottled clayey Silt	Stiff
—		
5 —		
—		
6 —		
—		
7 —		
—		
8 —	End of Test Pit at 8 ± Feet	
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-409
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>642 ±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	9/17/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	2-Inch Topsoil	
1	Light Brown clayey SILT, some medium to fine Sand, trace Gravel	Medium Stiff
2	Infiltration Rate = 6 in/hr @ El. 640±'	
3		to
4	...Same with mottled clayey Silt	Stiff
5		
6		
7		
8	End of Test Pit at 8 ± Feet	
9		
10		
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-410
LOCATION SEE FIGURE 1	APPROX. ELEV. 644 ±	INSPECTED BY	RR
WATER OBSERVATION Seepage @ 6±'		DATE EXCAVATED	9/21/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	3-Inch Topsoil	
1	Light Brown SILT, and medium to fine Sand, trace Gravel	Medium Stiff
2	Infiltration Rate = 10in/hr @ El. 642±'	
3		
4		
5	Brown medium to fine Sand, and mottled Silt, little medium to fine Gravel, with occasional Cobbles and Boulders (Weathered Schist)	Medium Dense
6		
7		
8		
9		
10	End of Test Pit at 10 ± Feet	
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-411</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. _____	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Light Seepage at 8'±</u>		DATE EXCAVATED <u>9/21/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil with light brown medium to fine Sand, and Silt, trace Gravel	
1 —	Light brown SILT, and medium to fine Sand, trace Gravel with Boulders	Medium Stiff
2 —		
3 —		
4 —		
5 —		
6 —		
7 —	Brown mottled medium to fine SAND, and Silt, little medium to fine Gravel with occasional Cobbles	Medium Dense
8 —		
9 —		
10 —		
11 —	End of Test Pit at 10'±	
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO.	9999	PROJECT	Prop. Logistics Center	TEST PIT NO.	TP-412
LOCATION	SEE FIGURE 1	APPROX. ELEV.	625 ±	INSPECTED BY	RR
WATER OBSERVATION	Not Encountered			DATE EXCAVATED	10/29/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	3 inch Topsoil	
1	Brown coarse to fine Sand, and Silt, little medium to fine Gravel	Medium Dense
2		
3	Infiltration Rate at el. 622 = 10.25 in/hr	
4		
5	Same... Mottled Silt	
6		
7		
8		
9	End of Test Pit at 9 ± Feet	
10		
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 PROJECT Prop. Logistics Center TEST PIT NO. TP-413
 LOCATION SEE FIGURE 1 APPROX. ELEV. 625 ± INSPECTED BY RR
 WATER OBSERVATION Seepage at 7 ± DATE EXCAVATED 10/29/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	2-Inch topsoil	
1 — — 2 — — 3 — —	Brown coarse to fine Sand, and Silt, little medium to fine Gravel with occasional Cobbles and Boulder	Medium Dense
4 — — 5 — — 6 — — 7 — — 8 — — 9 — —	Same... Mottled Silt	Medium Dense
10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9 ± Feet	

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999.4.1</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. TP-413A
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>625 ±</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>10/29/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-Inch topsoil	
—		
1 —	Brown medium to fine Sand, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
—		
2 —		
—		
3 —	Infiltration Rate at el. 622 = 12 in/hr	
—		
4 —		
—		
5 —	Brown Mottled Silt, and coarse to fine Sand, little medium to fine Gravel	Medium Stiff
—		
6 —		
—		
7 —		
—		
8 —	-----	-----
—		
9 —	End of Test Pit at 9 ± Feet	
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-414
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. _____	INSPECTED BY	RR
WATER OBSERVATION _____	NE	DATE EXCAVATED	9/21/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil	
1 —	Light brown SILT, and medium to fine Sand, trace Gravel with occasional cobbles	Medium Stiff
2 —		
3 —		
4 —		
5 —	Brown medium to fine SAND, and Silt, little mottled medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	End of Test Pit at 10'±	
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO. <u>TP-415</u>	
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. _____		INSPECTED BY <u>RR</u>	
WATER OBSERVATION _____		NE _____		DATE EXCAVATED <u>9/21/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	2" Topsoil	
1 — — 2 — — 3 — — 4 — — 5 — —	Light Brown SILT, and medium to fine Sand	Medium Stiff
6 — — 7 — — 8 — — 9 — — 10 — —	Brown mottled medium to fine SAND, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
11 — — 12 — — 13 — — 14 —	End of Test Pit at 10'±	

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 PROJECT Prop. Logistics Center

TEST PIT NO.

TP-416

LOCATION SEE FIGURE 1 APPROX. ELEV. _____INSPECTED BY RRWATER OBSERVATION Seepage @ 4' ±DATE EXCAVATED 9/21/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	2" Topsoil	
1 — — 2 — — 3 — — 4 — —	Light brown SILT, and medium to fine Sand, trace Gravel	Medium Stiff
5 — — 6 — — 7 — — 8 — — 9 — — 10 — —	Brown mottled medium to fine SAND, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
11 — — 12 — — 13 — — 14 —	End of Test Pit at 10'±	

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PROJECT NO. 9999 PROJECT Prop. Logistics Center TEST PIT NO. TP-501
 LOCATION SEE FIGURE 1 APPROX. ELEV. INSPECTED BY RR/UK
 WATER OBSERVATION Heavy Seepage @ 5.0'±/ Seepage @ 3.0'± DATE EXCAVATED 10/3/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	2-Inch Topsoil	
1	Light Brown Silt and medium to fine Sand, trace Gravel with occasional cobbles	Med. Soft
2		
3		
4	Brown Sand and mottled Silt, trace Gravel with occasional cobbles and boulders	Med. Dense
5		
6		
7		
8		
9	END OF TEST PIT AT 8 FEET ±	
10		
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-002
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. _____	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage @ 3.5'± / Heavy Seepage @ 5.5'±</u>		DATE EXCAVATED	10/3/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — 1 — 2 — 3 —	Light Brown Silt and medium to fine Sand, trace Gravel	Med. Soft
4 — 5 — 6 — 7 — 8 —		
9 — 10 — 11 — 12 — 13 — 14 —		
	Brown medium to fine Sand and mottled Silt, trace Gravel	Med. Dense
	END OF TEST PIT AT 9 FEET ±	

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>		TEST PIT NO.		TP-801	
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV.		INSPECTED BY		RR	
WATER OBSERVATION		<u>Seepage @ 9.0'±</u>		DATE EXCAVATED		<u>10/3/2018</u>	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-Inch Topsoil	
—	Light Brown Silt, and medium to fine Sand, trace Gravel with occasional cobbles	Med. Stiff
1 —		
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —	Brown medium to fine Sand and mottled Silt, trace Gravel with occasional cobbles and boulders	Med. Dense
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —	END OF TEST PIT AT 10 FEET ±	
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999PROJECT Prop. Logistics Center

TEST PIT NO.

TP-602

LOCATION SEE FIGURE 1

APPROX. ELEV. _____

INSPECTED BY

RR

WATER OBSERVATION

Seepage @ 3.5' ± /Heavy Seepage @ 5' ±

DATE EXCAVATED

10/4/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2-Inch Topsoil	
—	Light Brown Silt and medium to fine Sand, trace Gravel with occasional cobbles	Med. Stiff
1 —		
—		
2 —		
—		
3 —		
—		
4 —	Brown medium to fine Sand and mottled Silt, little coarse to fine Gravel with cobbles and occasional boulders	Med. Dense
—		
5 —		
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —	END OF TEST PIT AT 9 FEET ±	
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

TP-603 and TP-604 NOT EXCAVATED

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-005
LOCATION SEE FIGURE 1	APPROX. ELEV. ±	INSPECTED BY	RR
WATER OBSERVATION Light Seepage @ 3.5±', Heavy @ 6.5±'		DATE EXCAVATED	10/4/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0	2-Inch Topsoil	
1	Light Brown SILT, and medium to fine Sand, trace Gravel, with Cobbles	Medium Stiff
2	Percolation Rate = 6 in/hr	
3		
4	Brown coarse to fine Sand, and Silt, little medium to fine Gravel with occasional Cobbles and Boulders	Medium Dense
5		
6		
7		
8	----- End of Test Pit at 8 ± Feet	-----
9		
10		
11		
12		
13		
14		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-606</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>EI 540±</u>	INSPECTED BY <u>RR</u>
WATER OBSERVATION <u>Seepage @ 1'±/Heavy @ 3'±</u>		DATE EXCAVATED <u>10/16/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	10-Inch Topsoil	
1 — — 2 — — 3 — — 4 — — 5 — —	Gray/Brown SILT, and medium to fine Sand, trace Gravel with occasional cobbles	Med. Stiff
—	END OF TEST PIT AT 5 FEET ±	
6 — — 7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 PROJECT Prop. Logistics Center

TEST PIT NO.

TP-607

LOCATION SEE FIGURE 1 APPROX. ELEV. EI 560±INSPECTED BY RRWATER OBSERVATION Heavy Seepage @ 2.74'±DATE EXCAVATED 10/16/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6-inch Topsoil	
1 — —	Light Brown SILT, and medium to fine Sand, trace Gravel with occasional cobbles	
2 — —	Mottled Silt @ 2'±	
3 — —		
4 — —	END OF TEST PIT AT 3.5 FEET ±	
5 — —		
6 — —		
7 — —		
8 — —		
9 — —		
10 — —		
11 — —		
12 — —		
13 — —		
14 — —		

SESI CONSULTING ENGINEERS

PROJECT NO.	9999	PROJECT	Prop. Logistics Center	TEST PIT NO.	TP-608
LOCATION	SEE FIGURE 1	APPROX. ELEV.	EI 550±	INSPECTED BY	RR
WATER OBSERVATION	Not Encountered			DATE EXCAVATED	10/31/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	10-inch Topsoil	
1 — — 2 — — 3 — — 4 — — 5 — —	Light Brown medlum to fine Sand and Silt, trace Gravel with occasional cobbles	Medlum Dense
6 — — 7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 — —	Light Brown medium to fine Sand and mottled Silt, trace Gravel with occasional Cobbles	Medium Dense
	End of Test Pit at 8 ± Feet	

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-609
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>EI 550+</u>	INSPECTED BY	<u>RR</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	<u>10/31/2018</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6-inch Topsoil	
1 — — 2 — — 3 — — 4 — — 5 —	Light Brown Silt and medium to fine Sand, trace Gravel with occasional cobbles	Medium Stiff
— 6 — — 7 — — 8 — — 9 —	Light Brown mottled Silt and medium to fine Sand, trace Gravel with occasional cobbles	Medium Stiff
— 10 — — 11 — — 12 — — 13 — — 14 —	End of Test Pit at 9 ± Feet	

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	STP-1
LOCATION SEE FIGURE 1	APPROX. ELEV. 626.0±'	INSPECTED BY	JQ
WATER OBSERVATION	Seepage at 2±'; Heavy seepage at 3±'	DATE EXCAVATED	3/28/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light Brown Silt, some coarse to fine Sand, trace Gravel (USCS: CL)	Medium Stiff
2 —	Percolation Rate = 6 min/in (Test A) @ Elv. 624 (10/30/18) Percolation Rate = 10.9 min/in (Test B) @ Elv. 624.1 (10/30/18)	Medium Stiff
3 —		
4 —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with frequent cobbles and occasional Boulder	to
5 —	(USCS: CL)	
6 —		
7 —		
8 —		Stiff
9 —	Test Pit Completed at 8± Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	STP-2
LOCATION SEE FIGURE 1	APPROX. ELEV. 628.0±'	INSPECTED BY	JQ
WATER OBSERVATION Seepage at 2±'	DATE EXCAVATED		3/28/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4" Topsoil	
1 —	Light Brown Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles (USCS: CL)	Medium Stiff
2 —		
3 —	Percolation Rate: 20 min/in (Test A) @ Elv. 626 (10/30/18) Percolation Rate: 20 min/in (Test B) @ Elv. 626 (10/30/18)	Medium Stiff
4 —		
5 —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles (USCS: CL)	
6 —		
7 —		
8 —		
9 —	Test Pit Completed at 8.5± Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	STP-8
LOCATION SEE FIGURE 1	APPROX. ELEV. 619.0±'	INSPECTED BY	JQ
WATER OBSERVATION Seepage at 6±'		DATE EXCAVATED	3/28/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3" Topsoil	
—	Light Brown/Yellow medium to fine Sand, and Silt, trace Gravel (USCS: SM)	Medium Dense
1 —		
—	Light Brown Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles	Medium Stiff
2 —		
—	Percolation Rate = 30 min/in (Test A) @ Elv. 617.0 (10/30/18)	
3 —	Percolation Rate = 40 min/in (Test B) @ Elv. 617.0 (10/30/18)	
—		
4 —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel with occasional cobbles	Medium Stiff
—		
5 —	(USCS: CL)	
—		
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—	Test Pit Completed at 9± Feet	
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

NOTE:

SESI CONSULTING ENGINEERS

PROJECT NO. 9999 PROJECT Prop. Logistics Center

TEST PIT NO.

STP-12

LOCATION SEE FIGURE 1 APPROX. ELEV. 645.0±'INSPECTED BY JQWATER OBSERVATION Seepage at 4±'DATE EXCAVATED 10/3/2018
3/28/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6" Topsoil	
1 — —	Light Brown Silt, and coarse to fine Sand, trace Gravel (USCS: CL)	Medium Stiff
2 — —	Test 1: Percolation Rate = 60 min/in @ Elv. 643.0 Test 2: Percolation Rate = 30 min/in @ Elv. 643.0 (10/3/18) Test 3: Percolation Rate = 30 min/in @ Elv. 643.0 (10/3/18)	
3 — —		
4 — —		
5 — —	Light Brown mottled Silt, some coarse to fine Sand, little coarse to fine Gravel, with occasional cobbles (USCS: CL)	Medium Stiff
6 — —		
7 — —		
8 — —		
9 — —	Test Pit Completed at 8.5± Feet	
10 — —		
11 — —		
12 — —		
13 — —		
14 — —		

NOTE:

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	STP-101
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>659.0±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Seepage at 5±'</u>		DATE EXCAVATED	9/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil	
1 —	Light Brown Silt, some medium to fine Sand, trace Gravel (USCS: CL) Percolation Rate = 15 min/in @ Elev. 657 (10/31/18)	Medium-Stiff
2 —		
3 —		
4 —		
5 —	Light Brown mottled Silt, and medium to fine Sand, little coarse to fine Gravel, with occasional cobbles (USCS: CL)	Medium-Stiff to Stiff
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	Test Pit Completed at 9.5± Feet	
12 —		
13 —		
14 —		

NOTE:

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	STP- 102
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>632'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>	DATE EXCAVATED		9/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil	
1 —	Light-brown SILT, and medium to fine Sand, trace Gravel . (USCS : SC/CL) Percolation Rate = 30 min/in @ Elev. 630.0 (10/30/18)	Soft to Medium-Stiff
2 —		
3 —		
4 —	Light-brown SILT, some medium to fine Sand, little Gravel, with occassional cobbles (USCS : SC/CL) ...Same with mottled SILT	Medium-Stiff to Stiff
5 —		
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	End of Test Pit at 10.5± Feet	
12 —		
13 —		
14 —		

NOTE:

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	STP- 103
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>631'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	9/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil	
1 —	Light-brown SILT, and medium to fine Sand, trace Gravel . (USCS : SC/CL) Percolation Rate = 9.6 min/in @ Elv. 629.0 (10/30/18)	Soft to Medium-Stiff
2 —		
3 —		
4 —	Light-brown SILT, some medium to fine Sand, little Gravel, with occassional cobbles (USCS : SC/CL) ...Same with mottled SILT	Medium-Stiff to Stiff
5 —		
6 —		
7 —		
8 —	End of Test Pit at 8.5± Feet	
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	STP- 104
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>630'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	9/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil	
1 —	Light-brown SILT, and medium to fine Sand, trace Gravel . (USCS : SC/CL) Percolation Rate = 30 min/in @ Elev. 628.0 (10/30/18)	Medium-Stiff
2 —		
3 —		
4 —		
5 —	Light-brown SILT, some medium to fine Sand, little Gravel, with occasional cobbles (USCS : SC/CL) ...Same with mottled SILT	Medium-Stiff to Stiff
6 —		
7 —		
8 —		
9 —	End of Test Pit at 9.0± Feet	
10 —		
11 —		
12 —		
13 —		
14 —		

NOTE:

PROJECT NO. <u>9999</u>	PROJECT <u>Southeast, NY</u>	TEST PIT NO.	STP- 105
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>638'±</u>	INSPECTED BY	RR
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	9/14/2018

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	2" Topsoil	
1 —	Light-brown SILT, and medium to fine Sand, trace Gravel . (USCS : SC/CL)	Medium-Stiff
2 —		
3 —		
4 —	Light-brown SILT, some medium to fine Sand, little Gravel, with occasional cobbles (USCS : SC/CL) ...Same with mottled SILT	Medium-Stiff to Stiff
5 —		
6 —		
7 —		
8 —		
9 —		
10 —		
11 —	End of Test Pit at 10.0± Feet	
12 —		
13 —		
14 —		

NOTE:

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APPENDIX C

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-A1
LOCATION SEE FIGURE 1	APPROX. ELEV. 655±	INSPECTED BY	RR/JT
WATER OBSERVATION Not Encountered		DATE EXCAVATED	11/11/2019

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
—	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel	Medium Stiff
1 —	with occasional Cobbles	
—		
2 —		
3 —	Infiltration Rate at el. 652 = 7.5 in/hr Kv = 0.67 in/hr	
4 —		
—	Brown coarse to fine SAND, some mottled Clayey Silt, little coarse to fine	Medium Dense
5 —	Gravel, with Cobbles and occasional Boulders	
—	TEST PIT COMPLETED AT 5± FEET	
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.		TP-A2	
LOCATION SEE FIGURE 1		APPROX. ELEV. 655±		INSPECTED BY		RR/JT	
WATER OBSERVATION		Not Encountered		DATE EXCAVATED		11/11/2019	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
—	Brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
1 —		
—		
2 —		
3 —	Infiltration Rate at el. 652 = 7 in/hr Kv = 0.62 in/hr	
4 —		
—	Brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
5 —		
—	TEST PIT COMPLETED AT 5± FEET	
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.		TP-A3	
LOCATION SEE FIGURE 1		APPROX. ELEV. 655±		INSPECTED BY		RR/JT	
WATER OBSERVATION		Not Encountered		DATE EXCAVATED		11/11/2019	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3± Inches Topsoil	
—	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel	Medium Stiff
1 —	with occasional Cobbles	
—		
2 —		
—		
3 —	Infiltration Rate at el. 652 = 12 in/hr Kv = 1.24 in/hr	
—		
4 —		
—	Brown mottled Clayey SILT, some coarse to fine Sand, little medium to fine	Stiff
5 —	Gravel, with frequent Cobbles and occasional Boulders	
—	TEST PIT COMPLETED AT 5± FEET	
6 —		
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

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PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.		TP-A4	
LOCATION SEE FIGURE 1		APPROX. ELEV. 659±		INSPECTED BY		RR/JT	
WATER OBSERVATION		Not Encountered		DATE EXCAVATED		11/11/2019	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3± Inches Topsoil	
—	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
1 —		
—		
2 —		
—		
3 —		
—	Infiltration Rate at el. 652 = 2.5 in/hr Kv = 0.24 in/hr	
4 —		
—		
5 —		
—		
6 —		
—	Brown mottled coarse to fine SAND, some Clayey Silt, little medium to fine Gravel, with frequent cobbles and occasional boulders	Loose to Medium Dense
7 —		
8 —		
—	TEST PIT COMPLETED AT 9± FEET	
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.		TP-A5	
LOCATION SEE FIGURE 1		APPROX. ELEV. 658±		INSPECTED BY		RR/JT	
WATER OBSERVATION		Not Encountered		DATE EXCAVATED		11/11/2019	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
—	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
1 —		
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —		
6 —	Brown clayey SILT, some coarse to fine Sand, little fine Gravel with frequent cobbles and occasional boulders (-200) = 52% W.C. = 11.1% Infiltration Rate at el. 652 = 12 in/hr Kv = 1.24 in/hr	Loose to Medium Dense
7 —		
—		
8 —		
—		
9 —	TEST PIT COMPLETED AT 8± FEET	
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-AA1
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655±</u>	INSPECTED BY	<u>RR/JT</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED	<u>1/8/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
1 —	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel with occasional Cobbles	Medium Stiff
2 —	Infiltration Rate at el. 653 = 3 in/hr Kv = 0.31 in/hr	
3 —		
4 —	Brown coarse to fine SAND, some mottled Clayey Silt, little coarse to fine Gravel, with Cobbles and occasional Boulders	Medium Dense
5 —	TEST PIT COMPLETED AT 5± FEET	
6 —		
7 —		
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

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PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-AA2</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655±</u>	INSPECTED BY <u>RR/JT</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>1/8/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
1 —	Brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
2 —	Infiltration Rate at el. 653 = 0.25 in/hr Kv = 0.02 in/hr	
3 —		
4 —		
5 —	Brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
6 —	TEST PIT COMPLETED AT 5± FEET	
7 —		
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-A2-1</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655±</u>	INSPECTED BY <u>RR/JT</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>2/14/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
1 —	Brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
2 —	Infiltration Rate at el. 653 = 14 in/hr Kv = 2.0 in/hr	
3 —		
4 —		
5 —	Brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
6 —	TEST PIT COMPLETED AT 5± FEET	
7 —		
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-A2-2</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655±</u>	INSPECTED BY <u>RR/JT</u>
WATER OBSERVATION <u>Not Encountered</u>		DATE EXCAVATED <u>2/14/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
1 —	Brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
2 —	Infiltration Rate at el. 653 = 20 in/hr Kv = 4.1 in/hr	
3 —		
4 —		
5 —	Brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
6 —	TEST PIT COMPLETED AT 5± FEET	
7 —		
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-AA3
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>655±</u>	INSPECTED BY	<u>RR/JT</u>
WATER OBSERVATION <u>Seepage @ 4'±</u>		DATE EXCAVATED	<u>1/8/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3± Inches Topsoil	
— 1 —	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel with occasional Cobbles	Medium Stiff
— 2 —	Infiltration Rate at el. 653 = Kv = 8.3 in/hr	
— 3 —		
— 4 —		
— 5 —	Brown mottled Clayey SILT, some coarse to fine Sand, little medium to fine Gravel, with frequent Cobbles and occasional Boulders	Stiff
— 6 —	TEST PIT COMPLETED AT 5± FEET	
— 7 —		
— 8 —		
— 9 —		
— 10 —		
— 11 —		
— 12 —		
— 13 —		
— 14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>		PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO.	TP-AA4
LOCATION <u>SEE FIGURE 1</u>		APPROX. ELEV. <u>656±</u>	INSPECTED BY	<u>RR/JT</u>
WATER OBSERVATION <u>Seepage @ 4'±, GW @ 4.8'±</u>		DATE EXCAVATED <u>1/8/2020</u>		

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	3± Inches Topsoil	
1 —	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
2 —		
3 —	Infiltration Rate at el. 653 = 8.6 in/hr Kv = 1.04 in/hr	
4 —		
5 —	Brown mottled coarse to fine SAND, some Clayey Silt, little medium to fine Gravel, with frequent cobbles and occasional boulders	Loose to Medium Dense
6 —	TEST PIT COMPLETED AT 5.5± FEET	
7 —		
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-A4-1</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>660±</u>	INSPECTED BY <u>RR/JT</u>
WATER OBSERVATION <u>Seepage at 5.5'</u>		DATE EXCAVATED <u>2/14/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
—	Brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
1 —		
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —		
—	Brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
6 —	TEST PIT COMPLETED AT 6± FEET	
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-A4-2</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>660±</u>	INSPECTED BY <u>RR/JT</u>
WATER OBSERVATION <u>Seepage at 5.5'</u>		DATE EXCAVATED <u>2/14/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
—	Brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
1 —		
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —		
—	Brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
6 —	TEST PIT COMPLETED AT 6± FEET	
—		
7 —		
—		
8 —		
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. <u>9999</u>	PROJECT <u>Prop. Logistics Center</u>	TEST PIT NO. <u>TP-A4-3</u>
LOCATION <u>SEE FIGURE 1</u>	APPROX. ELEV. <u>664±</u>	INSPECTED BY <u>RR/JT</u>
WATER OBSERVATION <u>Seepage at 6.5'</u>		DATE EXCAVATED <u>2/14/2020</u>

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
—	Brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
1 —		
—		
2 —		
—		
3 —		
—		
4 —		
—		
5 —		
6 —	Brown coarse to fine SAND, some Clayey Silt, little coarse to fine Gravel with occasional Cobbles and Boulders	Medium Dense
7 —		
8 —	TEST PIT COMPLETED AT 6± FEET	
—		
9 —		
—		
10 —		
—		
11 —		
—		
12 —		
—		
13 —		
—		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999

PROJECT Prop. Logistics Center

TEST PIT NO.

TP-AA5

LOCATION SEE FIGURE 1

APPROX. ELEV. 656±

INSPECTED BY

RR/JT

WATER OBSERVATION

Seepage at 4±'; GW @5'

DATE EXCAVATED

1/8/2020

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	4± Inches Topsoil	
—	Light brown Clayey Silt, and coarse to fine Sand, trace Gravel, with occasional Cobbles	Medium Stiff
1 —		
2 —		
3 —	Infiltration Rate at el. 653 = 13.5 in/hr Kv = 1.93 in/hr	
4 —		
5 —	Brown mottled clayey SILT, some coarse to fine Sand, little fine Gravel with frequent cobbles and occasional boulders	Loose to Medium Dense
6 —	TEST PIT COMPLETED AT 5.5± FEET	
7 —		
8 —		
9 —		
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999

PROJECT Prop. Logistics Center

TEST PIT NO.

TP AA6

LOCATION SEE FIGURE 1

APPROX. ELEV. 658' ±

INSPECTED BY

RR

WATER OBSERVATION

Mottled @ 6.5'±

DATE EXCAVATED 06.13.2020

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6"± Topsoil	
1 — — 2 — — 3 — —	Tan-brown coarse to fine Sand, some coarse to fine Gravel, little Silt, with occasional cobbles	Loose to Medium Dense
4 — — 5 — — 6 — — 7 — —	Tan-brown coarse to fine Sand, some coarse to fine Gravel, some Silt, with occasional cobbles Infiltration Rate: Kv=1.4 in/hr	Dense
8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	TEST PIT COMPLETED @ 7'±	

SESI CONSULTING ENGINEERS

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.		TP AA7	
LOCATION SEE FIGURE 1		APPROX. ELEV. 656' ±		INSPECTED BY		RR	
WATER OBSERVATION		NE		DATE EXCAVATED		06.13.2020	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — —	6"± Topsoil	
1 — — 2 — — 3 — — 4 — — 5 — —	Tan-brown coarse to fine Sand, some coarse to fine Gravel, little Silt, with occasional cobbles Infiltration Rate: Kv=1.2 in/hr	Medium Dense to Dense
6 — — 7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	TEST PIT COMPLETED @ 5'±	

SESI CONSULTING ENGINEERS

Page 1 of 1 **Figure No.:**

The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgement of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod

Approximate Change in Strata: _____ Inferred Change in Strata: -----

Soil descriptions represent a field identification after D.M. Burmister unless otherwise noted.

Page 1 of 1	Figure No.:
The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgement of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted. Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod Approximate Change in Strata: _____ Inferred Change in Strata: ----- Soil descriptions represent a field identification after D.M. Burmister unless otherwise noted.	

		BORING LOG		Job:	9999	Boring:	B-312-4	Client:	Putnam Seaburty Partners, LP				
				Project:	Northeast Interstate Logistics Center			Observer:	RR/JT				
				Location:	Southeast, NY			Elevation:	570.0±				
Date Started:	June 4, 2020		Date Completed:	June 4, 2020		Boring Location Offset:		4'± SE					
Contractor:	General Borings, INC.		Type of Rig:	ATV		Weather:		Sunny		Temperature:	75F		
Driller:	John		Helper:			Rotary Bit Diameter:							
Casing Dia.:		Inches	Casing Depth:		Feet	Auger Diameter:		OD:	6	Inches	ID: 4 Inches		
Drilling Mud Utilized:		☒ None	☐ Water	☐ Quickgel	☐ Bentonite	☐ Revert	☐ Ez Mud	☐ Other					
SAMPLING EQUIPMENT (type and size)	Split Spoon Sampler:		☒ 2-inch Diameter				☐ 3-inch Diameter						
	U-tube Sampler:		☐ Piston				☐ Shelby		☐ Other				
	Core Barrel:					Core Bit:							
	Sampler Hammer:		☐ External Anvil		☐ Mobile Safety		☒ Auto		☐ Mechanical Trip				
	Weight:		lbs.		Drop Height:		Inches						
WATER LEVEL OBSERVATIONS													
Date		Time		Depth of Hole		Depth of Casing		Depth to Water		Remarks			
06.05.2020		8:00 AM		24'±		20'±		NE					
SAMPLE					SAMPLE DESCRIPTION				Depth	Strata	Rec.	REMARKS	
Number	Interval	Blows/6"	N- Value										
					Augered to 6'±							23.2' = Top of casing to bottom of hole	
						5							
S-1	6	6	7	19	Light-brown coarse to fine Sand, some Silt, little medium to fine Gravel								
	8	12	12										
S-2	8	6	10	22	Black-gray coarse to fine Sand, some coarse to fine Gravel, trace Silt, with cobbles								
	10	12	14										
S-3	10	6	6	18	Brown medium to fine Sand, some Silt, trace Gravel (moist)								
	12	12	12										
S-4	12	6	12	22	Same as above								
	14	10	10										
S-5	14	8	10	20	Gray-brown medium to fine Sand, some Silt, trace Gravel								
	16	10	17										
S-6	16	9	10	22	Gray Clayey Silt, some coarse to fine Sand, trace Gravel								
	18	12	18										
S-7	18	8	12	27	No recovery								
	20	15	19										
S-8	20	10	13	31	Gray Clayey Silt, and coarse to fine Sand, trace Gravel								
	22	18	26										
S-9	22	24	26	60	Unfactored Infiltration Rate (EL 548'±) = 1.3"/hr								
	24	34	36										
					BORING COMPLETED @ 24'±								
									30				
Page 1 of 1												Figure No.:	
The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgement of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.													
Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod													
Approximate Change in Strata: _____ Inferred Change in Strata: _____													
Soil descriptions represent a field identification after D.M. Burmister unless otherwise noted.													

PROJECT NO. 9999		PROJECT Prop. Logistics Center		TEST PIT NO.		TP 301A	
LOCATION SEE FIGURE 1		APPROX. ELEV. 556' ±		INSPECTED BY		RR	
WATER OBSERVATION		NE		DATE EXCAVATED		06.04.2020	

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — — 1 —	Fill: Black coarse to fine Sand, little Silt, trace Gravel	Loose
2 — — 3 — — 4 — — 5 —	Tan-brown coarse to fine Sand, some Silt, trace Gravel, with cobbles	Medium Dense to Dense
6 — — 7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	TEST PIT COMPLETED @ 5'±	

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-B312-5
LOCATION SEE FIGURE 1	APPROX. ELEV. 525' ±	INSPECTED BY	RR
WATER OBSERVATION Seepage @ 1.5' ±		DATE EXCAVATED	06.04.2020

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 —	6"± Topsoil	
1 —	Tan-brown coarse to fine Sand, and coarse to fine Gravel, some Silt, with frequent cobbles; slight mottling @ 1.5'±	Medium
2 —		Dense
3 —		to
4 —		Dense
5 —	Tan-brown coarse to fine Sand, and Silt, some coarse to fine Gravel, with with occasional cobbles; cobbles are highly weathered rock	Dense
6 —		to
7 —		Very
8 —		Dense
9 —	TEST PIT COMPLETED @ 8'±	
10 —		
11 —		
12 —		
13 —		
14 —		

SESI CONSULTING ENGINEERS

PROJECT NO. 9999	PROJECT Prop. Logistics Center	TEST PIT NO.	TP-B312-6
LOCATION SEE FIGURE 1	APPROX. ELEV. 520' ±	INSPECTED BY	RR
WATER OBSERVATION Seepage @ 1.5' ±		DATE EXCAVATED	06.04.2020

DEPTH FT.	DESCRIPTION / SOIL CLASSIFICATION	RELATIVE DENSITY OR CONSISTENCY
0 — —	6"± Topsoil	
1 — — 2 — — 3 — — 4 — —	Tan-brown coarse to fine Sand, and coarse to fine Gravel, some Silt, with frequent cobbles; some cobbles are highly weathered rock	Medium Dense to Dense
5 — — 6 — — 7 — — 8 — — 9 — — 10 — — 11 — — 12 — — 13 — — 14 —	TEST PIT COMPLETED @ 4.5'±	

SESI CONSULTING ENGINEERS