

June 14, 2021

16000 Commerce Pkwy. Suite B Mount Laurel, NJ 08054 **T** 856.273.1224 TRCcompanies.com

Mr. Eddie Barry *ConnectGen LLC* 1001 McKinney Street, Suite 700 Houston, TX 77002

Re: Geotechnical Engineering Report *Mill Point Solar Project* Town of Glen Montgomery County, New York <u>TRC Project No.: 411360.GEO1</u>

Dear Mr. Barry:

TRC Engineers, Inc. (TRC) is pleased to present our Geotechnical Engineering Report for this project. Our work was initiated in accordance with your authorization to proceed (Task Order # 03) dated March 4, 2021 and completed in general accordance with our agreed scope of work presented in our revised proposal, submitted February 10, 2021. A summary of our geotechnical investigation activities, findings and recommendations is summarized below.

### 1.0 INTRODUCTION

This report presents the results of our geotechnical investigation for the proposed 250 MW photovoltaic (PV) solar array to be constructed at the Mill Point project site. The Mill Point project consists of multiple parcels on the order of 3,000 acres, located South of Interstate 90 in the Town of Glen, New York. The purpose of our investigation was to evaluate the geologic and subsurface conditions to reduce uncertainty with respect to anticipated foundation and site construction, and to provide preliminary geotechnical recommendations for design of the proposed project.

### 1.1 **Project Description**

The site is located South of Interstate 90 in the Town of Glen, in Montgomery County, NY. The project includes PV solar arrays, ancillary equipment, and proposed substation facilities on the north side of Ingersoll Road. Based on our experience with similar projects, we assume that the proposed photovoltaic arrays would preferably be mounted on posts driven into the ground. The anticipated post loads have not been provided but are assumed to be typical for such construction. It is assumed that existing grades will remain relatively unchanged.

## 1.2 Scope of Services

Our scope of services was presented in our Proposal for Geotechnical Engineering Services dated February 10, 2021. To accomplish this work, we have provided the following services:

- Exploration of subsurface conditions by drilling thirty (30) borings spread across the proposed solar array areas, drilling two (2) additional test borings within the proposed substation areas, and retrieving soil samples for classification & laboratory testing.
- Evaluation of the physical and engineering properties of the subsurface soils based on visually classifying the samples by a member of our geotechnical staff.
- Engineering analysis to evaluate the proposed foundation systems for the support of the ground-mounted PV solar arrays and associated equipment.
- Preparation of this report to summarize our findings and to present our conclusions and recommendations regarding the following:
  - Foundation support for the proposed solar array structures assuming post foundations, or alternative system as applicable based on subsurface conditions.
  - Preliminary bearing capacity and other parameters for use in preliminary foundation design.
  - Anticipated excavation conditions and presence of potential rock or other refusal conditions, if applicable.
  - Suitability of on-site soils for reuse in backfills and requirements for imported fills.
  - Recommendations for placement, compaction, and testing of fills, if applicable.
  - Preliminary soil parameters pressures (both above and below ground water table) for active, at rest, and passive conditions and L-Pile soil parameters for use in foundation design
  - Anticipated ground water conditions and impacts on the design and construction.
  - Frost penetration depth.
  - Corrosivity concerns on buried steel and concrete.
  - Thermal resistivity results.
  - Preliminary Seismic Site Class parameters.
  - Other construction-related concerns, as warranted based on site subsurface conditions, details of the proposed construction, and any available preliminary design information.



## 2.0 SITE CONDITIONS

### 2.1 Site Reconnaissance, Boring Stakeout and Investigation

TRC's field staff performed a site reconnaissance in conjunction with test boring stakeout. Test boring locations were staked in the field using a hand-held GPS unit at the approximate locations recommended by TRC's geotechnical staff and approved by the Client as shown on the Test Boring Location Plan. The site is mostly open agricultural fields covered by seasonal crops along the array field. Some wooded areas are present in many of the proposed parcel areas. Prior to drilling, the Dig Safely NY notification system was contacted to check the presence of public utilities in the area of the proposed testing borings.

The test boring work was performed during the period from April 27, 2021 to May 4, 2021 by TRC's drilling subcontractor, CME Associates. Drilling and sampling were performed using an ATV-mounted drill rig in general accordance with ASTM D 1586. Split spoon sampling was performed continuously through the upper 10 ft and at 5 ft intervals thereafter to the completion depths of each boring, unless refusal to drilling tools was encountered prior to these depths. Borings were terminated at depths ranging from 6.5 to 15 ft below existing ground surface (bgs) within the proposed solar array areas. Test borings for the proposed substation locations were extended to depths of 35 ft bgs each. Upon completion, all test borings were backfilled to the approximate existing ground surface with the auger cuttings. Copies of the test boring logs and a Test Boring Location plan identifying approximate borings locations are attached.

### 2.2 Geology

According to available geological data, the surficial geology at the project site consists of residual soils. Locally the site is underlain predominantly by mudstone and shale of the Canajoharie Shale Formation from the Middle Ordovician Age. The northern parcels sit near a contact with carbonate limestone of the Trenton and Black River Groups, as well as Quarternary Age glacial and alluvial deposits.

### 2.3 Subsurface Conditions

The test borings revealed that the project site is generally covered with a surficial layer of topsoil approximately 3 inches thick. Below the surficial topsoil, the subsurface conditions consisted of brown to dark brown clays and silts with varying quantities of sand and gravel or gravel-sized rock fragments. Standard Penetration (SPT) N-values indicate that the consistency of this layer ranges from "medium" and "stiff" in the upper 2 to 4 ft bgs and generally increasing to "very stiff" to "hard with depth. Laboratory test results performed on representative samples indicate plastic limits ranging from approximately 13% to 28%, liquid limits ranging from 18% to 52% and plasticity indices ranging from 4% to 25%.



Natural moisture contents range from approximately 10% to 40% and dry unit weights ranged from approximately 93.9 to 124.8 pounds per cubic foot (pcf). Maximum laboratory compacted dry density of five composite bulk samples as determined by ASTM D 698 ranged from 96.2 to 119 pcf at optimum moisture contents ranging from 11.8% to 18.4%.

Occasional strata of cobbles and boulders were encountered in various borings ranging from the depth of 3 ft to 15 ft. The SPT N-values for these strata indicate the consistency of very dense to refusal. The presence of this strata may pose difficult driving conditions for driven post type foundation during installation.

Auger refusal, which typically represents the presence of weathered rock was encountered in ten (10) of the borings, sporadically located throughout the exploration area. Refusal depths varied between 6.5 ft and 9.5 ft, dipping away from Mohawk River. Difficult drilling conditions which are typically indicative of very dense till type of soil and/or decomposed rock were also encountered in 21 of the 32 test boring locations. The depths and locations where difficult drilling and auger refusal were encountered are summarized in Table 1, below.

Test Boring Location	Depth to Very Dense Soils/Difficult Drilling (ft)	Depth to Auger Refusal (ft)
B-01	6.5	6.9
B-02	8	>15
B-03	8	>15
B-04	7	>15
B-05	7	>15
B-06	7	7.7
B-07	8	>15
B-08	>15	>15
B-09	10	13.9
B-10	7.8	>15
B-11	6	7.6
B-12	5	>15
B-13	>15	>15
B-14	13.5	>15
B-15	9	>15
B-16	>15	>15
B-17	9	10.5
B-18	6	8
B-19	6	7.5

 Table 1. Summary of Difficult Drilling and Auger Refusal Depths



Test Boring Location	Depth to Very Dense Soils/Difficult Drilling (ft)	Depth to Auger Refusal (ft)
B-20	>15	>15
B-21	>15	>15
B-22	>15	>15
B-23	6	>15
B-24	8	>15
B-25	>15	>15
B-26	>15	>15
B-27	13.5	>15
B-28	8	>15
B-29	7	14.6
B-30	5.5	6.5
SS-01	7	>35
SS-02	9	>35

### 2.4 Ground Water

Groundwater was encountered during drilling at the time of the field investigation in seven (7) of the test boring locations as summarized in Table 2 below:

Test Boring Location	Groundwater Depth (ft)
B-08	12.5
B-09	10.3
B-24	10.3
B-25	14.2
B-28*	3
B-30*	2.5
SS-02	8.2

 Table 2. Summary of Groundwater Conditions

\* Possible perched water

Groundwater and/or the development of perched water conditions may be encountered within standard excavation depths for foundations or utilities during wet periods. The groundwater conditions are representative of the conditions at the date and time of this study and are not representative of daily, seasonal, long term fluctuations, development of perched conditions, or ponding of water in low lying areas during wet periods.



## 3.0 CORROSION EVALUATION AND THERMAL RESTIVITY

### **3.1 Corrosion Evaluation**

To evaluate the corrosion potential of the subsurface soils at the site, we submitted five (5) composite bulk soil samples collected from test boring locations (approximately 0-5 ft bgs) during our subsurface investigation to an analytical laboratory for pH, resistivity, soluble sulfate and chloride content testing. The results are summarized in Table 3, below.

rusic of Neounty resulty										
Sample	Boring No.	Chloride (mg/kg)*	Sulfate (mg/kg)*	рН	Resistivity (ohm-cm)**	Estimated Corrosivity Based on Resistivity	Estimated Corrosivity Based on Sulfates			
Bulk 1	B-1 to B-5	50	58	7.7	2,548	Moderately Corrosive	Negligible			
Bulk 2	B-6 to B-8	40	55	8.1	2,940	Moderately Corrosive	Negligible			
Bulk 3	B-9 to B-14	40	220	8.4	1,260	Severely Corrosive	Negligible			
Bulk 4	B-22 to B-29	38	235	8.2	1,176	Severely Corrosive	Negligible			
Bulk 5	SS-1 & SS-2	75	185	8.3	1,568	Severely Corrosive	Negligible			

Table 3. Results of Corrosivity Testing

mg/kg = milligrams per kilogram

\*\* ohm-cm = ohm-centimeter

TRC also conducted ten (10) field resistivity testing using the Wenner Four-Pin method in general accordance with ASTM G57. Tests were centered at boring locations B-1, B-4, B-9, B-12, B-13, B-16, B-20, B-22, B-27, and SS-2 with the test lines oriented perpendicular to one another at each test location. Measurements were taken along each test line corresponding to electrode spacings of 2.5 ft, 5 ft, 10 ft, 20 ft, and 40 ft. Field resistivity test results are attached, and the results are discussed further in this section.

Many factors can affect the corrosion potential of soil including soil moisture content, resistivity, permeability and pH, as well as chloride and sulfate concentration. In general, soil resistivity, which is a measure of how easily electrical current flows through soils, is the most influential factor. Based on classification developed by William J. Ellis (1978), the approximate relationship between soil corrosiveness was developed as shown in Table 4 below.



Soil Resistivity	Classification of					
(ohm-cm)*	Soil Corrosiveness					
0 to 900	Very Severely Corrosive					
900 to 2,300	Severely Corrosive					
2,300 to 5,000	Moderately Corrosive					
5,000 to 10,000	Mildly Corrosive					
10,000 to >100,000	Very Mildly Corrosive					
+ 1 1 1 1						

Table / Polationshi	in Ratwoon Soil Pasisti	vity and Soil Corrosivity
1 abie 4. Reiauonsin	p Delween Jun Kesisu	vily and Son Conosivily

\* ohm-cm = ohm-centimeter

Chloride and sulfate ion concentrations and pH appear to play secondary roles in affecting corrosion potential. High chloride levels tend to reduce soil resistivity and break down otherwise protective surface deposits, which can result in corrosion of buried metallic improvements or reinforced concrete structures. Sulfate ions in the soil can lower the soil resistivity and can be highly aggressive to Portland cement concrete (PCC) by combining chemically with certain constituents of the concrete, principally tricalcium aluminate. This reaction is accompanied by expansion and eventual disruption of the concrete matrix. Soils containing high sulfate content could also cause corrosion of the reinforcing steel in concrete. Table 4.2.1 of the American Concrete Institute (ACI, 2008) provides requirements for concrete exposed to sulfate-containing solutions as summarized in Table 5.

 Table 5. Relationship Between Sulfate Concentration and Sulfate Exposure

 (Table 4.2.1 of ACI)

Water-Soluble Sulfate (SO4) in soil (ppm)*	Sulfate Exposure
0 to 1,000	Negligible
1,000 to 2,000	Moderate
2,000 to 20,000	Severe
over 20,000	Very Severe

\* ppm = parts per million

Acidity is an important factor of soil corrosivity. The lower the pH (the more acidic the environment), the higher will the soil corrosivity be with respect to buried metallic structures. As soil pH increases above 7 (the neutral value), the soil is increasingly more alkaline and less corrosive to buried steel structures due to protective surface films which form on steel in high pH environments. A pH between 5 and 8.5 is generally considered relatively passive from a corrosion standpoint.

The laboratory electrical resistivity tests completed on the composite samples of surficial soils indicate values ranging from 1,176 to 2,940 ohm-centimeters, which would be indicative of moderately to severely corrosive potential to buried metallic improvements. Based on the field resistivity testing results, the electrical resistivity

values for the existing subsoils range from approximately 3,275 to 69,132 ohmcentimeters. Based on these results and the resistivity correlations presented in Table 4, the corrosion potential to buried metallic improvements may be characterized a ranging from moderately corrosive to severely corrosive.

Based on our previous experience and Table 4.2.1 of the ACI, it is our opinion that sulfate exposure to PCC may be considered negligible for the native subsurface materials sampled.

## 3.2 Thermal Resistivity

The thermal resistivity test results with the thermal dryout curves, are attached to this report. Thermal Resistivity testing was performed in general accordance with ASTM 5334 on five composite samples compacted to density equivalent to approximately 90% of the maximum dry density per ASTM D 698 and at the optimum moisture contents for each composite test sample. The samples were then oven dried and multiple thermal resistivity readings were obtained at various moisture contents. The thermal resistivities decrease with increasing moisture content and varies from 100 to 565 °C-cm/W when fully dry and from 46.8 to 111.5 °C-cm/W at optimum moisture.

## 4.0 FOUNDATIONS AND EARTHWORK

### 4.1 Site Seismic Coefficients

According to the 2018 International Building Code, the site class is within "Site Class C" based on the soil profiles. The maximum considered earthquake ground motions in this area for 0.2 sec. and 1.0 sec. spectral responses are approximately 21.4 % g and 6.2 % g, respectively. For Site Class C, the corresponding 0.2 and 1.0 sec. design spectral response acceleration parameters  $S_{DS}$  and  $S_{D1}$  are 18.5 % g and 6.2 % g, respectively.

### 4.2 Foundations

Based on the results of this investigation and our experience with similar structures, a foundation system consisting of driven posts is generally preferred for support of the proposed ground-mounted photovoltaic arrays. Boring locations were divided in five (5) different zone for engineering characterization purposes. Based on the results of the test borings, the use of driven posts could be problematic in zones 2 and 3 (Table 5) due to very dense soil and shallow refusal conditions

As noted in Table 1, nine (9) test borings encountered refusal to earth drilling equipment at depths ranging from 6.5 to nearly 15 feet bgs. Additionally, difficult drilling conditions and/or very dense soil conditions including cobble layers were encountered in twenty (20) of the thirty two (32) test borings at depths ranging from 5 ft to 10 ft ft bgs. Therefore,



shallow refusal conditions may be encountered within these areas and other portions of the proposed solar array areas when attempting to drive posts.

Since the use of a driven post system may be limited for use on this project where refusal to drilling and sampling tools is encountered, the designer and contractor should be prepared to implement alternative installation methods (or alternative foundation support systems) for achieving sufficient foundation embedment to provide sufficient resistance for uplift and lateral loading condition, as necessary. The following alternatives will need to be considered at the project site since subsurface obstructions due to likely highly decomposed rock or possible cobbles are anticipated at depths less than 10 ft at six (6) out of thirty (32) test boring locations in addition to possible difficult driving conditions due to very dense residual soils:

- The use of predrilling or spudding with a heavy steel beam to break up the dense highly decomposed rock or other obstructions to increase post embedment for vertical and lateral support.
- The use of larger sized, heavier grade posts that will allow harder driving and could provide increased embedment and sufficient lateral capacity and uplift.
- The use of helical screw piles to achieve uplift and lateral capacities at shallower depths.
- The use of shallow spread footings or ballast foundations where adequate embedment with other foundation or installation methods cannot be achieved.

### 4.2.1 Driven Post Support System

As mentioned above, driving post beyond depths where very dense soils, cobble layers, and highly decomposed rock were encountered will be difficult and pre-drilling will likely become necessary to achieve sufficient post depth to resist the required lateral and uplift loads wherever similar conditions are encountered. All posts should be driven to bear at sufficient depths required to provide adequate axial, uplift, and lateral resistances.

### 4.2.2 Helical Screw Support System

A helical pile system, such as that manufactured by IDEAL Manufacturing, AB Chance, Magnum Piering, or similar, having a minimum 3-inch diameter or low-displacement ground screws, such as those manufactured by TerraSmart, or similar, could be considered as an alternative to driven posts in areas where overburden depths are less than 8 ft for support of the proposed arrays. Lateral and uplift capacities of helical piles, as well as the ability of the shaft to withstand anticipated installation torque based on subsurface conditions, should be verified by the pile manufacturer or installer. Generally speaking, additional capacities can be developed using larger diameters and helix combinations. Installation of



helical piles below the auger refusal depths, where encountered, will not be feasible. Embedment into the very dense/difficult augering material may be possible, but as stated previously, will be dependent on the ability of the central shaft to withstand installation torque required to advance helices. Depths of very dense soils and auger refusal are as presented in Table 1 above and piles will not be able to penetrate below these depths Alternative to a conventional small shaft diameter helical pile, the use of a continuous flight helical pile, could be considered that generally can be drilled deeper into very dense soil conditions as compared to a conventional helical pile with larger diameter helices.

The final design should be verified by the helical or drilled pile manufacturer prior to implementation at the site. Also, the type and diameter of helix plates to be used, as well as the central bar or round pipe characteristics or that of a continuous flight helical pile should be verified by the product manufacturer based on this design capacity and anticipated torque value required for installation of the helical piles. If subsurface obstructions are encountered during installation, pre-drilling or pre-excavation will be required. If predrilling or pre-excavating, then all piles should be grouted to ensure intimate contact with surrounding soils and so not to negatively impact lateral stability.

Recommended geotechnical parameters for use in design analysis, included in Tables 6a through 6e below, can be utilized for evaluation of posts or piles for support of the PV solar array, or other design analysis, as required. We recommend that lateral and uplift resistance of soils be reduced by 50% above a depth of 4 ft below the ground surface to account for disturbance resulting from construction as well as to account for the negative impacts and loss of support due to frost and thaw action. A minimum factor of safety of 2 is recommended for compression loads; a factor of safety equal to 3 should be used for determining allowable uplift capacity of piles; a factor of safety equal to 1.5 should be used for transient (wind/seismic) loading conditions.

[	-	(readed		or upper 4 1	9		
Soil Description	LPILE Soil Type	Relative Density / Consistency	Total Unit Weight (pcf*)	Friction Angle (degrees)	E <sub>50</sub>	Cohesion (psf**)	Allowable Bearing Capacity (ksf***)
SILT & CLAY (0-4 ft)	Clay	"Medium" to "Stiff"	120	-	0.01	1,500	2
SILT & CLAY (4 ft+)	Clay	"Very Stiff" to "Hard"	125	-	0.005	3,000	4

### Table 6a. Summary of Unfactored Soil Parameters for Design Zone 1: Borings B-1 through B-5 (reduce by 50% for upper 4 ft)

pcf – pounds per cubic foot

\*\* psf – pounds per square foot

\*\*\* ksf – kips per square foot



### Table 6b. Summary of Unfactored Soil Parameters for Design Zone 2: Borings B-6 through B-8 (reduce by 50% for upper 4 ft)

Soil Description	LPILE Soil Type	Relative Density / Consistency	Total Unit Weight (pcf*)	Friction Angle (degrees)	E <sub>50</sub>	Cohesion (psf**)	Soil Modulus, k (pci***)	Allowable Bearing Capacity (ksf****)
Silty CLAY (0-6 ft)	Clay	"Medium" to "Stiff"	115	-	0.01	1,500		1.5
Silty SAND & Silty Gravel (6 ft+)	Sand	"Medium Dense/Very Stiff" to "Dense/Hard"	125	34	-	-	225	4
*	pcf-	– pounds per cu	ibic foot	1		1	1	1

\*\* psf – pounds per square foot

\*\*\* pci – pounds per cubic inch

\*\*\*\* ksf – kips per square foot

### Table 6c. Summary of Unfactored Soil Parameters for Design Zone 3: Borings B-9 through B-16 (reduce by 50% for upper 4 ft)

Soil Description	LPILE Soil Type	Relative Density / Consistency	Total Unit Weight (pcf*)	Friction Angle (degrees)	E <sub>50</sub>	Cohesion (psf**)	Soil Modulus, k (pci***)	Allowable Bearing Capacity (ksf****)
Sandy and Clayey SILT (0-6 ft)	Clay	"Medium" to "Stiff"	115	-	0.01	1,500		2
SILT and Sandy SILT (6 ft+)	Sand	"Medium Dense/Very Stiff" to "Dense/Hard"	130	32	-	-	225	3

pcf – pounds per cubic foot

\*\* psf – pounds per square foot

\*\*\* pci – pounds per cubic inch

\*\*\*\* ksf – kips per square foot

### Table 6d. Summary of Unfactored Soil Parameters for Design Zone 4: Borings B-17 through B-21, B-30, SS-1 & SS-2 (reduce by 50% for upper 4 ft)

Soil Description	LPILE Soil Type	Relative Density / Consistency	Total Unit Weight (pcf*)	E <sub>50</sub>	Cohesion (psf**)	Allowable Bearing Capacity (ksf***)
Silt & Clay (0-2 ft)	Clay	"Soft" to "Medium"	115	0.01	1,000	1.5



Soil Description	LPILE Soil Type	Relative Density / Consistency	Total Unit Weight (pcf*)	E <sub>50</sub>	Cohesion (psf**)	Allowable Bearing Capacity (ksf***)
Silt & Clay (2-6 ft)	Clay	"Medium" to "Stiff"	115	0.01	1,500	1.5
Silty CLAY & Silty Gravel (6 ft+)	Clay	"Medium Dense/Very Stiff" to "Dense/Hard"	125	0.005	4,000	4

pcf – pounds per cubic foot

\*\* psf – pounds per square foot

\*\*\* ksf – kips per square foot

### Table 6e. Summary of Unfactored Soil Parameters for Design Zone 5: Borings B-22 through B-29 (reduce by 50% for upper 4 ft)

Soil Description	LPILE Soil Type	Relative Density / Consistency	Total Unit Weight (pcf*)	Friction Angle (degrees)	E <sub>50</sub>	Cohesion (psf**)	Soil Modulus, k (pci***)	Allowable Bearing Capacity (ksf****)
SILT (0-6 ft)	Clay	"Medium" to "Stiff"	115	-	0.01	1,500	-	2
SILT & SILTY SAND (6 ft+)	Sand	"Medium Dense/Very Stiff" to "Dense/Hard"	125	32	-	-	225	3

pcf – pounds per cubic foot

\*\* psf – pounds per square foot

\*\*\* pci – pounds per cubic inch

\*\*\*\* ksf – kips per square foot

We recommend that the installation of each pile size or system utilized should be monitored and documented by qualified geotechnical personnel under the direct supervision of a professional engineer registered in the State of New York. Prior to or during construction, we recommend that tension and lateral load tests be conducted on a minimum of two piles for each pile size or system planned to be utilized for this project to verify the adequacy of the design. Testing should be performed in general accordance with ASTM 3689 and ASTM 3966 or in accordance with standard practice in the industry. The test locations should coincide with the test boring locations based on the variability of the subsurface conditions. Each planned pile type should be installed with the same means and methods used to install production piles. In the event that the means and methods of pile installation are revised following initial pile testing, additional pile tests should be performed to verify that sufficient resistance can be achieved with the revised means and methods. The results should be reviewed and approved by a qualified geotechnical engineer.



### 4.2.3 Shallow Foundations

Shallow foundation systems such as rigid mats can be considered for support of electrical equipment. Mats supporting electrical equipment can be designed for an allowable bearing capacity of 2,000 psf when constructed in accordance with the general recommendations presented in the *Earthwork* section of this report. A vertical subgrade modulus of 100 pci may be used in foundation mat design. Foundation subgrades for supporting electrical equipment or other ancillary structures subjected to freezing temperatures during construction and/or the life of the structure should be established at least 4 ft below adjacent grades or otherwise protected against frost action. Alternatively, to resist frost heave, light loaded mat slabs constructed at grade should be provided a coarse aggregate similar to AASHTO #57 aggregate below the slab that extends to frost depth. To guard against a punching type shear failure, minimum widths of continuous footings should be 24 in.

Shallow excavations for foundation slabs and construction of utilities are not expected to encounter static groundwater. However, perched groundwater should be anticipated in excavations in low lying areas or during wet periods. If perched groundwater or surface runoff are encountered, sumps and pumps should be sufficient to control groundwater and provide stable working conditions.

### 4.3 Earthwork

Based on our understanding of the proposed construction, significant grading and earthwork operations are not anticipated unless material removal and replacement would be considered for support of equipment foundations. The following recommendations are provided based on the site soils encountered.

Any existing subsurface utilities which conflict with the proposed development should be removed or relocated, where applicable. In areas of backfill placement and/or construction of shallow foundations, all topsoil and organic or otherwise deleterious material should be removed before foundation construction or new fill placement. Any obstructions that would interfere with new foundation construction must be removed in their entirety from a foundation location. After stripping residual topsoil and excavation to the proposed bearing elevations for shallow mat foundations, the exposed subgrade areas should be vigorously densified with as large a compactor as is practical. Loose or unstable areas identified during the course of excavation should be densified in-place or excavated and replaced with compacted load bearing fill.

The natural soils surficial soils contain predominantly fine-grained (clay and silt) content and will be sensitive to moisture and disturbance, especially during wet periods. Therefore, they will lose considerable strength when wet or disturbed by construction equipment and



could be difficult to work with during cold or wet weather. Laboratory testing of representative samples indicates that the in-situ surficial soils are generally above their optimum moisture contents. Therefore, drying of these soils should be anticipated before reuse in compacted backfills, particularly during wet seasons. Once a subgrade has been prepared, construction traffic should be controlled in such a fashion as to minimize subgrade disturbance.

Imported load-bearing fill, if required, should consist of well-graded granular material similar to SW-GW as identified by the Unified Soil Classification System (USCS) which is not excessively moist and is free from ice and snow, roots, surface coatings, sod, loam, clay, rubbish, other deleterious or organic matter, and any particles larger than 4 inches in diameter. Alternatively, an AASHTO No. 57 coarse aggregate layer (minimum 24 inches thick) could be utilized below mat foundations supporting electrical equipment to reduce frost impacts.

All backfills fills should be placed in layers not exceeding 8 in. loose thickness. This criterion may be modified in the field depending on the conditions present at the time of construction and on the compaction equipment used. Load-bearing fills for the support of foundations should be compacted to not less than 98% of maximum dry density (ASTM D 698). All fills and backfills if utilized for areas of the solar array posts or piles, should be compacted to not less than 95% of maximum dry density. Fills in paved areas or access roads, if planned, should be compacted to not less than 95% of maximum dry density. Fills in landscaped areas should be compacted to at least 90% of maximum dry density.

The sidewalls of any confined excavations deeper than 4 ft must be sloped, benched or adequately shored per OSHA 29 CFR 1926 regulations. Trench boxes and/or sheeting could be used in conjunction with open cut slopes to permit access to confined excavations. The onsite near surface soils are classified as Type B soils according to OSHA 29 CFR 1926. Open excavations in the natural soils should not be steeper than 1H:1V if dry and 1.5H:1V if submerged.

If site grading will include cuts, especially near or beyond the depths listed in Table 1, then heavy duty excavators or dozers with ripper attachments will be required to remove the decomposed rock materials.

## 4.4 Trench Backfill

Bedding and pipe embedment materials to be used around underground utility or electrical conduit pipes should be well graded sand or gravel conforming to the pipe manufacturer's recommendations and should be placed and compacted in accordance with project specifications, local requirements or governing jurisdiction. General fill to be used above pipe embedment materials should be placed and compacted in accordance with the recommendations contained in this section.



Utility trenches located adjacent to footings or foundations should not extend below an imaginary 1:1 (horizontal:vertical) plane projected downward from the foundation bearing surface to the bottom edge of the trench. Where utility trenches will cross beneath footing bearing planes, the footing concrete should be deepened to encase the pipe, or the utility trench should be backfilled with sand/cement slurry or lean concrete within the foundation-bearing plane.

Depended on site grading and depth of trenches, it is noted that cobbles and or refusal to excavation equipment may be encountered during excavation of trenches. Heavy duty excavators and/or hydraulic ram attachments may need to be considered if such conditions are encountered.

## 4.5 Surface Drainage

Positive surface water drainage gradients at least 2 percent should be provided to direct surface water away from foundations and mat slabs towards suitable discharge facilities. Ponding of surface water should not be allowed on or adjacent to structures, slabs-on-grade, or pavements. Any rain runoff should be directed away from foundation and slabs-on-grade such as equipment pads, as applicable.

In addition, a sufficiently thick velocity dissipater, such as layer of coarse drainage aggregate of at least 3 to 4 inches in size, should be placed along water flow paths to dissipate concentrated flow of runoff water in order to minimize surface erosion.

### 4.6 Plans, Specifications, and Construction Review

We recommend that TRC perform a plan review of the geotechnical aspects of the project design for general conformance with our recommendations. In addition, subsurface materials encountered in the relatively small diameter, widely spaced borings may vary significantly from other subsurface materials on the site. Therefore, we also recommend that a representative of our firm observe and confirm the geotechnical specifications of the project construction. This will allow us to form an opinion about the general conformance of the project plans and construction with our recommendations. In addition, our observations during construction will enable us to note subsurface conditions that may vary from the conditions encountered during our investigation and, if needed, provide supplemental recommendations. For the above reasons, our geotechnical recommendations are contingent upon geotechnical observation and testing services by qualified geotechnical professionals during construction to confirm that site conditions do not vary considerably from the conditions previously observed. These services are not included as part of TRC's current scope of work.



## 4.7 Construction Observation

A qualified geotechnical professional should observe the geotechnical aspects of the earthwork for general conformance with our recommendations including site preparation, selection of fill materials, pile installation, and the placement and compaction of fill. To facilitate your construction schedule and if you wish TRC to perform these services, we request sufficient notification (72 hours) for site visits. The project plans and specifications should incorporate all recommendations contained in the text of this report. These services are not included as part of TRC's current scope of work.

## 5.0 LIMITATIONS

This report has been prepared ConnectGen LLC., specifically for design of the proposed solar array and associated development to be constructed at the project site located in Glen, NY, as identified herein.

Transfer of this report or included information is at the sole discretion of ConnectGen LLC. TRC's contractual relationship remains with ConnectGen LLC and limitations stated herein remain applicable regardless of end user. The opinions, conclusions, and recommendations presented in this report have been formulated in accordance with accepted geotechnical engineering practices that exist in the area at the time this report was written. No other warranty, expressed or implied, is made or should be inferred.

The opinions, conclusions and recommendations contained in this report are based upon the information obtained from our investigation, which includes data from a limited number of widely separated discrete locations, visual observations from our site reconnaissance, and review of other geotechnical data provided to us, along with local experience and engineering judgment. An attempt has been made to provide for normal contingencies; however, the possibility remains that differing or unexpected conditions may be encountered during construction. If this should occur, or if additional or contradictory data are revealed in the future, TRC should be notified so that modifications to this report can be made, if necessary. TRC is not responsible for any conclusions or opinions drawn from the data included herein, other than those specifically stated, nor are the recommendations presented in this report intended for direct use as construction specifications.

TRC should be retained to review the geotechnical aspects of the final plans and specifications for conformance with our recommendations. The recommendations provided in this report are based on the assumption that TRC will be retained to provide observation and testing services during construction to confirm that conditions are similar to that assumed for design and to form an opinion as to whether the work has been performed in accordance with the project plans and specifications. If we are not retained for these services, TRC cannot assume any responsibility for any potential claims that may arise during or after construction as a result of misuse or misinterpretation of TRC's report by



others. Furthermore, TRC will cease to be the Geotechnical Engineer-of-Record at the time another consultant is retained for follow up service to this report, if applicable.

The opinions presented in this report are valid as of the present date for the property evaluated. Changes in the condition of the property will likely occur with the passage of time due to natural processes and/or the works of man. In addition, changes in applicable standards of practice can occur as a result of legislation and/or the broadening of knowledge. Furthermore, geotechnical issues may arise that were not apparent at the time of our investigation. Accordingly, the opinions presented in this report may be invalidated, wholly or partially, by changes outside of our control. Therefore, this report is subject to review and should not be relied upon after a period of three years. Similarly, this report should not be used, nor are its recommendation applicable, for any other properties or alternate developments.

We trust this report contains the information you require and thank you for the opportunity to work on this project. Please consider our firm for future geotechnical services as needed.

Sincerely,

**TRC Engineers, Inc.** 

James P. Benjamiø, PE\* Geotechnical Project Manager \*NJ, PA

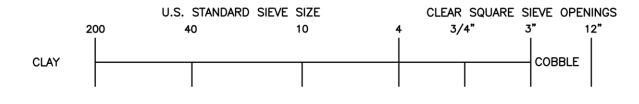
Nhi K. Lam, EIT Geotechnical Engineer

Petro W. Kazaniwsky, PE Chief Geotechnical Engineer NY License No.: 081310



				SA	ND		GRA	VEL				
SILT	SILTS AND CLAY		FINE	MED	NUM	COARSE	FINE COARSE		COBBLES	BOULDERS		
	PR	IMARY DIVISIO	DNS	SOIL TYPE		S	ECONDARY	DIVISIONS				
			CLEAN GRAVELS	GW		Well graded gravels,	, gravel—sand	d mixtures,	little or no	fines		
SOILS	。	GRAVELS	(Less than 5% Fines)	GP	$\circ$	Poorly graded grave	els or gravel-	-sand mixtu	res, little o	r no fines		
MATE MATE	0. 20	OF COARSE FRACTIO IS LARGER THAN NO. 4 SIEVE	GRAVEL	GM		Silty gravels, gravel	-sand-silt m	nixtures, plas	stic fines			
GRAINED HALF OF M	LARGER THAN NO. 200 SIEVE SIZE	HAN N		FINES	GC		Clayey gravels, grav	el-sand-clay	/ mixtures,	plastic fines	3	
	SIEVE		CLEAN SANDS	SW	••••	Well graded sands, gravelly sands, little or no fines						
	IS LAF		SANDS MORE THAN HALF	MORE THAN HALF	(Less than 5% Fines)	SP		Poorly graded sand	s or gravelly	sands, little	e or no fine	es
<sup>№</sup> CO		OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	LER THAN SANDS	SM		Silty sands, sand—s	Silty sands, sand-silt-mixtures, non-plastic fines					
			FINES	SC		Clayey sands, sand	-clay mixture	es, plastic fi	ines			
Sila S	。			ML		Inorganic silts and sands or clayey silt			our, silty or	clayey fine		
SOILS MATERIAL	0. 20	0.2.0	ID CLAYS LESS THAN 50 %	CL		Inorganic clays of I clays, silty clays, le		ow to medium plasticity, gravelly clays, sandy an clays				
LED F	SIZE			OL	11	Organic silts and o	rganic silty c	lays of low	plasticity			
GRAINED AN HALF OF	SIEVE			мн		Inorganic silts, mico soils, elastic silts	aceous or die	atomaceous	fine sandy	or silty		
	SILTS AND CLAYS SILTS AND CLAYS LIQUID LIMIT IS LESS THAN S SILTS AND CLAYS SILTS AND CLAYS			СН		Inorganic clays of I	nigh plasticity	, fat clays				
				ОН		Organic clays of m	edium to hig	h plasticity,	organic sill	S		
	HIGH	ILY ORGANIC	SOILS	PT	<u> </u>	Peat and other hig	hly organic s	oils				

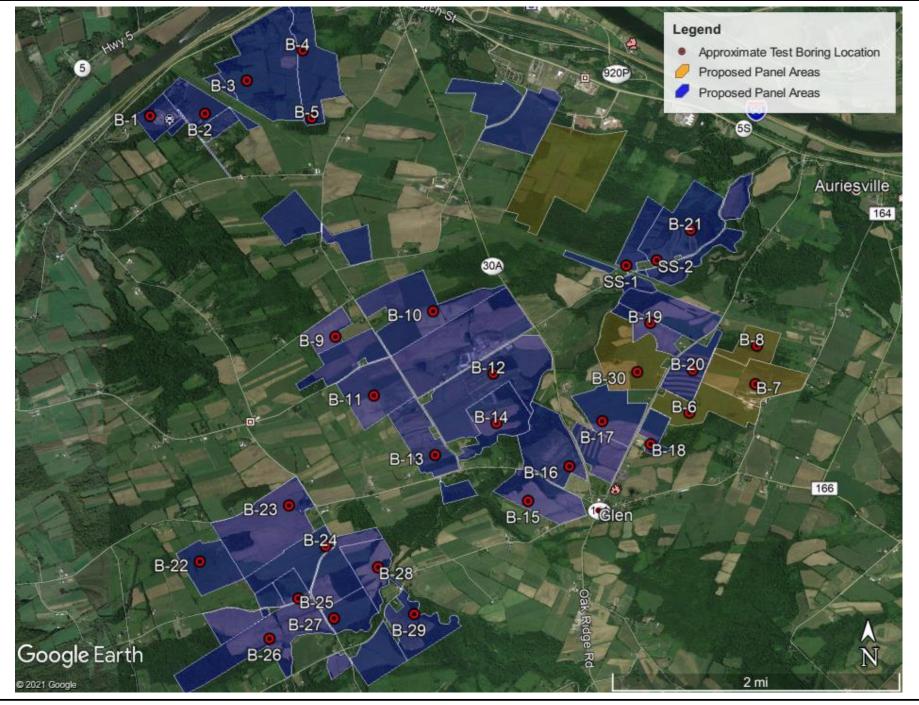
## DEFINITION OF TERMS





# FIELD DATA

# **FIGURES**



Project No. 411360.GEO1		APPROXIMATE TEST BORING LOCATIONS	FIGURE
Date: June 9, 2021 For: ConnectGen LLC Houston, TX	16000 Commerce Parkway, Mr. Laurel, New Jersey 08054 PH (1856) 273-1224 FAX (1856) 273-9244	Mill Point Solar Town of Glen, Montgomery County, New York	1

TEST BORING LOGS



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

GROUNDWATER DATA										
FIRST ENCOUNTERED N/A										
DEPTH	HOUR	DATE	ELAPSED TIME							

METHOD OF ADVANCING BOREHOLE								
а	FROM	0.0 '	то	6.6 '				
d	FROM	6.6 '	то	6.9 '				

BORING **B-01** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/27/2021
DATE COMPLETE	ED 04/27/2021

	DEPTH	1	Α			В		С		DESCRIPTION	PP	REMARKS
									0.2	TOPSOIL		
						•						
		-	S-1	2	4	3	3					
			S-2	3	4	7	7			BROWN SILTY CLAY, TR TO SM F/M SAND, SM ORANGE STAINING		
	5											
	· _			_	~	10						
			S-3 S-4	5 19	<u>9</u> 100	<u>16</u> 0/0.1'	24					
		_F							6.9		-	AUGER REFUSAL AT
										END OF BORING AT 6.9'		6.9 FT
	10											
	10	+										
		_										
		_										
	45											
	15 _	+										
		_										
		-										
	20	+										
_												
3/9/2												
GEO1.GPJ SITE BLAUVELT.GDT 6/9/21												
9. 5		-										
		_										
BLA	25 _											
Ë												
2												
<u>5</u>												
E E E E		-										
1360.												
41	30 _											
9		T										
g		$\neg$										
BOR		-										
ST		_										
S TE												
	35											
NEW PROJECTS TEST BORING LOG 411360.			1					1	1	DRN.		SAP
×.										CKD.		JPB
۳ſ												



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA 

 FIRST ENCOUNTERED
 N/A

 DEPTH
 HOUR
 DATE
 ELAPSED TIME

М	METHOD OF ADVANCING BOREHOLE									
а	FROM	0.0 '	то	10.0 '						
d	FROM	10.0 '	то	15.0 '						

BORING **B-02** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	004/27/2021
DATE COMPLET	TED 04/27/2021

DEPTH	A			В		С	DESCRIPTION	PP	REMARKS
							2 TOPSOIL		
	S-1	1	4	4	5				
5	S-2	3	4	6	8				
	S-3	12	12	16	12		DARK BROWN SILTY CLAY, TR GRAVEL, SM ORANGE STAINING ON GRAVEL, MOIST		
	S-4	19	30	23	30				
10	S-5	10	16	22	26		0.0		
							DARK BROWN TO BLACK SILTY CLAY, SM GRAVEL		
15	S-6	7	7	11			5.0		
							END OF BORING AT 15'		
20									
25									
30									
35							DRI	 1	SAP
							СКЕ		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

GROUNDWATER DATA										
FIRST ENCOUNTERED N/A										
DEPTH	HOUR	DATE	ELAPSED TIME							

М	METHOD OF ADVANCING BOREHOLE									
а	FROM	0.0 '	то	10.0 '						
d	FROM	10.0 '	то	15.0 '						

BORING **B-03** 

G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/27/2021
DATE COMPLETE	ED 04/27/2021

DEPTH	А	В	DESCRIPTION	PP REMARKS
5	S-1 S-2 S-3	2 3 5 5 4 5 6 6 3 3 6 5	BROWN CLAYEY SILT, TR TO SM F/M S	AND, MOIST
	S-4 S-5	<u>3 5 18 76</u> 100/0.4'	6.3 BROWN CLAY, TR TO SM GRAVEL 8.5	PROBABLE COBBLES 7.8 FT TO 8.5 FT
	_		BROWN TO DARK GRAY SILT, TR TO S MOIST	M GRAVEL,
15	S-6	8 10 13	15.0 END OF BORING AT 15'	
	1	I		DRN. <u>SAP</u> CKD. JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA							
FIRST ENCOUNTERED N/A							
DEPTH	HOUR	HOUR DATE ELAPSED TIME					

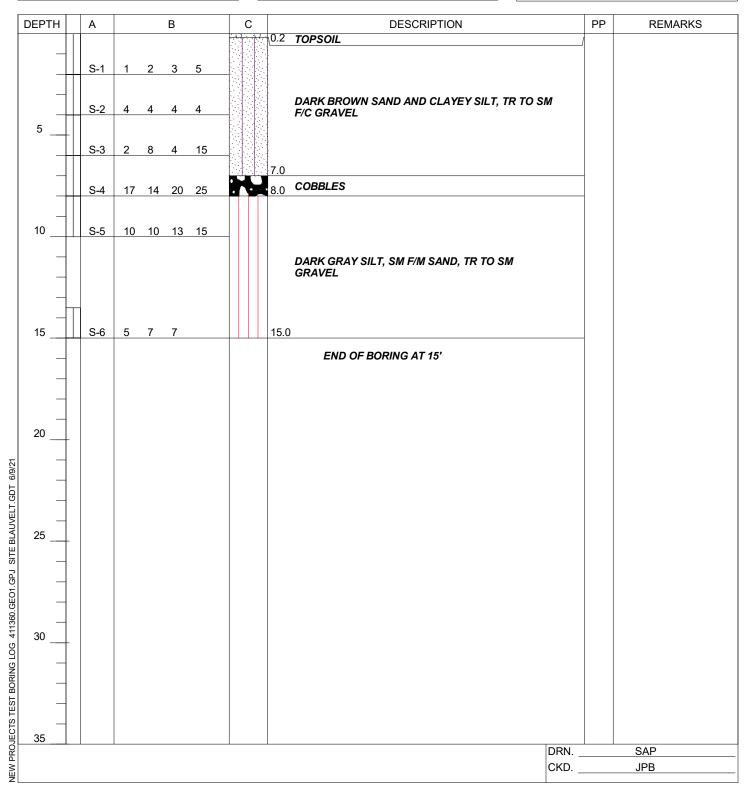
Μ	IETHOD O	F ADVANO	CING BO	REHOLE
а	FROM	0.0 '	то	10.0 '
d	FROM	10.0 '	то	15.0 '

BORING **B-04** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/27/2021
DATE COMPLET	ED 04/27/2021





PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA						
FIRST ENCOUNTERED N/A						
DEPTH	HOUR	HOUR DATE ELAPSED TIME				

М	ETHOD O	F ADVANO	CING BO	REHOLE
а	FROM	0.0 '	то	10.0 '
d	FROM	10.0 '	то	15.0 '

BORING B-05

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/27/2021
DATE COMPLETE	ED04/27/2021

DEPTH	н	A			В			С		DESCRIPTION	PP	REMARKS
							÷.4	<del></del>	0.2	TOPSOIL		
		S-1	1	1	3	6						
	+	3-1	1	1	<u> </u>	0	-					
										DARK BROWN TO BROWN CLAYEY SILT, TR TO SM		
		S-2	8	12	12	20	_			F/M/C SAND, TR GRAVEL		SOME CLAY FROM 4
5 _	-											FT TO 5 FT
	+	S-3	7	11	14	27						
									7.0			PROBABLE COBBLES
		S-4	20	21	25	25						FROM 7 FT TO 10 FT
10		S-5	9	16	87	37						
										BROWN AND DARK GRAY SILTY CLAY, SM F/M/C		
										SAND, TR TO SM GRAVEL		
	-											
	-L											
	-											
15 _		S-6	34	10	14			/////	15.0		-	
	_									END OF BORING AT 15'		
	_											
20												
1												
25 _	-											
2	-											
	-											
25 _	+											
5	_											
5	_											
30												
ŝ	-											
	-											
30 _	-											
35										DRN.		SAP
										CKD.		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA							
FIRST ENCOUNTERED N/A							
DEPTH	HOUR	HOUR DATE ELAPSED TIME					

М	ETHOD O	F ADVAN	CING BO	REHOLE	
а	FROM	0.0 '	то	3.5 '	
d	FROM	3.5 '	то	7.7 '	

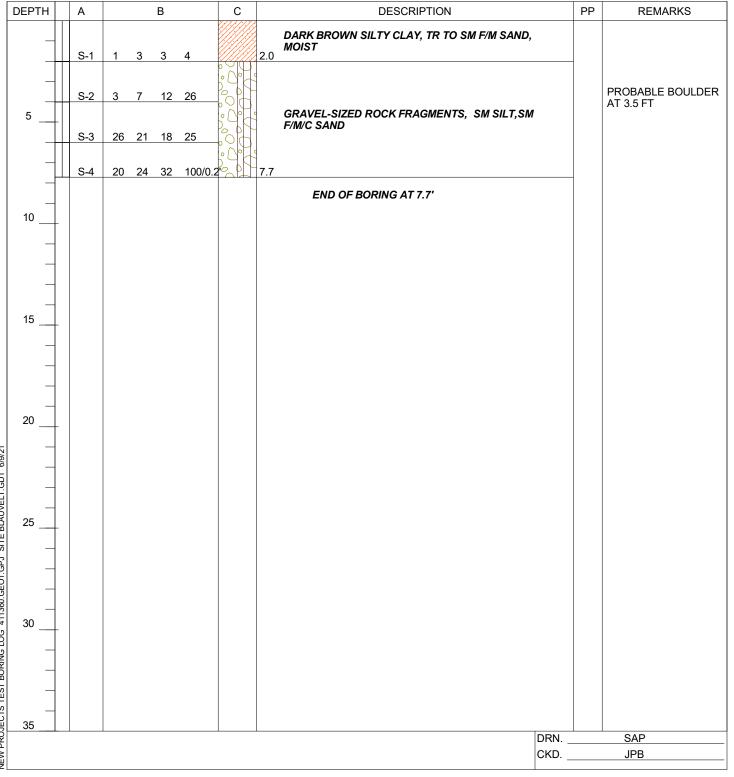
BORING **B-06** 

G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/05/2021
DATE COMPLETE	ED05/05/2021



NEW PROJECTS TEST BORING LOG 411360.GE01.GPJ SITE BLAUVELT.GDT 6/9/21



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

	GROUNDWATER DATA										
FIRST E	FIRST ENCOUNTERED N/A										
DEPTH	HOUR	HOUR DATE ELAPSED TIME									

Μ	METHOD OF ADVANCING BOREHOLE						
а	FROM	0.0 '	то	10.0 '			
d	FROM	10.0 '	то	15.0 '			

BORING **B-07** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/05/2021
DATE COMPLET	ED 05/05/2021

	DEPT	н	Α			В		С		DESCRIPTION		PP	REMARKS
		_	S-1	WH	1	1	4		2.0	BROWN SILTY CLAY, TR F/ SAND, WITH ROOTS (ORGANICS)			
	_	_	S-2	4	6	7	9			BROWN SILTY CLAY, TR TO SM F/ SAND, GLACIAL TILL, MOIST			
	5 _	_	S-3	7	10	14	22		6.0				
		_	S-4	22	26	34	35						
	10 _		S-5	20	26	40	50			DARK GRAY F/M/C SAND AND SILT, TR TO SM			
		_								GRAVEL, MOIST			
	15 _		S-6	12	22	25	33		15.0				
		_								END OF BORING AT 15'			
		_											
24	20 _	_											
T.GDT 6/9/		_											
E BLAUVEL	25 _	_											
1.GPJ SITE		_											
111360.GEC	20	_											
ING LOG 4	30 _	_											
S TEST BOF													
NEW PROJECTS TEST BORING LOG 411360.GEO1.GPJ SITE BLAUVELT.GDT 6/9/21	35										RN		SAP
NEV										c	KD		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

	GROUN	NDWATEF	R DATA	]	M	ETHOD O	F ADVAN	CING BO	REHOLE	
FIRST E	ENCOUNT	ERED N	I/A	$\nabla$	а	FROM	0.0 '	то	10.0 '	
DEPTH	HOUR	DATE	ELAPSED TIME	-	d	FROM	10.0 '	то	15.0 '	
12.5'	14:00	5/5	0 HR							
				Ī						
				<u> </u>						

BORING **B-08** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/05/2021
DATE COMPLET	ED 05/05/2021

DEPTH	А			В		С	DESCRIPTION	PP	REMARKS
_	S-1 S-2	1	2		4		DARK BROWN CLAYEY SILT, TR TO SM F/ SAND, TR F/ GRAVEL		
5	S-3	4	5	9	6		)		
⊻ _	S-4	6	6	5	5		BROWN F/M/C SAND, SM F/ GRAVEL, SM SILT, WET		
10	S-5	3	4	4	4		BROWN F/M/C SAND AND CLAYEY SILT, TR TO SM GRAVEL, WET .0		
¥ _				_	_		DARK GRAY SILTY CLAY, SM F/ SAND, WET		
15	S-6	WH	12	3	3		.0 END OF BORING AT 15'		
_									
20									
_									
_									
25									
_									
30									
_									
35							DRN CKD		SAP JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

LOCATION: GLEN, NY

BORING **B-09** 

G.S. ELEV.

FILE 411360.GEO1

A. FISHMAN

04/28/2021 04/28/2021

SHEET 1 OF 1

				-								
	GROUI	NDWATE	R DATA		M	ETHOD C	F ADVANC	CING BC	REHOLE	DRILL	_ER E	B. FLETCHER
-IRST E	ENCOUNT	ERED N	I/A	$\nabla$	а	FROM	0.0 '	то	10.0 '	HELP	ER R	. CASATELLI
DEPTH	HOUR	DATE	ELAPSED TIME		d	FROM	10.0 '	то	13.9 '	INSP	ECTOR	A. FISHN
10.3'	NR	4/28	0 HR	T						DATE	STARTED	04/28/202
				<u> </u>						DATE	COMPLETED	04/28/2
				1						1		
	EPTH	IRST ENCOUNT DEPTH HOUR	IRST ENCOUNTERED N DEPTH HOUR DATE	DEPTH HOUR DATE ELAPSED TIME	FIRST ENCOUNTERED     N/A       DEPTH     HOUR     DATE     ELAPSED TIME       10.3'     NR     4/28     0 HR	IRST ENCOUNTERED N/A     Image: mail of the second se	FIRST ENCOUNTERED N/A     Image: Constraint of the second se	FIRST ENCOUNTERED     N/A       DEPTH     HOUR     DATE       10.3'     NR     4/28       0 HR     V	FIRST ENCOUNTERED N/A     Image: mail of the state of the	IRST ENCOUNTERED         N/A         Image: Constraint of the state	IRST ENCOUNTERED N/A     Image: Constraint of the second sec	IRST ENCOUNTERED N/A     Image: Constrained of the second se

DEPTH PP А В С DESCRIPTION REMARKS 0.2 TOPSOIL S-1 3 4 4 6 S-2 4 7 4 4 5 S-3 5 12 16 8 DARK BROWN F/M/C SAND AND SILT. TR TO SM GRAVEL, SOME ORANGE STAINING S-4 11 13 13 18 10 S-5 13 13 59 96 V 12.0 **GRAVEL-SIZED ROCK FRAGMENTS** S-6 100/0.4' 13.9 15 END OF BORING AT 13.9' 20 NEW PROJECTS TEST BORING LOG 411360.GE01.GPJ SITE BLAUVELT.GDT 6/9/21 25 30 35 DRN. SAP CKD. JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

	GROUNDWATER DATA										
FIRST ENCOUNTERED N/A											
DEPTH	HOUR	HOUR DATE ELAPSED TIME									

М	METHOD OF ADVANCING BOREHOLE					
а	FROM	0.0 '	то	10.0 '		
d	FROM	10.0 '	то	15.0 '		

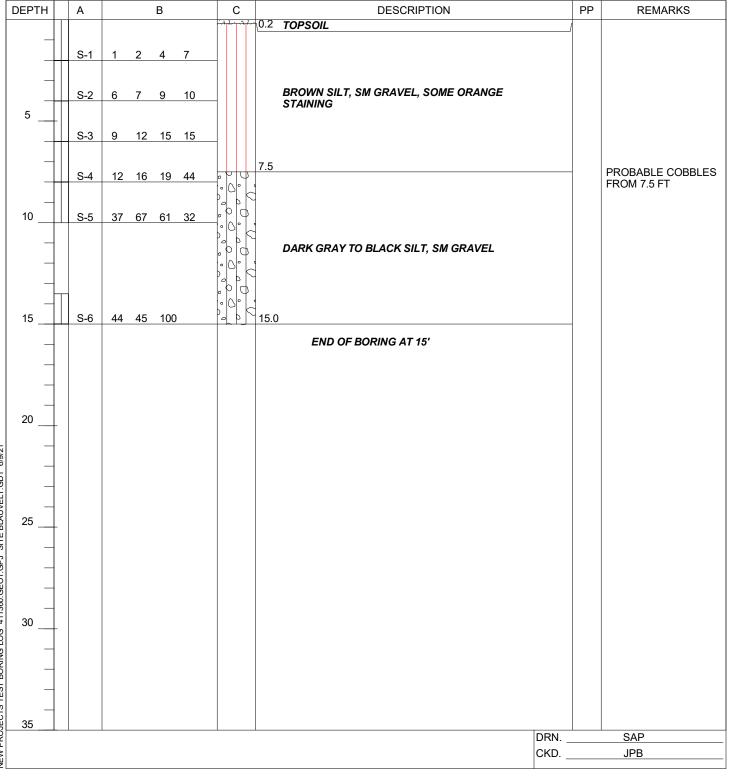
BORING **B-10** 

G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/28/2021
DATE COMPLETE	ED 04/28/2021
1	



NEW PROJECTS TEST BORING LOG 411360.GE01.GPJ SITE BLAUVELT.GDT 6/9/21



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

	GROUNDWATER DATA										
FIRST ENCOUNTERED N/A											
DEPTH	H HOUR DATE ELAPSED TIME										

METHOD OF ADVANCING BOREHOLE							
а	FROM	0.0 '	то	6.3 '			
d	FROM	6.3 '	то	7.6'			

BORING B-11

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/28/2021
DATE COMPLETE	ED 04/28/2021

DEPTH	A		В		С	DESCRIPTION	PP	REMARKS
					0	TOPSOIL		
			~	0				
	S-1	2 3	6	8	-			
						BROWN CLAYEY SILT, TR TO SM GRAVEL, TR TO		
	S-2	57	11	14		SM F/M/C SAND		
5								
	S-3	6 14	4 26	35				
					6		_	
	S-4	100/0.3	3'			DECOMPOSED SHALE		
								AUGER REFUSAL AT 7.6 FT
						END OF BORING AT 7.6'		
10								
15								
20								
- 0/3/								
25								
- -								
<u>با</u>								
5								
200								
44 30								
35								
						DRN.		SAP
						CKD.		JPB
-								



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

	GROUNDWATER DATA											
FIRST I	ENCOUNT	ERED N	I/A									
DEPTH	HOUR	DATE	ELAPSED TIME									

М	METHOD OF ADVANCING BOREHOLE							
а	FROM	0.0 '	то	10.0 '				
d	FROM	10.0 '	то	15.0 '				

BORING **B-12** 

G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/28/2021
DATE COMPLET	ED 04/28/2021

DEPTH	A			В			C	DESCRIPTION	PP	REMARKS
	S-1	2	5	7	6					
_	S-2	5	7	11	13					
5	S-3	16	23	19	20					POSSBILE COBBLES
_	S-4	16	20	22	24			BROWN F/M/C SANDY SILT, TR TO SM GRAVEL		FROM 5 FT
10	S-5	13	28	36	25	_				
15	S-6	7	15	22				5.0	_	
								END OF BORING AT 15'		
_										
20										
20										
_										
-										
25										
_										
_										
30										
35										
	_1	1						DRN CKD		SAP JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

GROUNDWATER DATA								
FIRST ENCOUNTERED N/A								
DEPTH	HOUR DATE ELAPSED TIME							

METHOD OF ADVANCING BOREHOLE							
а	FROM	0.0 '	то	10.0 '			
d	FROM	10.0 '	то	15.0 '			

BORING B-13

G.S. ELEV.

FILE 411360.GEO1

DRILLER	В.	FLETCHER	
HELPER	R. (	CASATELLI	
INSPECTOR		A. FISHMAN	
DATE STARTED		04/28/2021	
DATE COMPLET	ED	04/28/2021	

DEP	тн	Α			В			С	DESCRIPTION	PP	REMARKS
							-4-		0.2 TOPSOIL	(	
		S-1	wн	l/1.5'		24					
	_										
		S-2	5	7	9	12	_				
5	-+	S-3	7	11	13	16					
					10	10			BROWN, DARK BROWN AND DARK GRAY CLAYEY		
		S-4	15	16	17	22			SILT, TR TO SM F/M SAND, TR GRAVEL, SOME ORANGE STAINING		
	_										ENCOUNTERED POSSIBLE COBBLES
10	-+	S-5	6	8	10	15	_				FROM 8.7 FEET TO 10 FEET
	-										
15		S-6	17	10	12				15.0	-	
	_								END OF BORING AT 15'		
	-										
	-										
20											
5	_										
	_										
ודן. ודן	-										
25	-										
	_										
	_										
11300.	-										
4 <b>30</b>	$\rightarrow$										
KING	-										
30 30 35	_										
35 2									DRN		SAP
2 2									CKD.		JPB
-											



GROUNDWATER DATA

# **TRC** TEST BORING LOG

PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

METHOD OF ADVANCING BOREHOLE 

 FIRST ENCOUNTERED
 N/A

 DEPTH
 HOUR
 DATE
 ELAPSED TIME

 0.0 ' 10.0 ' FROM то а d FROM 10.0' то 15.0 '

BORING B-14

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/28/2021
DATE COMPLET	ED 04/28/2021

DEPTH	A			В		С	DESCRIPTION	PP	REMARKS
							0.2 TOPSOIL	ſ	POSSBILE COBBLES
	S-1	2	3	5	5				THROUGHOUT
_	S-2		4	5	4				
_ ++	3-2	4	4	5	4				
5									
	S-3	3	6	6	14				
_									
	S-4	12	18	14	16		BROWN, DARK BROWN, DARK GRAY SILTY CLAY, TR TO SM F/M SAND, TR TO SM GRAVEL		
10	S-5	20	11	19	27				
_									
-									
_									
15	S-6	48	25	24			15.0	-	
_							END OF BORING AT 15'		
_									
20									
20									
_									
_									
_									
_									
25									
_									
_									
30									
_									
35									
	1	1					DRN.		SAP
							CKD.		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA							
FIRST ENCOUNTERED N/A							
DEPTH	HOUR DATE ELAPSED TIME						

METHOD OF ADVANCING BOREHOLE						
а	FROM	0.0 '	то	10.0 '		
d	FROM	10.0 '	то	15.0 '		

BORING B-15

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/30/2021
DATE COMPLET	ED 04/30/2021

DEPTH	Α			В			С		DESCRIPTION	F	PP	REMARKS
						-42	· · · · / ·	0.2	TOPSOIL			
	S-1	1	4	5	7							
5	S-2	6	8	9	10				BROWN, DARK BROWN AND BLACK SILT, TR TO SM F/M SAND, TR GRAVEL			
	S-3	4	4	4	4							
	S-4	6	9	13	19			8.0				
	S-5	16	25	100	/0.3'							
10									BROWN AND BLACK SILTY F/M/C SAND, SM GRAVEL			
 	S-6	45	52	61				15.0				
							<u> </u>		END OF BORING AT 15'			
_												
20												
_												
25												
30												
										RN KD		SAP JPB
												JFD



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA 

 FIRST ENCOUNTERED
 N/A

 DEPTH
 HOUR
 DATE
 ELAPSED TIME

METHOD OF ADVANCING BOREHOLE					
а	FROM	0.0 '	то	10.0 '	
d	FROM	10.0 '	TO	15.0 '	

BORING **B-16** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/03/2021
DATE COMPLET	ED05/03/2021

DEPTH	A		В		С	DESCRIPTION	PP	REMARKS
	S-1	WH 2	3	4		DARK GRAY CLAYEY SILT, TR GRAVEL, MOIST		
5	S-2	39	9	11		.0		
3 <u> </u>	S-3	10 10	) 14	14		DARK GRAY CLAYEY SILT, TR TO SM GRAVEL, TR TO SM F/M/C SAND, MOIST		
	S-4	12 18	3 30	35		3.0		
10	S-5	15 17	<u>7 14</u>	17		DARK GRAY F/M/C SAND AND SILT, SM F/C GRAVEL, MOIST		
  15	S-6	7 9	14			3.0 DARK GRAY CLAYEY SILT, TR TO SM F/C GRAVEL 5.0		
						END OF BORING AT 15'		
20								
0/8/21								
11380.GEC.								
41 00 41 41 40 41 41 40 41 41 41 41 41 41 41 41 41 41 41 41 41								
35	<u> </u>				<u> </u>	DRI CKI		SAP JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

LOCATION: GLEN, NY

GROUNDWATER DATA METHOD OF ADVANCING BOREHOLE C 

 FIRST ENCOUNTERED
 6.0 '

 DEPTH
 HOUR
 DATE
 ELAPSED TIME

  $\overline{\nabla}$ 0.0 ' 9.0' H FROM то а d FROM 9.0' то 15.0 ' Ţ 

BORING B-17

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/03/2021
DATE COMPLETI	ED 05/03/2021

DEPTH	А			В		C		DESCRIPTION	PP	REMARKS
	S-1 S-2	WH 4	5	37	5	_	4.0	BROWN SILT, TR TO SM F/M/C SAND, TR GRAVEL, WITH ORGANICS (ROOTS), MOIST		
5 	S-3 S-4	7	7	7	12		4.0	DARK GRAY CLAY, SM F/M/CSAND, TR TO SM GRAVEL-SIZED ROCK FRAGMENTS, MOIST TO WET		
	S-5			50/0			9.0			
10							13.5	SHALE COBBLES		AUGER REFUSAL AT 10.5 FT; BORING OFFSET AND COMPLETED TO 15 FT.
15	S-7	21	16	16				DARK GRAY SILTY CLAY, TR F/M/C SAND, TR GRAVEL, WET		
							10.0	END OF BORING AT 15'		
20										
2 PHC								DR CK		SAP JPB
Ž										



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

GROUNDWATER DATA							
FIRST ENCOUNTERED N/A							
DEPTH	HOUR DATE ELAPSED TIME						

METHOD OF ADVANCING BOREHOLE						
а	FROM	0.0 '	то	6.0 '		
d	FROM	6.0 '	то	8.0 '		

BORING **B-18** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER F	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/03/2021
DATE COMPLETE	D 05/03/2021

	EPTH	-	A			В		С	DESCRIPTION	PP	REMARKS
			S-1	1	1	4	6				
			S-2	4	7	9	10		BROWN CLAY, TR TO SM F/M SAND, TR F/C GRAVEL, MOIST		
	5 _	+	S-3	4	5	6	80		6.0	_	S-4: 50/0' AT 6 FT
		-							GRAVEL-SIZED SHALE FRAGMENTS 8.0	_	REFUSAL AT 8 FT
	10 _								END OF BORING AT 8'		
	15 _										
		_									
	20	_									
6/9/21	_										
UVELT.GDT		_									
9 SITE BLA	25 _	_									
60.GEO1.GF		_									
5 LOG 4113	30 _										
EST BORING											
NEW PROJECTS TEST BORING LOG 411360.GE01.GPJ SITE BLAUVELT.GDT 6/9/21	35								DRN.		SAP
									CKD.		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

	GROUNDWATER DATA							
FIRST ENCOUNTERED N/A								
DEPTH	HOUR	DATE	ELAPSED TIME					

Μ	METHOD OF ADVANCING BOREHOLE							
а	FROM	0.0 '	то	7.2 '				
d	FROM	7.2 '	то	7.5 '				

BORING B-19

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/04/2021
DATE COMPLETE	ED05/04/2021

D	EPTH	1	А			В		С		DESCRIPTION		PP	REMARKS
	-	_	S-1	WH	1	2	4		2.0	BROWN SILTY CLAY, TR F/M/C SAND WITH ROOTS (ORGANICS), MOIST	5		
	5	_	S-2 S-3	5	79	9	16	-	6.0	BROWN SILT, TR F/M/C SAND, MOIST			
	-		S-4		80	100/			A	DECOMPOSED SHALE			
	-								7.5	END OF BORING AT 7.5'			AUGER REFUSAL AT 7.5 FT
	- 10	-								END OF BORING AT 7.5			
	10												
	-												
	-	-											
	15												
	-	_											
	-												
	-												
	20	+											
3/9/21	-												
.GDT (	-												
AUVELT	-	_											
SITE BL	25	+											
GPJ S	-												
0.GE01	-	-											
41136	30												
IG LOG	-												
<b>BORIN</b>	-	-											
IS TESI	-												
NEW PROJECTS TEST BORING LOG 411360.GEO1.GPJ SITE BLAUVELT.GDT 6/9/21	35										DRN		SAP
HA NEN BO	ring m	oved	20 feet	north							CKD		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA 

 FIRST ENCOUNTERED
 N/A

 DEPTH
 HOUR
 DATE
 ELAPSED TIME

М	METHOD OF ADVANCING BOREHOLE								
а	FROM	0.0 '	то	10.0 '					
d	FROM	10.0 '	то	15.0 '					

BORING **B-20** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/05/2021
DATE COMPLET	ED 05/05/2021

DEF	РΤΗ	A			В		С	DESCRIPTION	PP	REMARKS
	-	S-1 S-2	1	2	2					
5	-	S-3	4	29	6	6				POSSIBLE COBBLE AT 5 FT
	-	S-4	6	5	5	8		BROWN TO DARK GRAY SILTY CLAY, TR TO SM F/M/C SAND, TR GRAVEL		
10	)	S-5	49	16	17	17				
	_									
15	5	S-6	12	14	12	9		15.0 END OF BORING AT 15'	_	
	_							END OF BORING AT 15		
	_									
_ 20	)									
DT 6/9/2	_									
NUVELT.G	_									
2! 2! 2!	5									
E01.GPJ	_									
111360.GE										
16 LOG 41	'-+									
ST BORIN										
NEW PROJECTS TEST BORING LOG 411380.GEO1.GPJ SITE BLAUVELT.GDT 6/9/21										
	<u>ــــــــــــــــــــــــــــــــــــ</u>		L					DRN	I	SAP
IEV F								CKD.		JPB
-										



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

	GROUNDWATER DATA								
FIRST E	FIRST ENCOUNTERED N/A								
DEPTH	HOUR	DATE	ELAPSED TIME						

Μ	METHOD OF ADVANCING BOREHOLE							
а	FROM	0.0 '	ТО	10.0 '				
d	FROM	10.0 '	ТО	15.0 '				

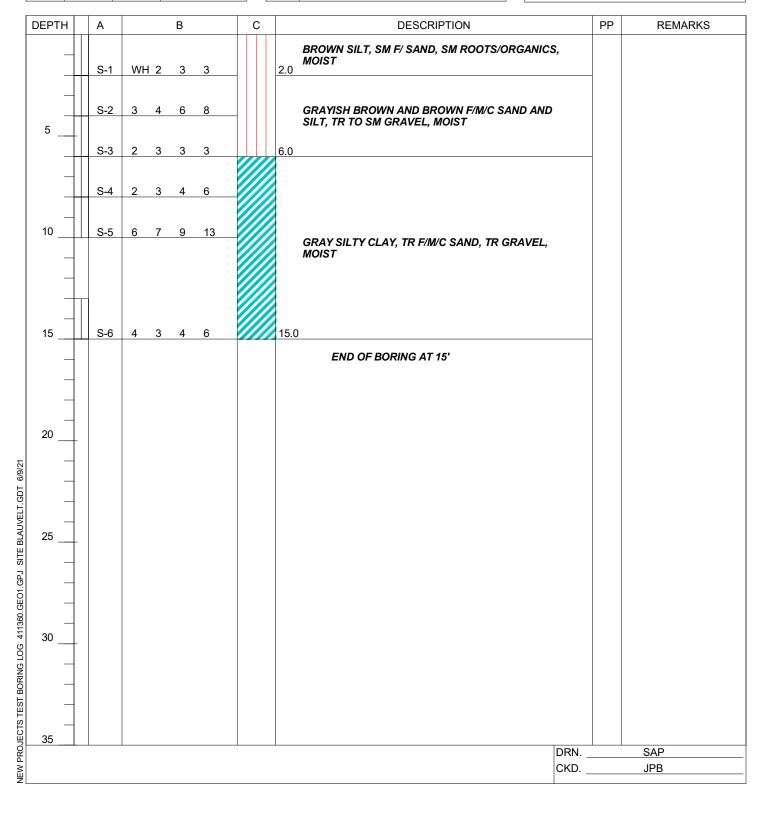
**B-21** 

G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/04/2021
DATE COMPLET	ED05/04/2021



BORING



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA							
FIRST ENCOUNTERED N/A							
DEPTH	HOUR	DATE	ELAPSED TIME				

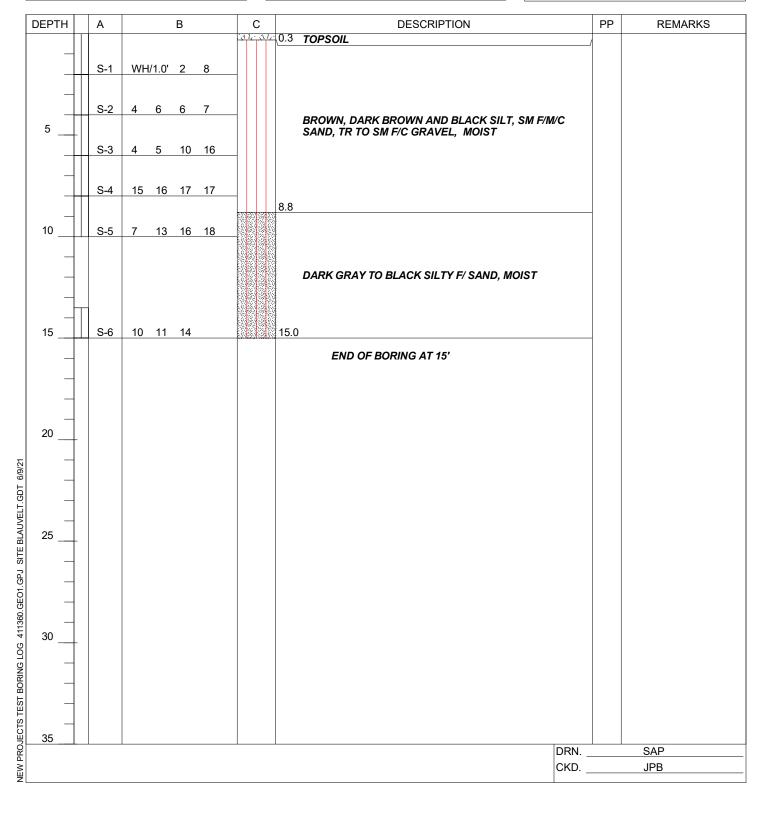
METHOD OF ADVANCING BOREHOLE									
а	FROM	0.0 '	то	10.0 '					
d	FROM	10.0 '	то	15.0 '					

BORING **B-22** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/29/2021
DATE COMPLETI	ED 04/29/2021





PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

	GROUI	NDWATE	R DATA	]	N	16
FIRST E	ENCOUNT	ERED N	I/A		а	
DEPTH	HOUR	DATE	ELAPSED TIME		d	
						Ι

METHOD OF ADVANCING BOREHOLE									
а	FROM	0.0 '	то	10.0 '					
d	FROM	10.0 '	то	15.0 '					

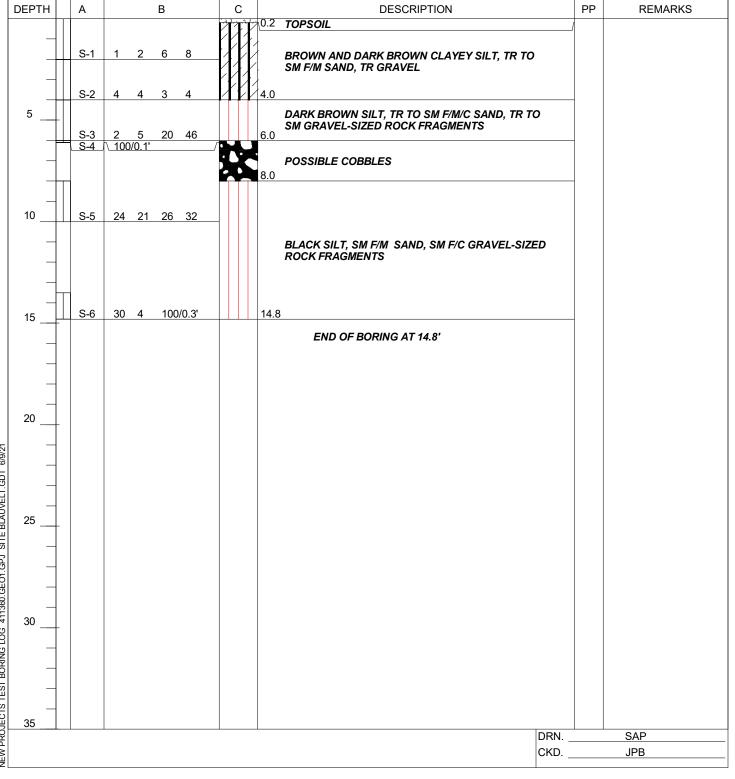
BORING B-23

G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/29/2021
DATE COMPLET	ED 04/29/2021
1	



NEW PROJECTS TEST BORING LOG 411360.GE01.GPJ SITE BLAUVELT.GDT 6/9/21



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA METHOD OF ADVANCING BOREHOLE 

 FIRST ENCOUNTERED
 10.3 '

 DEPTH
 HOUR
 DATE
 ELAPSED TIME

  $\overline{\nabla}$ 0.0 ' 10.0 ' FROM то а d FROM 10.0' то 15.0 ' Ţ

BORING **B-24** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/29/2021
DATE COMPLET	ED 04/29/2021

DEPT	Ή	А			В			С	DESCRIPTION	PP	REMARKS
							<u>, 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 </u>	·.\/.	0.2 TOPSOIL		
		S-1	1	1	41	4					
		S-2	6	11	12	20					
5											
		S-3	8	15	17	23					
									BROWN SILT, SM F/M/C SAND, TR TO SM F/		
		S-4	18	26	28	24			GRAVEL		
											SAND SEAM FROM 9
<u>∑</u> 10		S-5	8	14	15	19					FT TO 9.3 FT
-	_										
	_										
	_										
									14.3		
15		S-6	7	9	12			<u>28</u>	15.0 GRAY SILTY F/M SAND		
	_								END OF BORING AT 15'		
	-										
	-										
	-										
20	-										
9/21	-										
	-										
	-										
	-										
25	-										
	-										
5	-										
	-										
41136	-										
	+										
SING I											
BOH	-										
TESI	-										
006 411360. 01 01 01 01 01 01 01 01 01 01 01 01 01 0	-										
			I						DRN.		SAP
- A									CKD		JPB
·											



GROUNDWATER DATA

 FIRST ENCOUNTERED
 14.2 '

 DEPTH
 HOUR
 DATE

 ELAPSED TIME

# TRC | TEST BORING LOG

METHOD OF ADVANCING BOREHOLE

то

то

10.0 '

15.0 '

0.0 '

10.0'

FROM

FROM

PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

 $\overline{\nabla}$ 

▼

а d

#### LOCATION: GLEN, NY

BORING B-25

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	0 04/29/2021
DATE COMPLET	TED 04/29/2021

DEPTH	А			В		С	DESCRIPTION	PP	REMARKS
	S-1	1	3	4	3	· · · · · · · · · · · · · · · · · · ·	0.2 TOPSOIL		
_	S-2	3	3	3	4				
5	S-3	4	3	3	4				SAND SEAM FROM 5.8 FT TO 6 FT
_	S-4	6	8	13	16		BROWN, DARK GRAY AND BLACK F/M SANDY SILT, TR GGRAVEL-SIZED ROCK FRAGMENTS		
10	S-5	8	10	12	13				
⊻ _ 15	S-6	13	20	27			15.0		
_							END OF BORING AT 15'		
20									
	-								
JVELT.GDT									
25	-								
0.GE01.GP,									
	-								
ST BORING									
NEW PROJECTS TEST BORING LOG 411360.GEO1.GPJ SITE BLAUVELT.GDT 6/9/21									SAP
NEW PF							DRN CKD		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA FIRST ENCOUNTERED N/A DEPTH HOUR DATE ELAPSED TIME

METHOD OF ADVANCING BOREHOLE									
а	FROM	0.0 '	то	10.0 '					
d	FROM	10.0 '	то	15.0 '					

BORING **B-26** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/30/2021
DATE COMPLET	ED 04/30/2021

DEPTH	4	A			В			С	DESCRIPTION	PP	REMARKS
							<u>.</u>	· · · · / ·	0.2 TOPSOIL		
-		S-1	1	5	5	6					
-		0-1	-	0		0					
-	-		_	•	-	<b>F</b> 4					
-		S-2	5	9	7	51	-				
5 _	+										
-		S-3	4	6	7	10	-				
-	-								BROWN, DARK GRAY AND BLACK SILT, SM F/M		
-		S-4	8	12	17	22			SAND, SM GRAVEL-SIZED ROCK FRAGMENTS		
-											
10		S-5	15	23	23	37					
_											
	$\square$	-									
15 _		S-6	13	18	22				15.0		
				-					END OF BORING AT 15'		
-									END OF BORING AT 15		
-											
-	-										
-	-										
20 _	+										
-	-										
-	_										
25	_										
-	_										
25	4										
-											
_											
_											
_											
30											
	T										
-											
-	1										
-	$\neg$										
-	$\neg$										
35									DRN.		SAP
30									CKD.		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

### LOCATION: GLEN, NY

GROUNDWATER DATA										
FIRST ENCOUNTERED N/A										
DEPTH HOUR DATE ELAPSED TIME										

М	METHOD OF ADVANCING BOREHOLE									
а	FROM	0.0 '	то	10.0 '						
d	FROM	10.0 '	то	15.0 '						

BORING **B-27** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/30/2021
DATE COMPLET	ED 04/30/2021

								DESCRIPTION	PP	REMARKS
						<u>`.</u> 4.Z.	· · · · · · · ·	.2 TOPSOIL	/	
	S-1	1	2	3	4					
	S-2	4	4	4	4					
5										
	S-3	3	3	4	10					
								BROWN SILT, SM F/M/C SAND, TR TO SM		
	S-4	16	32	14	15			GRAVEL-SIZÉD SHALE FRAGMENTS		
10	S-5	10	16	10	20					
	3-0	12	10	19	29					
										COBBLES PRESENT FROM 13.5-15 FEET
15	S-6	15	11	14				5.0		FROM 13.5-15 FEET
								END OF BORING AT 15'		
20										
25										
_										
30										
35										
	1	L						DRN.		SAP
								CKD.		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

GROUNDWATER DATA METHOD OF ADVANCING BOREHOLE 
 FIRST ENCOUNTERED 3.0 '

 DEPTH
 HOUR

 DATE
 ELAPSED TIME
  $\overline{\nabla}$ 0.0 ' 9.4 ' FROM то а 9.4 ' d FROM то 15.0 ' Ţ

BORING **B-28** 

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/30/2021
DATE COMPLET	ED 04/30/2021

DEPT	н	A			В			С		DESCRIPTION	F	PP	REMARKS
							<u>`-4</u> 2-	<u>, ., ., .</u> ,	0.2	TOPSOIL			
	$\neg$	S-1	2	4	6	4							
		0-1	2		0	-							
<u>▼</u>				•		_							
	+	S-2	8	3	4	1	_			BROWN SILT, SM F/M/C SAND, TR TO SM GRAVEL-SIZED SHALE FRAGMENTS			
5													
		S-3	5	4	2	8							
		S-4	12	16	19	22			8.0				
			<b>F</b> 7	0.4	400	10 41		11					
10		S-5	5/	84	100	/0.4	-1/	Ŵ					
-							ĺ	11					
							X	Ŵ	1	BLACK CLAYEY SILT, TR TO SM GRAVEL-SIZED ROCK FRAGMENTS			
	_							¥{	1	ROCK FRAGMENTS			
							١X.	Ń	1				
	-						Ń	11	1				
15 _		S-6	67	89	41		-11	<u>⁄</u> //	15.0				
	_									END OF BORING AT 15'			
	_												
	_												
20													
2	-												
	_												
25	-												
5	_												
5	_												
25													
30													
2													
<u>S</u>	$\neg$												
	-												
	_												
35										DR			SAP
30										СК			JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

	GROUNDWATER DATA										
FIRST ENCOUNTERED N/A											
DEPTH HOUR DATE ELAPSED TIME											

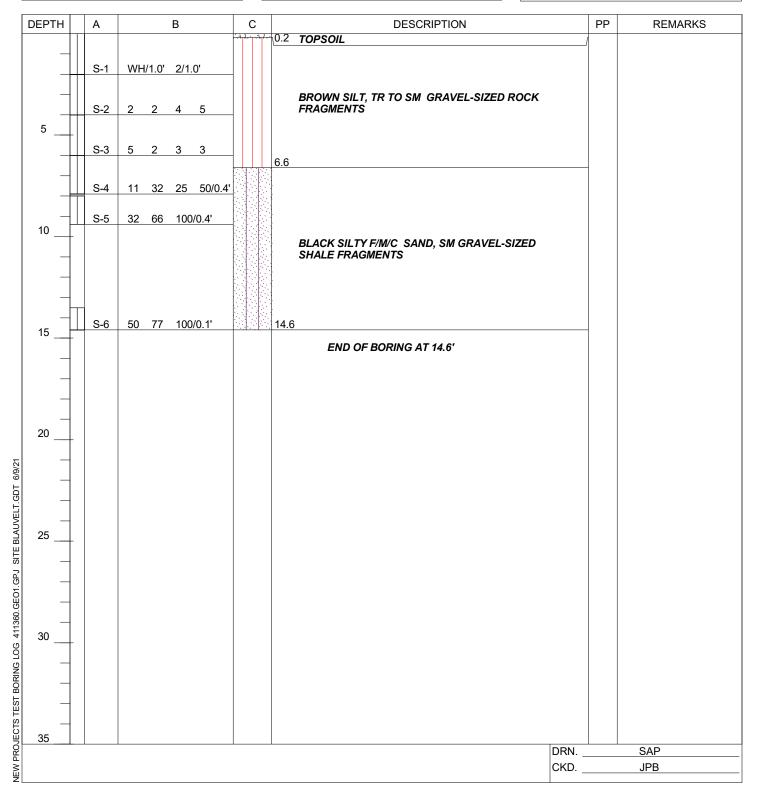
М	METHOD OF ADVANCING BOREHOLE									
а	a FROM 0.0' TO 9.4'									
d	FROM	9.4 '	ТО	14.1 '						

BORING B-29

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	A. FISHMAN
DATE STARTED	04/30/2021
DATE COMPLETI	ED 04/30/2021





PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

LOCATION: GLEN, NY

BORING **B-30** G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	0 05/04/2021
DATE COMPLET	TED 05/04/2021

		GROUI	NDWATE	R DATA		N	IETHOD O	F ADVAN	CING BO	REHOLE	DRILLER
FIF	RST E	NCOUNT	ERED N	I/A	$\Box$	а	FROM	0.0 '	то	6.5 '	HELPER
DE	PTH	HOUR	DATE	ELAPSED TIME							INSPECT
2	2.5'	16:15	5/4	0 HR	▼						DATE ST
					Ī						DATE CO
-											
D	FPTH	Α		В	С				DESCRI	PTION	

DEPTH	A			В			С		DESCRIPTION	PP	REMARKS
¥ _ −	S-1	3	5	77	8			4.0	BROWN SILT, TR TO SM F/M/C SAND, TR GRAVEL		
5						0.0		0	DARK BROWN SILTY GRAVEL, TR TO SM F/M/C	-	
_	S-3 S-4	3	3 50/	36	48	2	łź	6.0	DECOMPOSED SHALE	-	
		20	00/	<u> </u>			/ • / _ /	<u></u>	END OF BORING AT 6.5'		AUGER REFUSAL AT 6.5 FT
10											
_											
_											
15											
_											
_											
20											
_											
_											
25											
_											
_											
30											
_											
_											
35									DRN		SAP
									CKD.		JPB



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

LOCATION: GLEN, NY

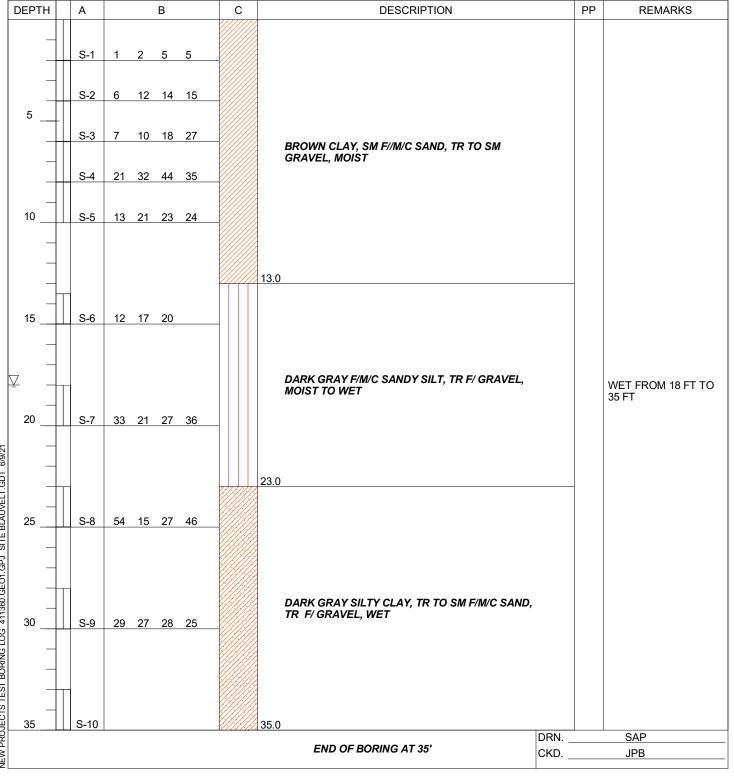
GROUNDWATER DATA METHOD OF ADVANCING BOREHOLE Г 0.0' 10.0 ' FROM ТΟ H FIRST ENCOUNTERED 18.0  $\nabla$ а 10.0 ' DEPTH HOUR DATE ELAPSED TIME d FROM ТΟ 35.0 ' I E V L BORING **SS-01** 

G.S. ELEV.

FILE 411360.GEO1

SHEET 1 OF 1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/03/2021
DATE COMPLET	ED05/04/2021



VEW PROJECTS TEST BORING LOG 411360.GE01.GPJ SITE BLAUVELT.GDT 6/9/21



PROJECT: MILL POINT SOLAR AND BATTERY STORAGE PROJECT

#### LOCATION: GLEN, NY

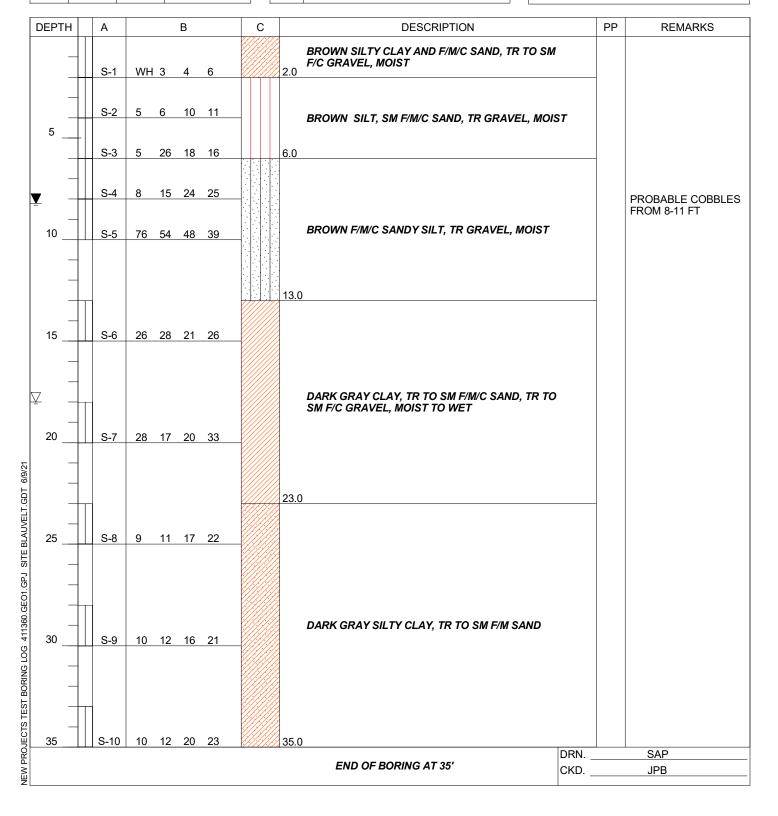
	GROUNDWATER DATA				M	ETHOD O	F ADVAN	CING BO	REHOLE
FIRST E	FIRST ENCOUNTERED N/A					FROM	0.0 '	то	10.0 '
DEPTH	HOUR	DATE	ELAPSED TIME	-	d	FROM	10.0 '	то	35.0 '
8.2'	NR	5/4	0 HR	▼					
				Ť					

BORING SS-02

G.S. ELEV.

FILE 411360.GEO1

DRILLER	B. FLETCHER
HELPER	R. CASATELLI
INSPECTOR	N. LAM
DATE STARTED	05/04/2021
DATE COMPLETE	ED 05/04/2021



### **KEY TO SYMBOLS**

Symbol	Description		Symbol Description
<u>Strata sy</u>	mbols		Misc. Symbols
	Boulders / Cobbles	Poorly-graded Gravel with Silt	<ul> <li>✓ Water table first encountered</li> <li>✓ Water table first reading after drilling</li> <li>✓ Water table second reading after drilling</li> </ul>
	Clay with High Plasticity	Silt with Low Plasticity	<ul> <li>Water table third reading after drilling</li> <li>NR Not Recorded</li> <li>MH Moh's Hardness</li> </ul>
	Clay with Low Plasticity	USCS Gravelly Silt	Sample Type
	Clayey Silt	USCS Sandy Silt	
	Silty Clay	Silty Sand	
- /	Highly Weathered or Decomposed Rock	Poorly graded silty fine sand	<u>Lab Symbols</u> FINES = Fines %
	Silty Gravel	Poorly-graded Sand with Clay	LL = Liquid Limit % PI = Plasticity Index % U <sub>c</sub> = Unconfined Compressive Strength
Notes:			W/V = Unit Weight
COLUMN	I A) Soil sample number.		

COLUMN B) FOR SOIL SAMPLE (ASTM D 1586): indicates number of blows obtained for each 6 ins. penetration of the standard split-barrel sampler. FOR ROCK CORING (ASTM D2113): indicates percent recovery (REC) per run and rock quality designation (RQD). RQD is the % of rock pieces that are 4 ins. or greater in length in a core run.

COLUMN C) Strata symbol as assigned by the geotechnical engineer.

DESCRIPTION) Description including color, texture and classification of subsurface material as applicable (see Descriptive Terms). Estimated depths to bottom of strata as interpolated from the borings are also shown.

DESCRIPTIVE TERMS: F = fine M = medium C = coarse

RELATIVE PROPORTIONS:

-Descriptive Term- Trace	-Symbol- TR	-Est. Percentages- 1-10
Trace to Some	TR to SM	10-15
Some Silty, Sandy,	SM	15-30
Clayey, Gravelly	-	30-40
And	and	40-50

REMARKS) Special conditions or test data as noted during investigation. Note that W.O.P. indicates water observation pipes.

\* Free water level as noted may not be indicative of daily, seasonal, tidal, flood, and/or long term fluctuations.

FIELD RESISTIVITY DATA

	Field	Engineers Resistivity Te Wenner Metho	esting		TRC Engineers, Inc. Field Resistivity Testing Wenner Method					
Project: Location: Site Conditions: Ambient Tempera Rain storms previ		Ideal	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/30/2021 N.Lam NA	Project: Location: Site Conditions: Ambient Tempera Rain storms previ		t Ideal	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/30/2021 N.Lam NA	
Test Line 1	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance	Apparent Resistivity (Ohm-cm) 5,889 8,943 17,695 32,708 67,025	Remarks	Test Line 2	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance           ∳           (Ohms)           12.6           9.7           8.8           8.7           7.2	Apparent Resistivity (Ohm-cm) 6,032 9,326 16,775 33,168 69,132	Remarks	
Line 1 Direction:	X	N-S NE_SW E-W NW-SE	Test Location	B1	Line 2 Direction:	X	_N-S _NE_SW _E-W _NW-SE	Test Location	B1	

		<b>C Engineers</b> d Resistivity To Wenner Metho	esting		TRC Engineers, Inc. Field Resistivity Testing Wenner Method					
			<b>I5</b>							
Project:	Mill Point Solar		Project No.:	411360.GEO1	Project:	Mill Point Solar		Project No.:	411360.GEO1	
Location:	Glen, NY		Client:	ConnectGen		Location: Glen, NY		Client:	ConnectGen	
Site Conditions:	Dry <u>x</u> Wet	Ideal	Date Completed:		Site Conditions:	Dry x Wet	Ideal	Date Completed:		
Ambient Tempera	ature: 70° F		Operator:	N.Lam	Ambient Tempera	ature: 70o F		Operator:	N.Lam	
Rain storms prev	ious day- yes		Helper:	NA	Rain storms prev	ious day- yes		Helper:	NA	
Test	Electrode	Resistance	Apparent		Test	Electrode	Resistance	Apparent		
	Spacing	<del>\$</del>	Resistivity	Remarks		Spacing	<b>•</b>	Resistivity	Remarks	
	(ft)	(Ohms)	(Ohm-cm)			(ft)	(Ohms)	(Ohm-cm)		
	2.5	10.3	4,931			2.5	17.0	8,139		
	5.0	6.5	6,262			5.0	9.0	8,646		
Line 1	10.0	4.2	8,062	Move from B4 due to access issue	Line 2	10.0	5.1	9,747		
	20.0	2.7	10,226			20.0	3.1	11,720		
	50.0	1.8	16,852			50.0	1.9	18,480		
Line 1 Direction:		_N-S NE_SW	Test Location	B5	Line 2 Direction:	X	_N-S NE_SW	Test Location	В5	
	х	E-W					Ē-W			
		NW-SE					NW-SE			
		_			1		-			
				-					-	

		Resistivity Te Wenner Metho	•		<b>TRC Engineers, Inc.</b> Field Resistivity Testing Wenner Method						
			-								
Project: N	Mill Point Solar		Project No.:	411360.GEO1	Project:	Mill Point Solar		Project No.:	411360.GEO1		
	Glen, NY		Client:	ConnectGen	Location:	Glen, NY		Client:	ConnectGen		
Site Conditions:	Dry Wet	x Ideal	Date Completed:	4/28/2021	Site Conditions:	Dry Wet	x Ideal	Date Completed:	4/28/2021		
Ambient Temperatu	ure: 70° F		Operator:	N.Lam	Ambient Tempera	ture: 70° F		Operator:	N.Lam		
Rain storms previous day- No Helper: NA					Rain storms previ			Helper:	NA		
	, , , , , , , , , , , , , , , , , , ,				'	, , , , , , , , , , , , , , , , , , ,		4 1			
Test	Electrode	Resistance	Apparent		Test	Electrode	Resistance	Apparent			
	Spacing	¢	Resistivity	Remarks		Spacing	<del>¢</del>	Resistivity	Remarks		
	(ft)	(Ohms)	(Ohm-cm)			(ft)	(Ohms)	(Ohm-cm)			
	2.5	14.7	7,038			2.5	14.6	6,990			
	5.0	7.8	7,469	1		5.0	8.0	7,622	1		
Line 1	10.0	4.8	9,211	1	Line 2	10.0	4.7	9,020	1		
	20.0	3.0	11,567	1		20.0	3.2	12,179	1		
	50.0	1.8	16,852	]		50.0	1.7	16,086	]		
Line 1 Direction:		N-S			Line 2 Direction:		N-S				
		NE SW	Test Location	В9			NE SW	Test Location	B9		
		E-W			1	X	 				
-		NW-SE			1		NW-SE				
_					1		-				
									1		

		Resistivity To			TRC Engineers, Inc.							
Project: Mill [	1		esting		Field Resistivity Testing							
Drojoot: Mill E	1	Venner Metho	d		Wenner Method							
	Point Solar		Droiget No.	444260 0504	Drojest	Mill Daint Calar		Droiget No.	444260 0504			
			Project No.: Client:	411360.GEO1 ConnectGen	Project:	Mill Point Solar		Project No.:	411360.GEO1 ConnectGen			
Location: Glen Site Conditions: Г		<u>deal</u>	Date Completed:		Location: Site Conditions:	Glen, NY Drv Wet	x Ideal	Client: Date Completed:				
							<u>x ideal</u>					
Ambient Temperature:	70° F		Operator:	N.Lam	Ambient Tempera			Operator:	N.Lam			
Rain storms previous d	ay- No		Helper:	NA	Rain storms previ	ious day- No		Helper:	NA			
	I											
Test E	Electrode	Resistance	Apparent		Test	Electrode	Resistance	Apparent				
	Spacing	¢	Resistivity	Remarks		Spacing	<del>\$</del>	Resistivity	Remarks			
	(ft)	(Ohms)	(Ohm-cm)			(ft)	(Ohms)	(Ohm-cm)				
	2.5	14.2	6,798			2.5	18.6	8,905	1			
	5.0	7.6	7,287	1		5.0	7.8	7,488	1			
Line 1	10.0	4.2	7,986	1	Line 2	10.0	4.1	7,928	1			
	20.0	2.1	8,043	1		20.0	2.3	8,732	1			
	50.0	1.2	11,682	]		50.0	1.2	11,490	]			
Line 1 Direction:		N-S			Line 2 Direction:	x	N-S					
		NE SW	Test Location	B12			NE_SW	Test Location	B12			
		E-Ŵ					E-W					
		NW-SE			1		NW-SE					
					1		_					

	Field	Engineers	esting		TRC Engineers, Inc. Field Resistivity Testing Wenner Method					
Project: Location: Site Conditions: Ambient Tempera Rain storms previo		x Ideal	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/28/2021 N.Lam NA	Project: Location: Site Conditions: Ambient Tempera Rain storms previ		<u>x Ideal</u>	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/28/2021 N.Lam NA	
Test Line 1	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance (Ohms) 7.7 3.0 2.0 1.5 1.1	Apparent Resistivity (Ohm-cm) 3,677 2,834 3,811 5,822 10,054	Remarks	Test Line 2	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance (Ohms) 6.8 3.1 1.9 1.5 1.2	Apparent Resistivity (Ohm-cm) 3,275 2,968 3,658 5,554 11,011	Remarks	
Line 1 Direction:	X	N-S NE_SW E-W NW-SE	Test Location	B13	Line 2 Direction:	X	_N-S _NE_SW _E-W _NW-SE	Test Location	B13	

	Field	Engineers Resistivity To Wenner Metho	esting		TRC Engineers, Inc. Field Resistivity Testing Wenner Method					
		x_Ideal	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/28/2021 N.Lam NA	Project: Location: Site Conditions: Ambient Tempera Rain storms previ		<u>x Ideal</u>	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/28/2021 N.Lam NA	
Test Line 1	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance (Ohms) 10.5 6.1 3.8 2.3 1.4	Apparent Resistivity (Ohm-cm) 5,027 5,812 7,334 8,847 13,788	Remarks	Test Line 2	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance           ♦           (Ohms)           11.0           6.1           3.7           2.4           1.5	Apparent Resistivity (Ohm-cm) 5,266 5,860 7,124 9,115 13,884	Remarks	
Line 1 Direction:	X	N-S NE_SW E-W NW-SE	Test Location	B16	Line 2 Direction:	X	_N-S _NE_SW _E-W _NW-SE	Test Location	B16	

	Field	Engineers Resistivity To Wenner Metho	esting		TRC Engineers, Inc. Field Resistivity Testing Wenner Method					
Location: Site Conditions: Ambient Tempera		Ideal	Project No.: Client: Date Completed: Operator:	N.Lam	Project: Location: Site Conditions: Ambient Tempera		t Ideal	Project No.: Client: Date Completed: Operator:	N.Lam	
Rain storms previ	ous day- yes		Helper:	NA	Rain storms previ	ous day- yes		Helper:	NA	
Test Line 1	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance (Ohms) 16.6 8.4 4.5 2.9 2.3	Apparent Resistivity (Ohm-cm) 7,947 8,053 8,694 10,992 22,406	Remarks	Test Line 2	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance (Ohms) 16.4 8.2 4.4 2.7 2.2	Apparent Resistivity (Ohm-cm) 7,852 7,890 8,407 10,494 21,448	Remarks	
Line 1 Direction:	X	N-S NE_SW E-W NW-SE	Test Location	B20	Line 2 Direction:	X	_N-S _NE_SW _E-W _NW-SE	Test Location	B20	

	Field	Engineers Resistivity Te Wenner Metho	esting	TRC Engineers, Inc. Field Resistivity Testing Wenner Method							
Project:	Mill Point Solar		Project No.:	411360.GEO1	Project:	Mill Point Solar		Project No.:	411360.GEO1		
Location:	Glen, NY		Client:	ConnectGen	Location:	Glen, NY		Client:	ConnectGen		
Site Conditions:	Dry x Wet	Ideal	Date Completed:	4/30/2021	Site Conditions:	Dry x Wet	Ideal	Date Completed:	4/30/2021		
Ambient Tempera	ture: 70° F		Operator:	N.Lam	Ambient Tempera	ture: 70o F		Operator:	N.Lam		
Rain storms previ			Helper:	NA	Rain storms previ	ous day- yes		Helper:	NA		
Test	Electrode	Resistance	Apparent		Test	Electrode	Resistance	Apparent			
	Spacing	<del>\$</del>	Resistivity	Remarks		Spacing	<del>¢</del>	Resistivity	Remarks		
	(ft)	(Ohms)	(Ohm-cm)			(ft)	(Ohms)	(Ohm-cm)			
	2.5	8.6	4,098			2.5	7.8	3,753			
	5.0	5.0	4,749	1		5.0	5.8	5,563	1		
Line 1	10.0	3.3	6,320	1	Line 2	10.0	3.0	5,783	1		
	20.0	1.4	5,285	1		20.0	1.5	5,630	1		
	50.0	0.6	6,128	]		50.0	0.7	6,320	]		
Line 1 Direction:	x	N-S			Line 2 Direction:		N-S				
		NE SW	Test Location	B22			NE SW	Test Location	B22		
		E-W			1	x					
		NW-SE			1		NW-SE				
					1		_				
				1					1		

	Field	Engineers	esting		TRC Engineers, Inc. Field Resistivity Testing Wenner Method							
Project: Location: Site Conditions: Ambient Tempera Rain storms previ		Ideal	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/29/2021 N.Lam NA	Project: Location: Site Conditions: Ambient Tempera Rain storms previ		t Ideal	Project No.: Client: Date Completed: Operator: Helper:	411360.GEO1 ConnectGen 4/29/2021 N.Lam NA			
Test Line 1	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance (Ohms) 8.2 4.3 3.1 2.2 1.5	Apparent Resistivity (Ohm-cm) 3,916 4,127 5,898 8,464 14,267	Remarks	Test Line 2	Electrode Spacing (ft) 2.5 5.0 10.0 20.0 50.0	Resistance         ♦         (Ohms)         8.3         5.2         3.5         2.7         1.9	Apparent Resistivity (Ohm-cm) 3,950 4,960 6,607 10,226 17,810	Remarks			
Line 1 Direction:	X	N-S NE_SW E-W NW-SE	Test Location	B27	Line 2 Direction:	X	_N-S _NE_SW _E-W _NW-SE	Test Location	B27			

Project:       Mill Point Solar       Project No.:         Location:       Glen, NY       Client:         Site Conditions:	ConnectGen eted: 4/29/2021 N.Lam NA nt ty Remarks			Ideal Resistance	Project No.: Client: Date Completed: Operator: Helper: Apparent	411360.GEO1 ConnectGen 4/29/2021 N.Lam NA
Location:       Glen, NY       Client:         Site Conditions:       Dry_x_Wet_leal       Date Completed         Ambient Temperature:       65° F       Operator:         Rain storms previous day- yes       Helper:         Test       Electrode         Spacing       \$\$ P\$       Resistance         (ft)       (Ohms)       (Ohm-cn         2.5       7.1       3,390         5.0       4.6       4,366         Line 1       10.0       3.1       5,994         20.0       2.1       8,043	ConnectGen eted: 4/29/2021 N.Lam NA nt ty Remarks	Location: Site Conditions: Ambient Tempera Rain storms previo	Glen, NY <u>Dry x Wet</u> ture: 65° F ous day- yes Electrode	Resistance	Client: Date Completed: Operator: Helper: Apparent	ConnectGen 4/29/2021 N.Lam
Site Conditions:       Dry x Wet       Ideal       Date Complete         Ambient Temperature:       65° F       Operator:         Rain storms previous day- yes       Helper:         Test       Electrode       Resistance       Apparer         Test       Electrode       Resistance       Apparer         (ft)       (Ohms)       (Ohm-cn         2.5       7.1       3,390         5.0       4.6       4,366         10.0       3.1       5,994         20.0       2.1       8,043	eted: 4/29/2021 N.Lam NA nt ty Remarks	Site Conditions: Ambient Tempera Rain storms previo	Dry x Wet ture: 65° F ous day- yes Electrode	Resistance	Date Completed: Operator: Helper: Apparent	4/29/2021 N.Lam
Ambient Temperature:         65° F         Operator:           Rain storms previous day- yes         Helper:           Test         Electrode Spacing         Resistance ¢         Apparer Resistivi (ft)           (ft)         (Ohms)         (Ohm-on Ohm-on Spacing           2.5         7.1         3,390           5.0         4.6         4,366           Line 1         10.0         3.1         5,994           20.0         2.1         8,043	N.Lam NA nt ty Remarks	Ambient Tempera Rain storms previo	ture: 65° F bus day- yes Electrode	Resistance	Operator: Helper: Apparent	N.Lam
Rain storms previous day- yes         Helper:           Test         Electrode Spacing (ft)         Resistance (Ohms)         Apparen Resistivi (Ohm-cn 2.5           Line 1         2.5         7.1         3,390           5.0         4.6         4,366           20.0         2.1         8,043	NA nt ity Remarks	Rain storms previo	ous day- yes Electrode		Helper: Apparent	
Rain storms previous day- yes         Helper:           Test         Electrode Spacing         Resistance (Ohms)         Apparen Resistivi (Ohm-cn           2.5         7.1         3,390           5.0         4.6         4,366           Line 1         10.0         3.1         5,994           20.0         2.1         8,043	nt ity Remarks	Rain storms previo	ous day- yes Electrode		Apparent	NA
Test         Electrode Spacing         Resistance \$\$ Resistivi (ft)         Apparen Resistivi (Ohms)           2.5         7.1         3,390           5.0         4.6         4,366           10.0         3.1         5,994           20.0         2.1         8,043	ity Remarks		Electrode		Apparent	
Spacing         *         Resistivi           (ft)         (Ohms)         (Ohm-cn           2.5         7.1         3,390           5.0         4.6         4,366           10.0         3.1         5,994           20.0         2.1         8,043	ity Remarks	Test				
Spacing (ft)         * (Ohms)         Resistivi (Ohm-cn (Ohm-cn 3,390)           2.5         7.1         3,390           5.0         4.6         4,366           10.0         3.1         5,994           20.0         2.1         8,043	ity Remarks		Spacing	•		
(ft)         (Ohms)         (Ohm-cn           2.5         7.1         3,390           5.0         4.6         4,366           10.0         3.1         5,994           20.0         2.1         8,043				I I	Resistivity	Remarks
Line 1 2.5 7.1 3,390 5.0 4.6 4,366 4,366 10.0 3.1 5,994 20.0 2.1 8,043	n)		(ft)	(Ohms)	(Ohm-cm)	
Line 1 10.0 3.1 5,994 20.0 2.1 8,043			2.5	7.5	3,567	
20.0 2.1 8,043			5.0	4.3	4,089	1
		Line 2	10.0	3.2	6,166	1
50.0 1.1 10.533			20.0	2.1	7,966	1
30.0 1.1 10,033	;		50.0	0.9	9,001	]
Line 1 Direction: N-S		Line 2 Direction:		N-S		
NE SW Test Location	n SS-2			NE SW	Test Location	SS-2
x E-W		1	х	E-W		
NW-SE		1		NW-SE		
				-		
	<b>I</b>					

# LABORATORY DATA



Project Name:	<u>Mill Poin</u>
Client Name:	<u>Connect(</u>
TRC Project #:	411360.0

Mill Point Solar Project ConnectGen, LLC 11360.GEO1

SAMP	LE IDENTIFICA	TION	stem)	(%	f)	GI	RAIN SIZE D	ISTRIBUTION	N		PLAS	TICITY	
Boring #	Sample #	Depth (ft)	Soil Group (USCS System)	Moisture Content (%)	Dry Unit Weight (pcf)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index (%)
B-1 to B-5	BULK 1	0.0-5.0	CL-ML	16.2	-	6.8	40.7	52	.5	22	16	6	0.0
B-1	S-2	2.0-4.0	CL*	16.6	-	-	-	-		24	16	8	0.1
B-2	S-5	8.0-10.0	CL-ML*	9.5	125.0	-	-	-		21	14	7	-0.6
B-3	S-4	6.0-8.0	CL*	18.5	-	-	-	-		25	16	9	0.3
B-4	S-3	4.0-6.0	SM	11.6	-	18.9	36.7	44	.4	-	-	-	-
B-5	S-5	8.0-10.0	CL-ML*	10.7	-	-	-	-		20	13	7	-0.3
B-6 to B-8	BULK 2	0.0-5.0	CL	25.7	-	14.4	27.3	58	.3	34	23	11	0.2
B-7	S-3	4.0-6.0	CL-ML*	12.7	-	-	-	-		21	15	6	-0.4



Project Name:	Mill
Client Name:	Conr
TRC Project #:	<u>4113</u>

<u>1ill Point Solar Project</u> onnectGen, LLC 11360.GEO1

SAMP	LE IDENTIFICA	TION	stem)	(%	f)	G	RAIN SIZE D	ISTRIBUTION	N		PLAS	TICITY	
Boring #	Sample #	Depth (ft)	Soil Group (USCS System)	Moisture Content (%)	Dry Unit Weight (pcf)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index (%)
B-7	S-4	6.0-8.0	SM	8.5	-	12.6	39.4	48	.0	-	-	-	-
B-8	S-4	6.0-8.0	SM	12.9	-	24.9	47.5	27	.6	-	-	-	-
B-9 to B-14	BULK 3	0.0-5.0	CL-ML	12.0	-	9.1	37.5	53	.4	20	14	6	-0.3
В-9	S-4	6.0-8.0	SM	12.3	-	15.0	38.8	46	.2	-	-	-	-
B-12	S-4	6.0-8.0	ML	10.6	124.8	11.1	34.6	54	.3	-	-	-	-
B-12	S-6	13.0-15.0	ML	10.6	123.6	7.6	27.8	64	.6	-	-	-	-
B-14	S-3	4.0-6.0	CL-ML*	15.0	-	-	-	-		23	18	5	-0.6
B-15	S-6	13.0-15.0	SM	6.6	-	27.5	33.0	39	.5	-	-	-	-



Project Name:	<u>Mill Po</u> i
Client Name:	Connec
TRC Project #:	<u>411360</u>

<u>1ill Point Solar Project</u> onnectGen, LLC 11360.GEO1

SAMP	LE IDENTIFICA	TION	stem)	(%	f)	G	RAIN SIZE D	ISTRIBUTIO	N		PLAS	TICITY	
Boring #	Sample #	Depth (ft)	Soil Group (USCS System)	Moisture Content (%)	Dry Unit Weight (pcf)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index (%)
B-16	S-5	8.0-10.0	SM	8.9	-	22.1	30.5	47	.5	-	-	-	-
B-17	S-3	6.0-8.0	CL*	24.7	-	-	-	-		40	24	16	0.0
B-18	S-2	2.0-4.0	CL*	25.4	-	-	-	-		42	26	16	0.0
B-19	S-2	4.0-6.0	ML*	27.9	93.9	-	-	-		48	28	20	0.0
B-20	S-5	8.0-10.0	CL-ML*	9.8	-	-	-	-		19	13	6	-0.5
B-21	S-3	4.0-6.0	ML	22.7	-	15.5	29.9	54	.6	-	-	-	-
B-21	S-5	8.0-10.0	CH*	29.2	95.1	-	-	-		52	27	25	0.1
B-22 to B-29	BULK 4	0.0-5.0	CL-ML	19.7	-	2.0	21.5	76	.5	18	14	4	1.4



Project Name:	Mill
Client Name:	<u>Con</u>
TRC Project #:	<u>411</u>

<u>lill Point Solar Project</u> onnectGen, LLC 11360.GEO1

SAMP	LE IDENTIFICA	TION	stem)	(%	f)	G	RAIN SIZE D	ISTRIBUTIO	N		PLAS	TICITY	
Boring #	Sample #	Depth (ft)	Soil Group (USCS System)	Moisture Content (%)	Dry Unit Weight (pcf)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index (%)
B-25	S-3	4.0-6.0	ML	31.4	-	1.9	31.1	67	.0	-	-	-	-
B-27	S-4	6.0-8.0	ML	17.9	-	16.8	27.2	56	.0	-	-	-	-
B-29	S-5	8.0-9.4	SM	5.4	-	18.7	44.6	36	.7	-	-	-	-
B-30	S-3	4.0-6.0	GM	31.9	-	44.4	10.7	44	.9	-	-	-	-
SS-1 & SS-2	BULK 5	0.0-5.0	CL	40.1	-	1.2	25.1	73	.7	43	25	18	0.8
SS-1	S-3	4.0-6.0	CL*	19.5	-	-	-	-		32	20	12	0.0
SS-1	S-6	13.0-15.0	ML	9.6	-	9.1	31.8	59	.1	-	-	-	-
SS-1	S-8	23.0-25.0	CL-ML	14.5	-	6.9	18.9	74	.2	-	-	-	-



Project Name:	Mill Point Solar Project
Client Name:	<u>ConnectGen, LLC</u>
TRC Project #:	<u>411360.GEO1</u>

SAMPLE IDENTIFICATION			System)	(%)	sf)	GRAIN SIZE DISTRIBUTION				PLASTICITY			
Boring #	Sample #	Depth (ft)	Soil Group (USCS Sy:	Moisture Content (%	Dry Unit Weight (pcf)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Liquidity Index (%)
SS-2	S-4	6.0-8.0	ML	12.4	-	4.0	33.1	62.9		-	-	-	-
SS-2	S-6	13.0-15.0	CL*	10.3	-	-	-	-		21	13	8	-0.3



# SUMMARY OF LABORATORY TEST DATA

Project Name:	Mill Point Solar Project
Client Name:	<u>ConnectGen, LLC</u>
TRC Project #:	<u>411360.GEO1</u>

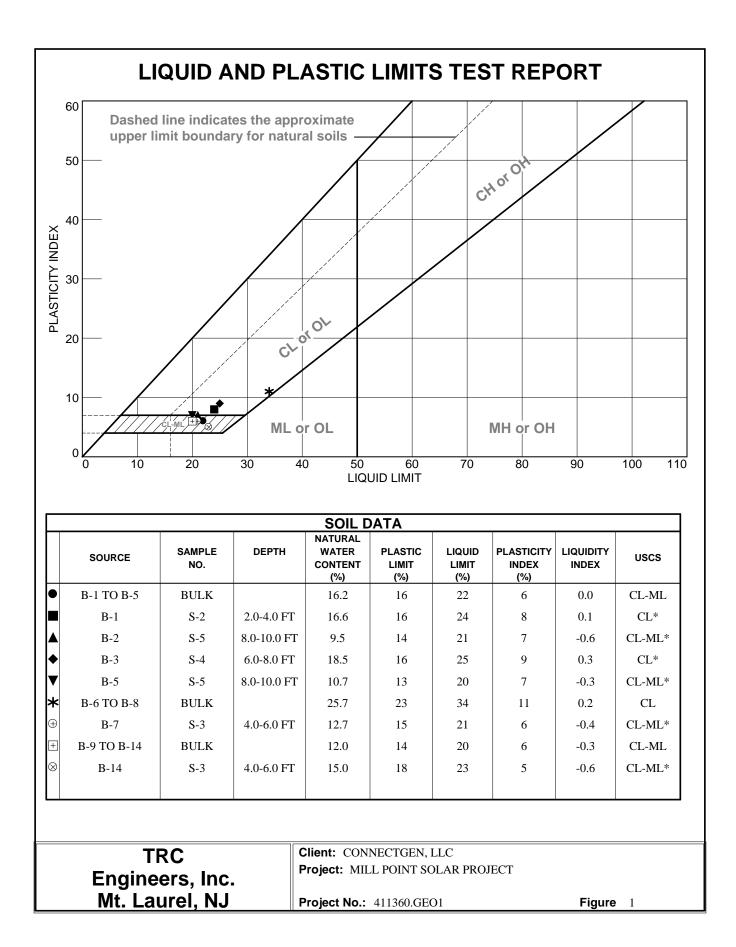
CORROSIVITY ANALYSIS OF SOILS								
Spe	cimen Identific	ation	pH Analysis ASTM D4972			Chlorides, mg/kg	Resistivity, ohm-cm	
Source #	Sample #	Depth (ft)	(IN H20)	(IN CaCl2)	ASTM D516	ASTM D512	ASTM G57	
B-1 to B-5	BULK 1	0.0-5.0	7.7	7.4	58	50	2,548	
B-6 to B-8	BULK 2	0.0-5.0	8.1	7.5	55	40	2,940	
B-9 to B-14	BULK 3	0.0-5.0	8.4	7.5	220	40	1,260	
B-22 to B-29	BULK 4	0.0-5.0	8.2	8.0	235	38	1,176	
SS-1 & SS-2	BULK 5	0.0-5.0	8.3	8.0	185	75	1,568	

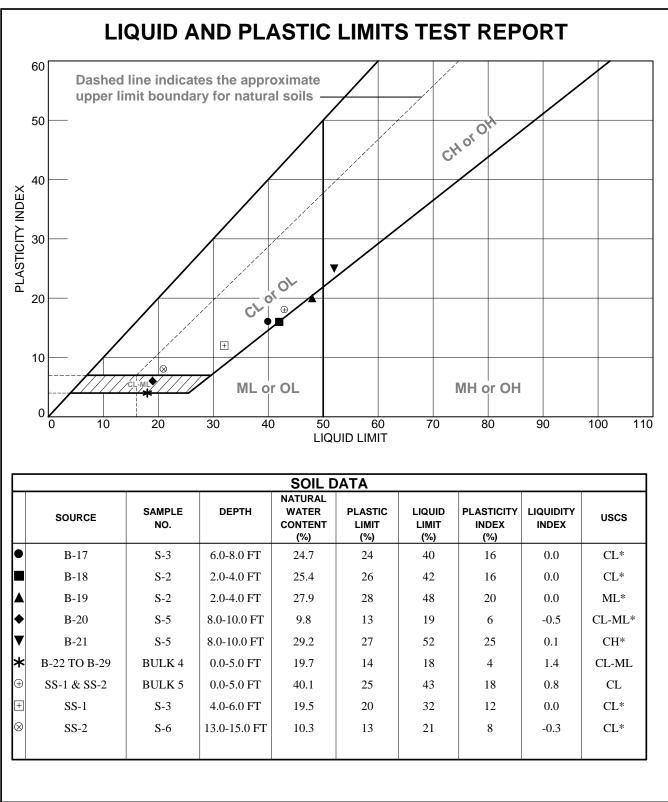


# SUMMARY OF LABORATORY TEST DATA

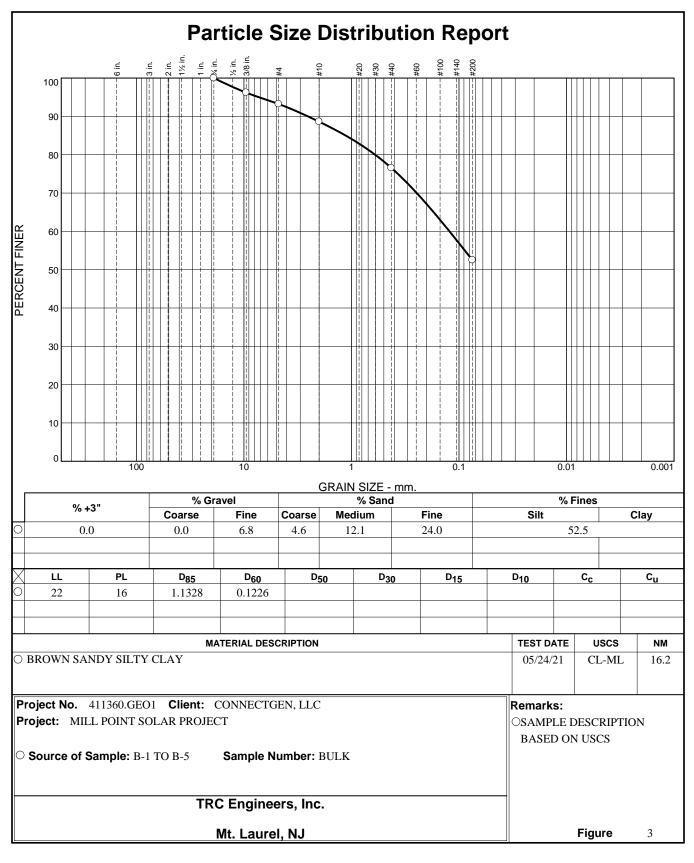
Project Name:	Mill Point Solar Project
Client Name:	<u>ConnectGen, LLC</u>
TRC Project #:	<u>411360.GEO1</u>

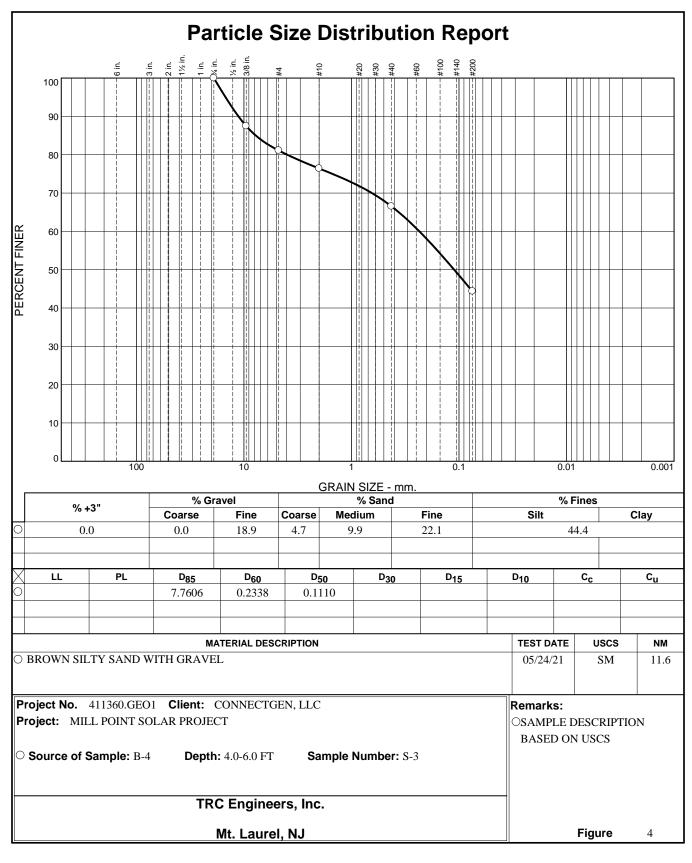
	COMPACTION & THERMAL RESISTIVITY RESULTS								
S	pecimen Identific	ation	Compa	ction Chara	cteristics	Thermal Resistivity (°C-cm/W)		tent	cf)
Source #	Sample #	Depth (ft)	Type of Test	Maximum Density (PCF)	Optimum Moisture Content (%)	Wet	Dry	Moisture Content (%)	Dry Density (pcf)
B-1 to B-5	BULK 1	0.0-5.0	D698	118.6	11.8	111.5	565.0	9.0	106.3
B-6 to B-8	BULK 2	0.0-5.0	D698	109.0	14.8	61.6	120.0	14.8	98.1
B-9 to B-14	BULK 3	0.0-5.0	D698	119.0	11.9	46.8	100.0	11.9	107.1
B-22 to B-29	BULK 4	0.0-5.0	D698	114.5	12.1	69.9	174.6	12.1	103.1
SS-1 & SS-2	BULK 5	0.0-5.0	D698	96.2	18.4	68.9	182.6	18.4	86.6

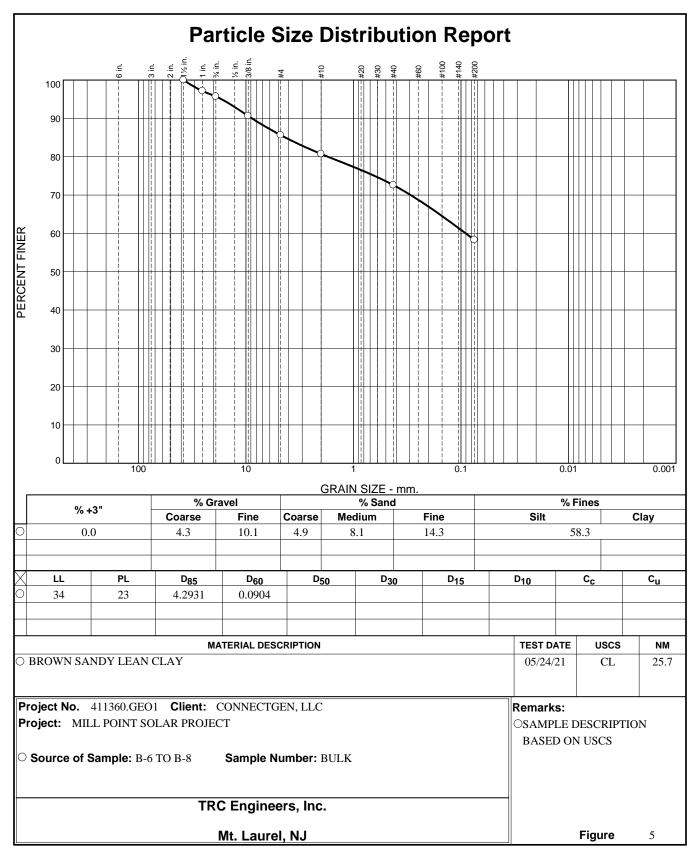


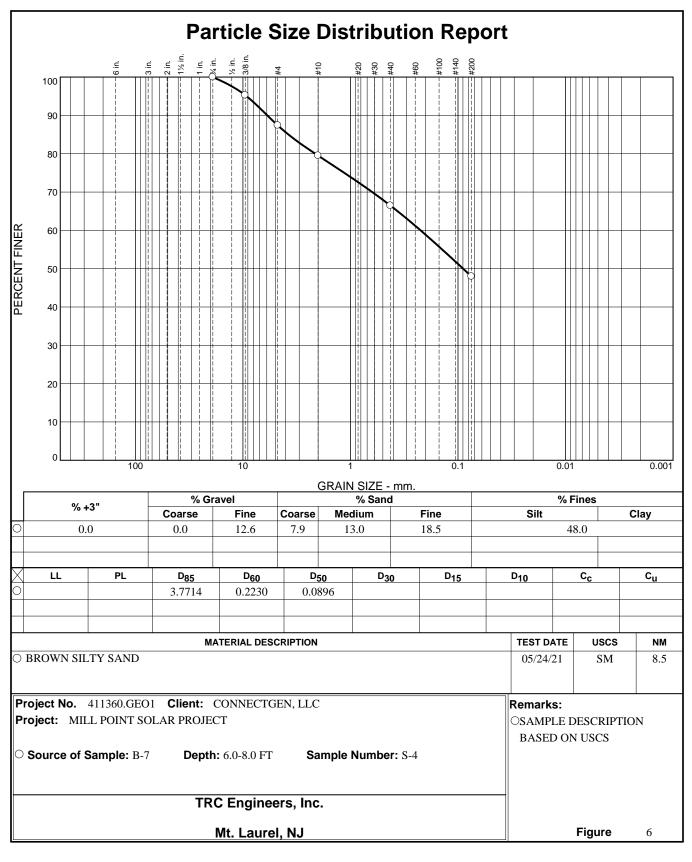


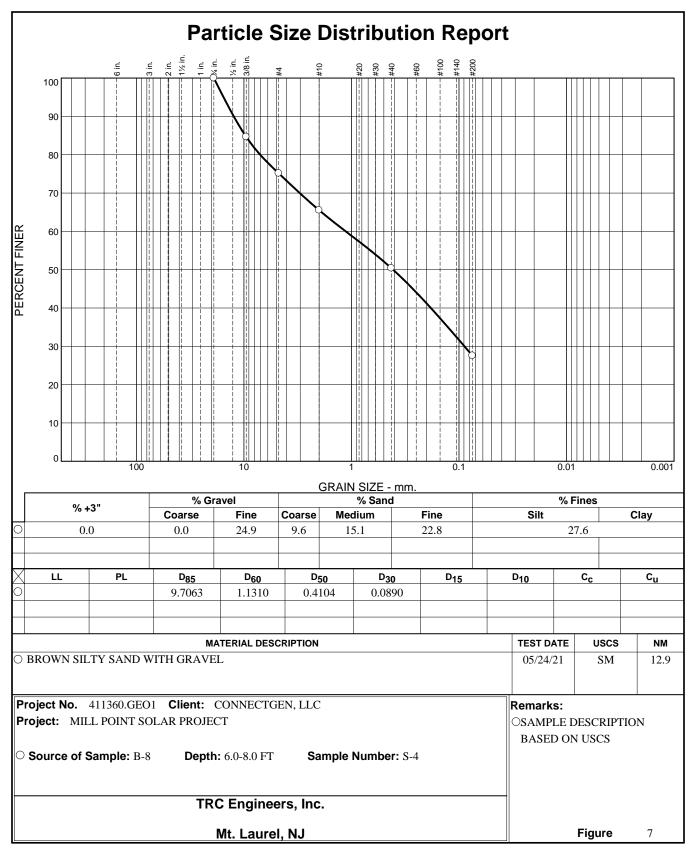
	Client: CONNECTGEN, LLC Project: MILL POINT SOLAR PROJECT		
Mt. Laurel, NJ	Project No.: 411360.GEO1	Figure	2

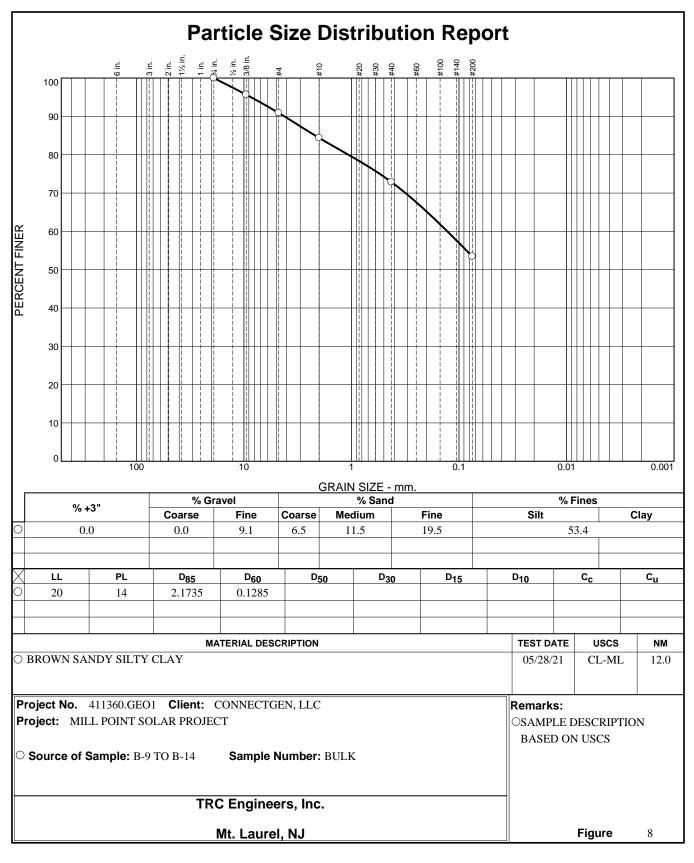




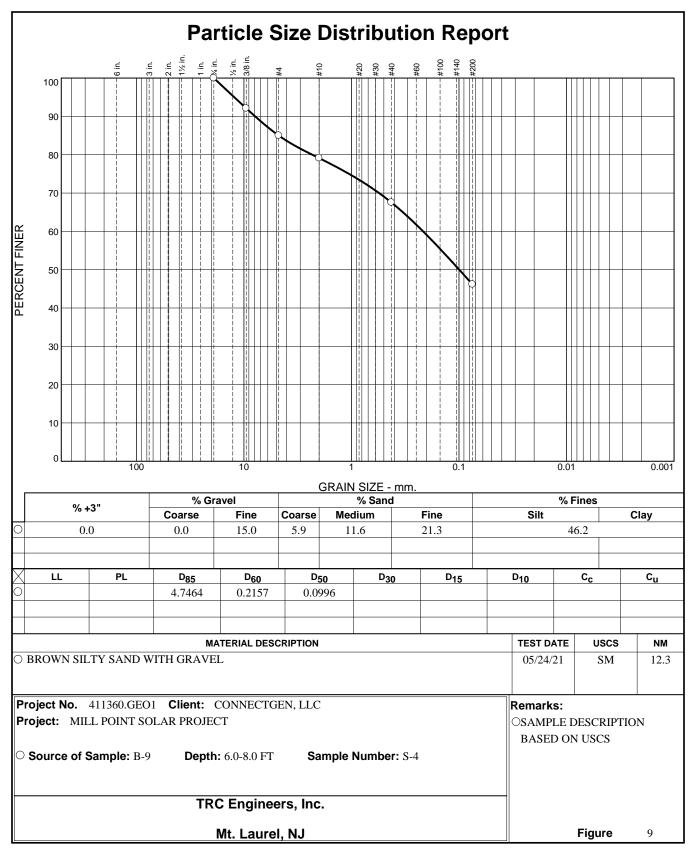


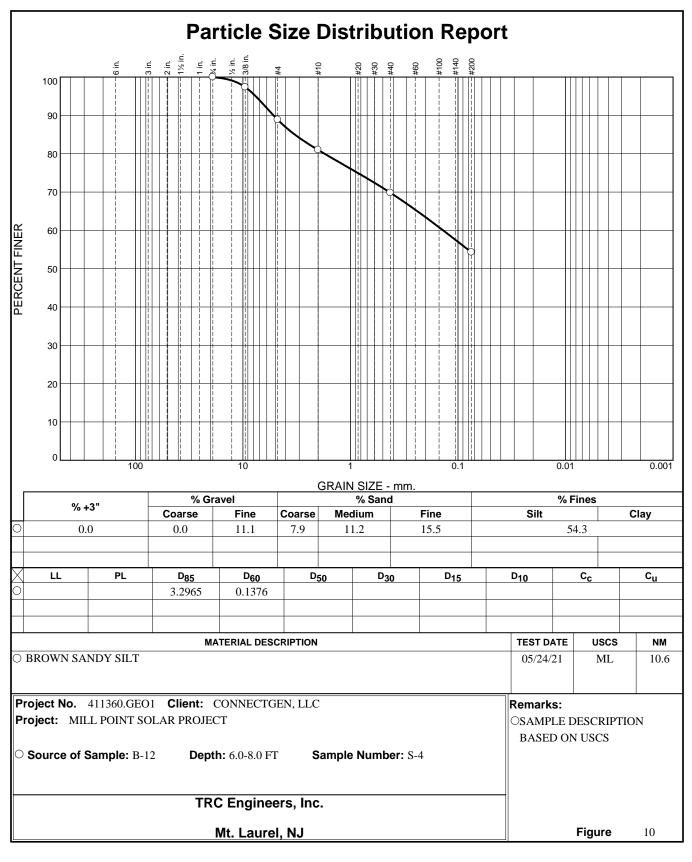


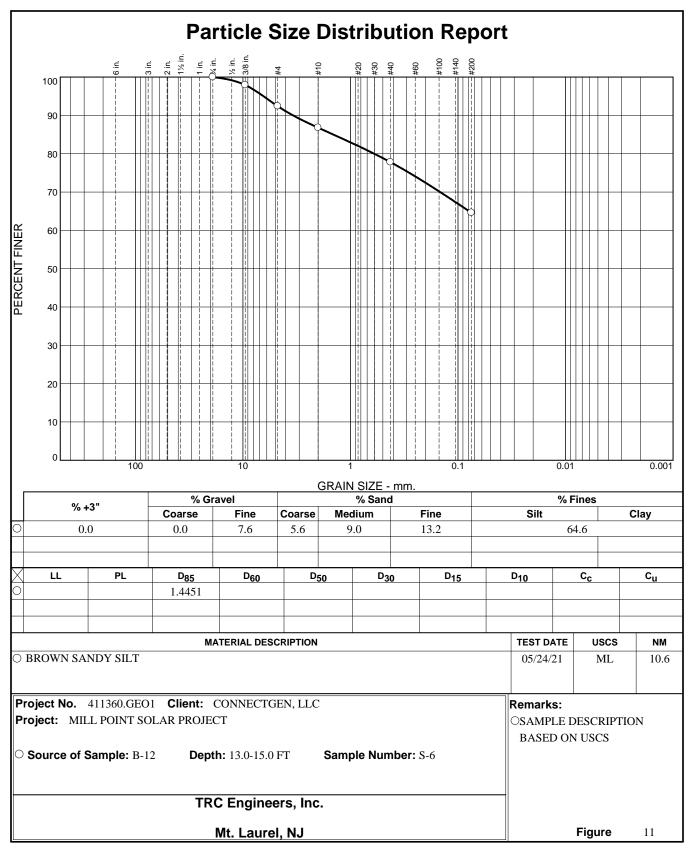




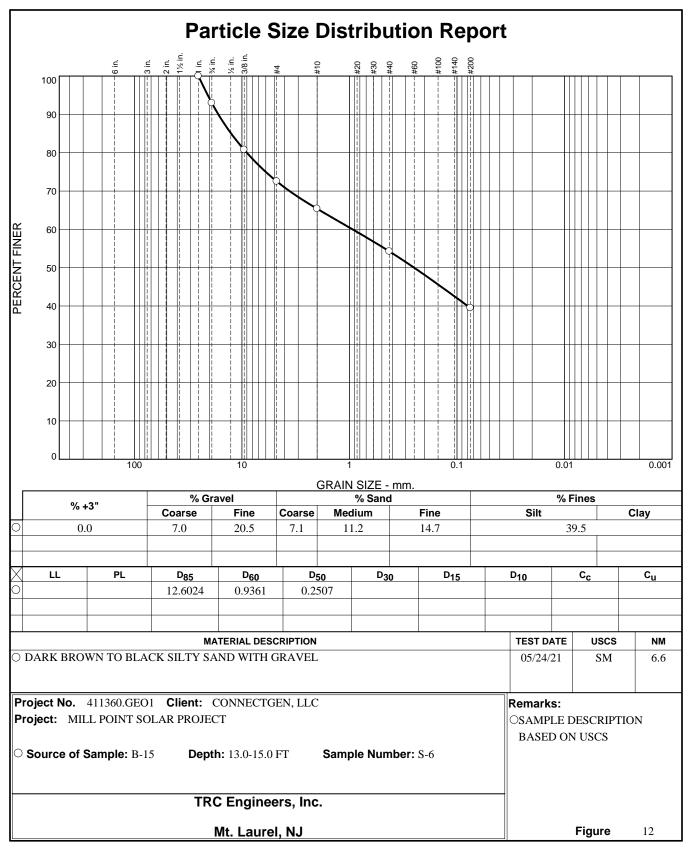
\_\_\_\_\_ Checked By: JPB 06/04/21



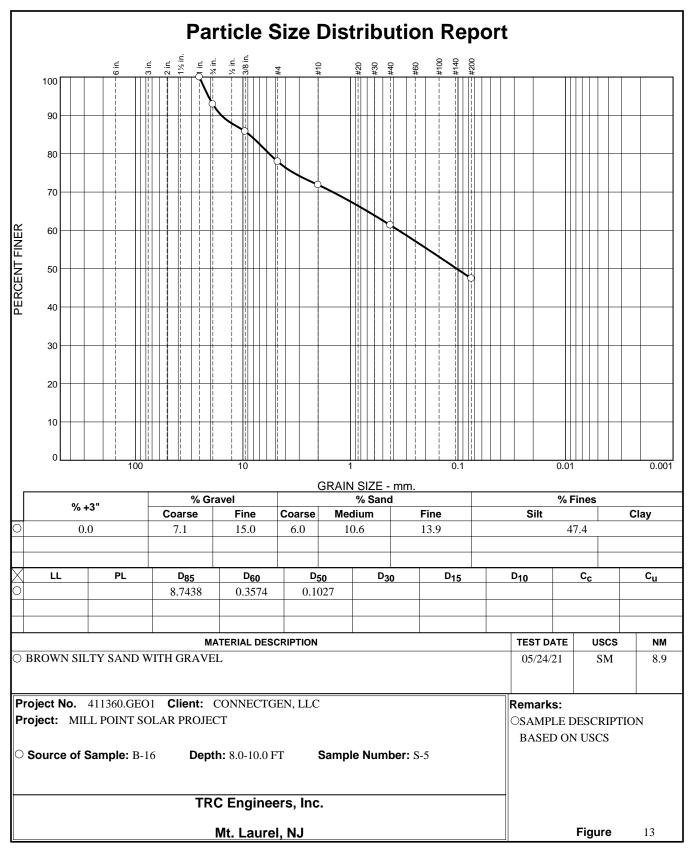


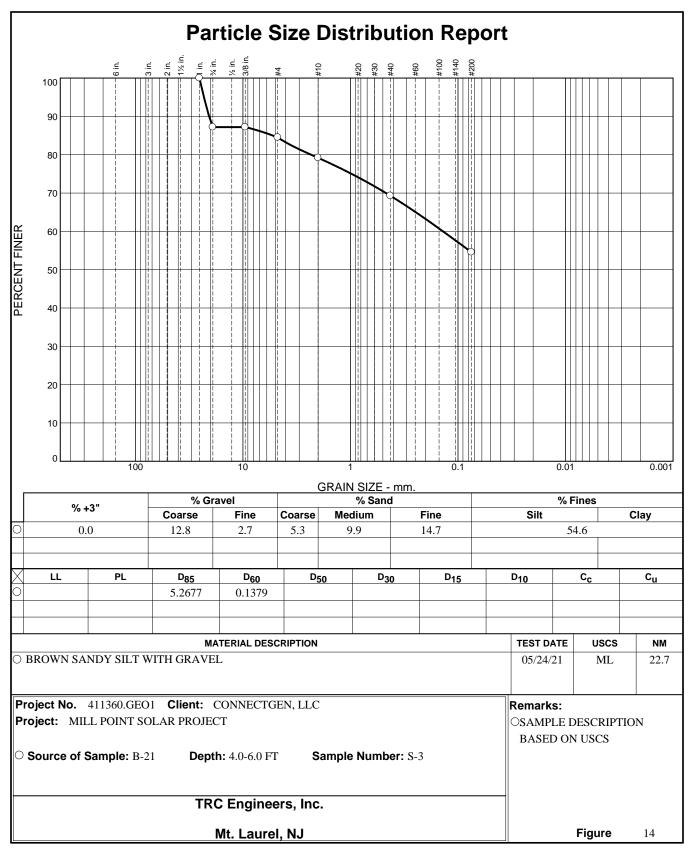


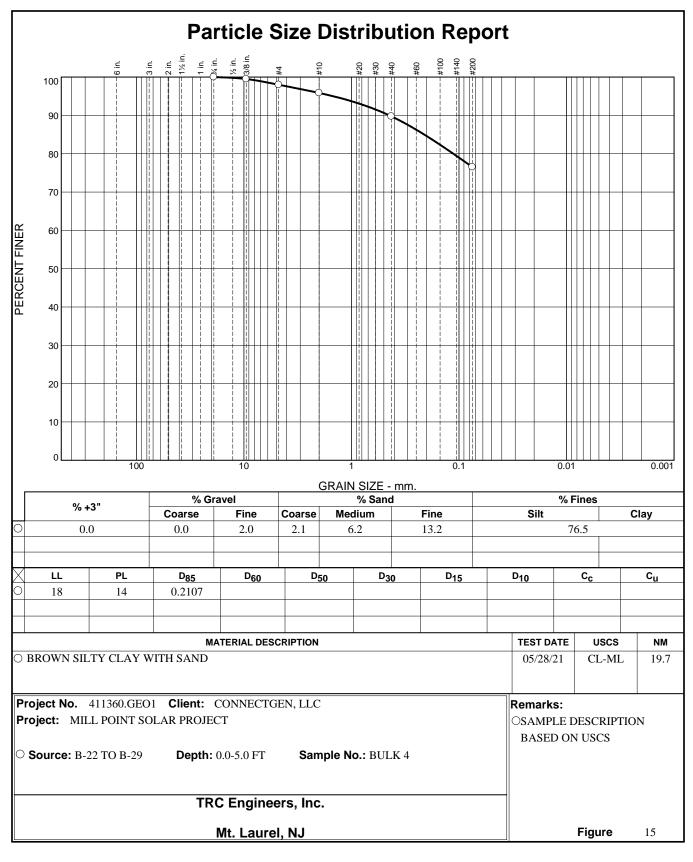
\_ Checked By: <u>JPB 05/28/21</u>



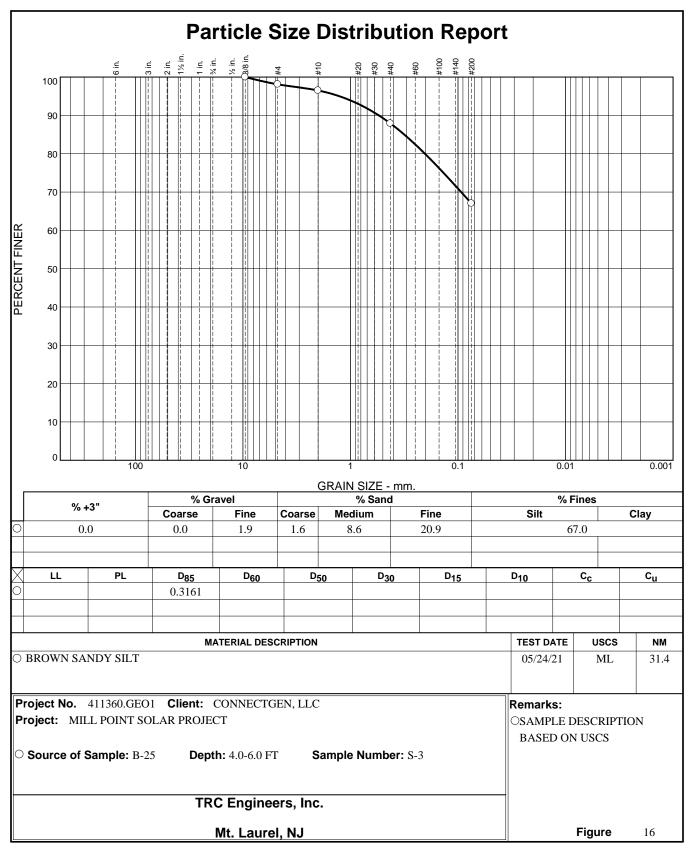
Checked By: <u>JPB 05/28/21</u>

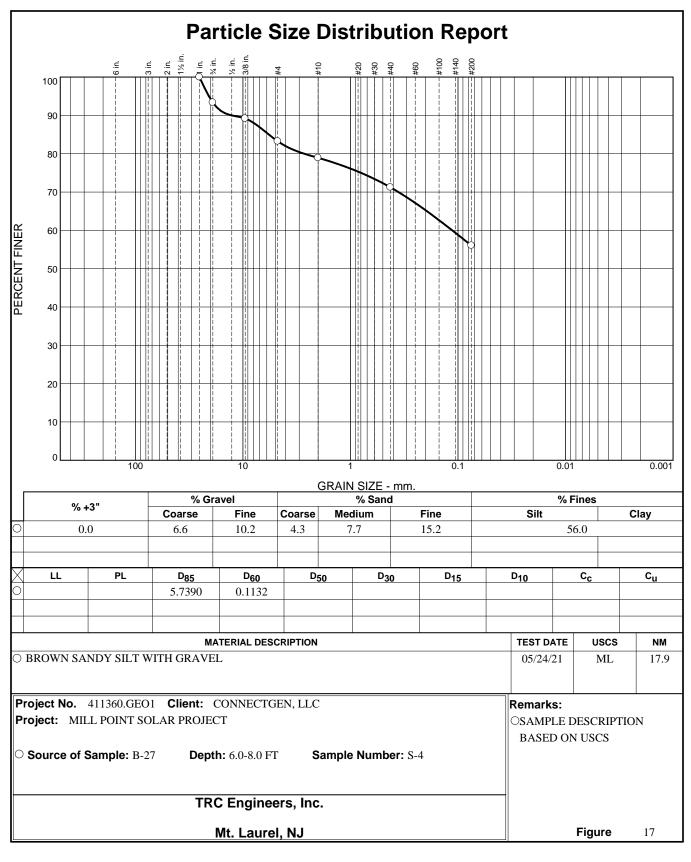


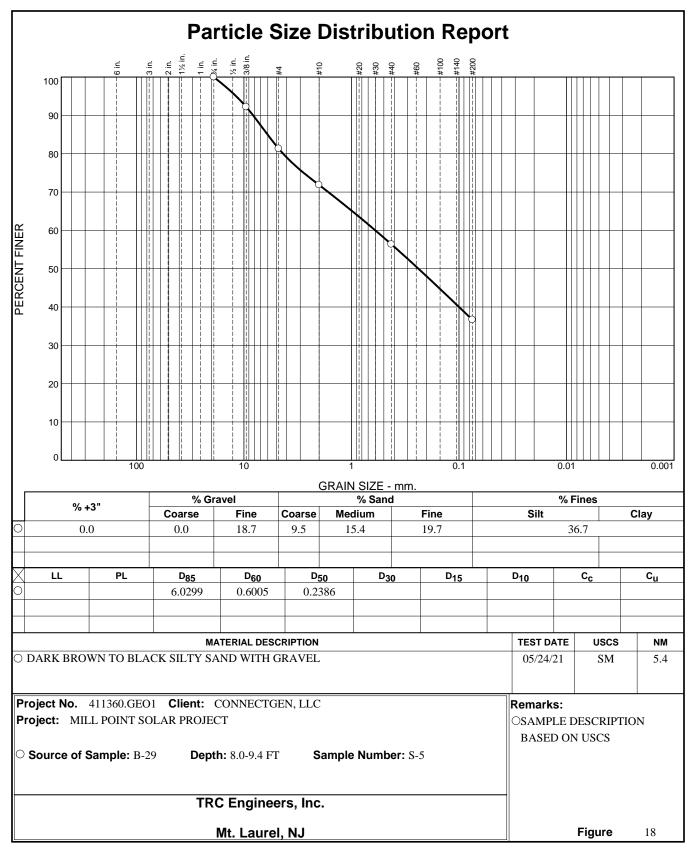


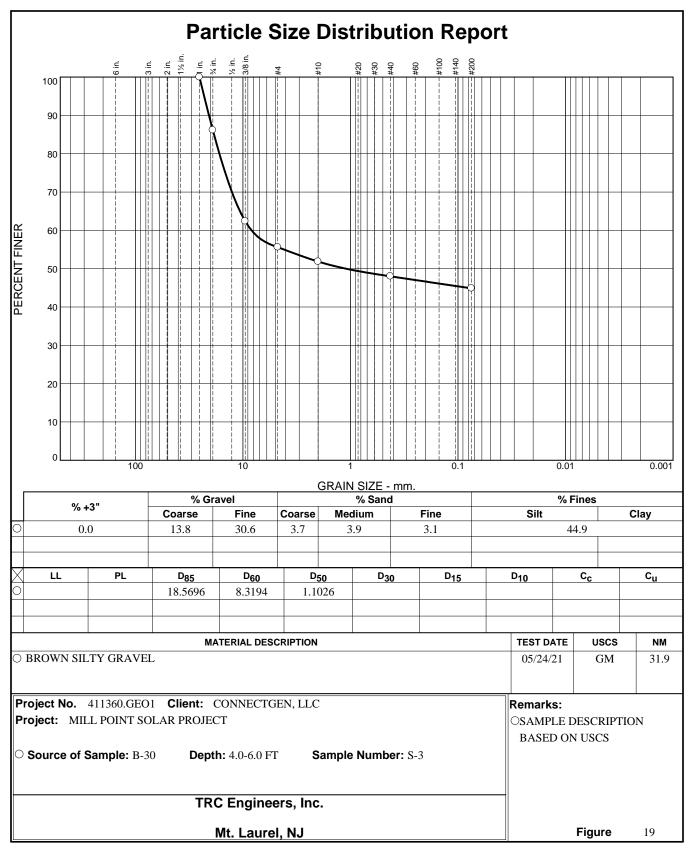


\_\_\_\_\_ Checked By: JPB 06/04/21

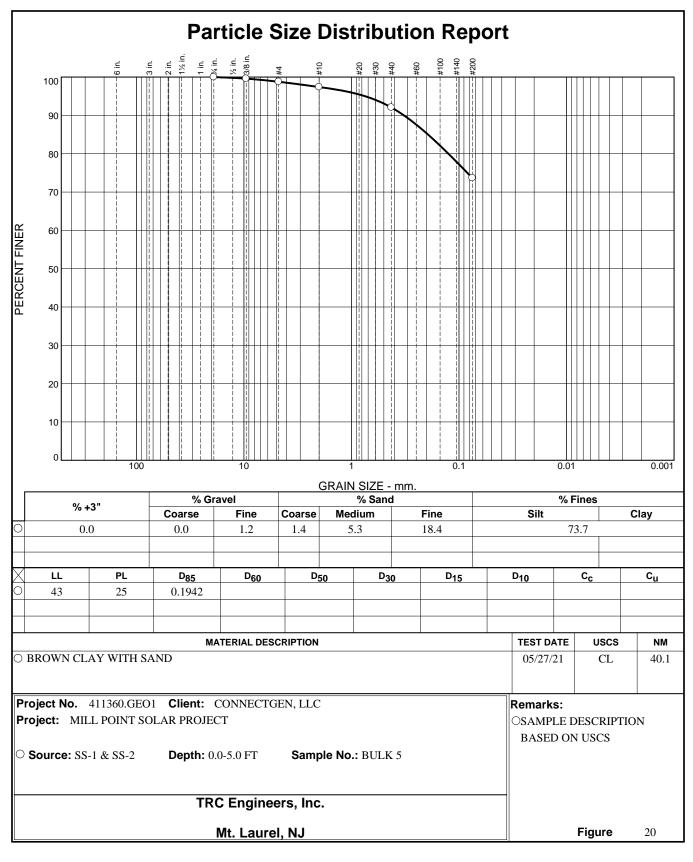




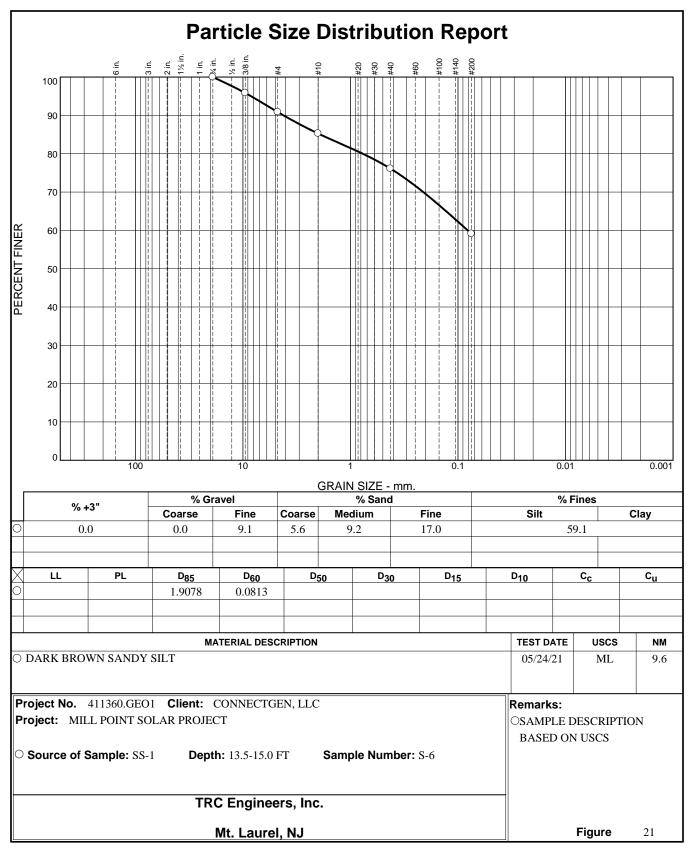




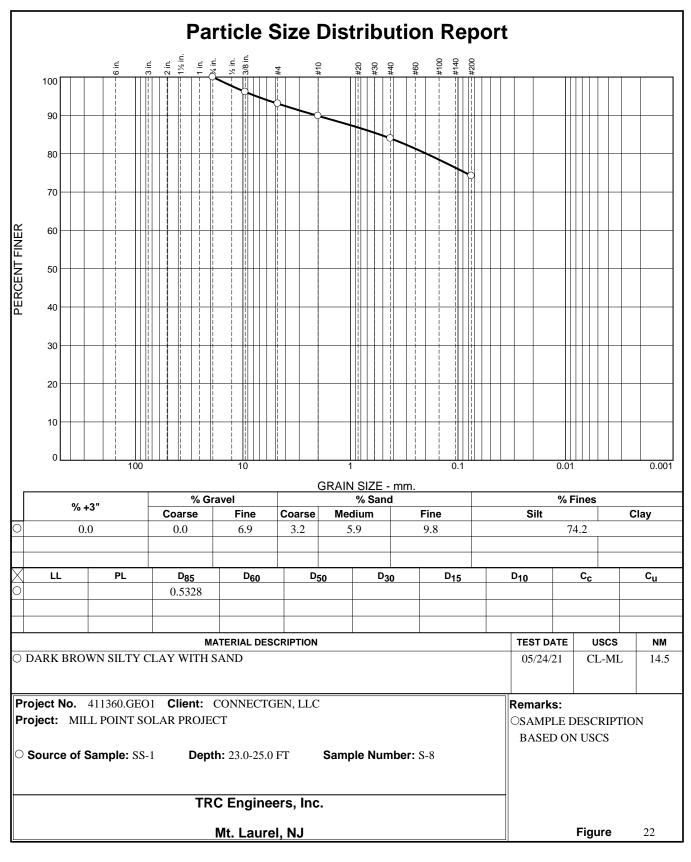
Checked By: <u>JPB 05/28/21</u>

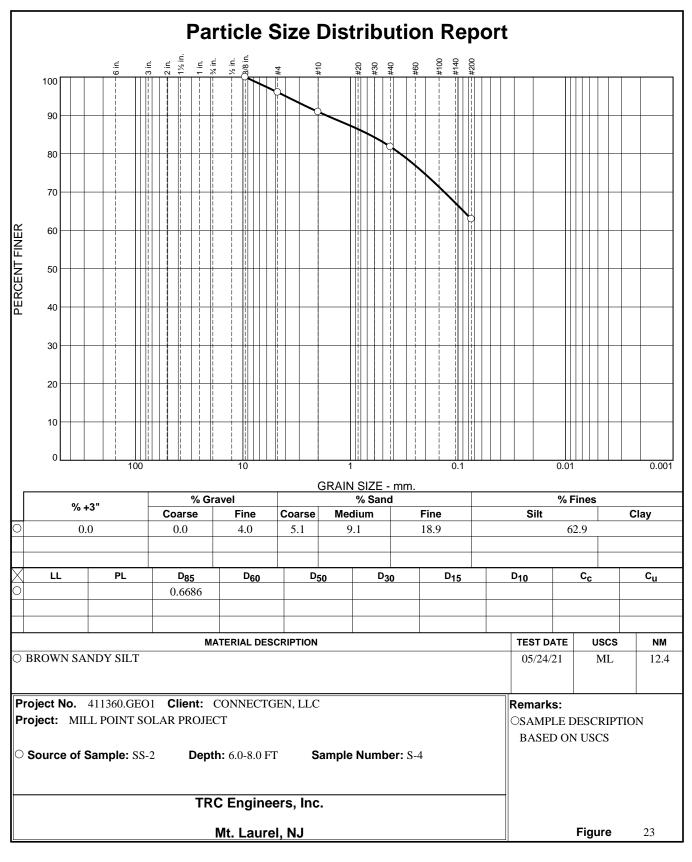


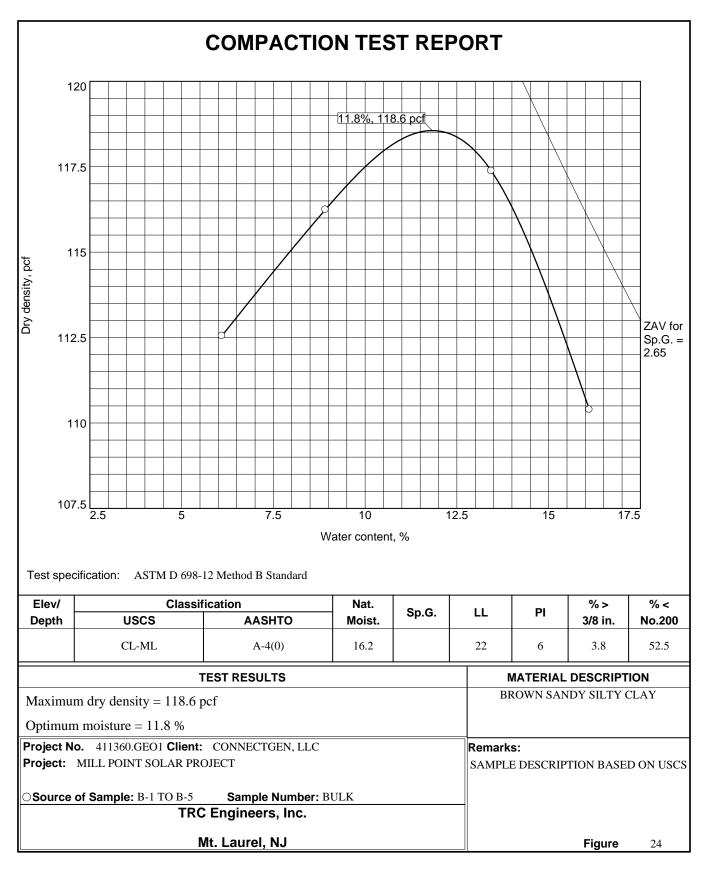
Tested By: <u>CWZ 05/27/21</u> Checked By: <u>JPB 06/04/21</u>

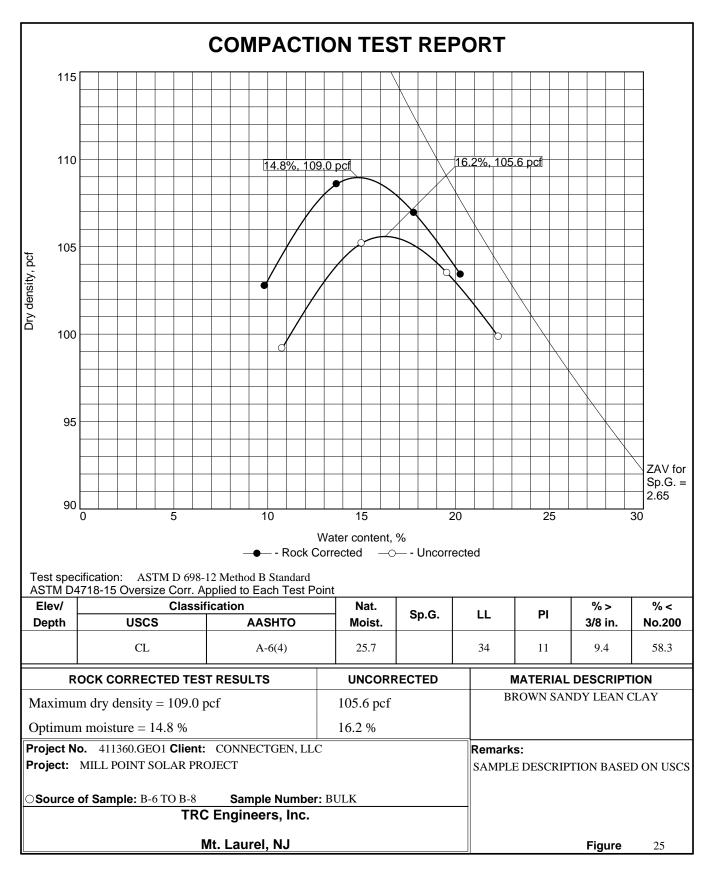


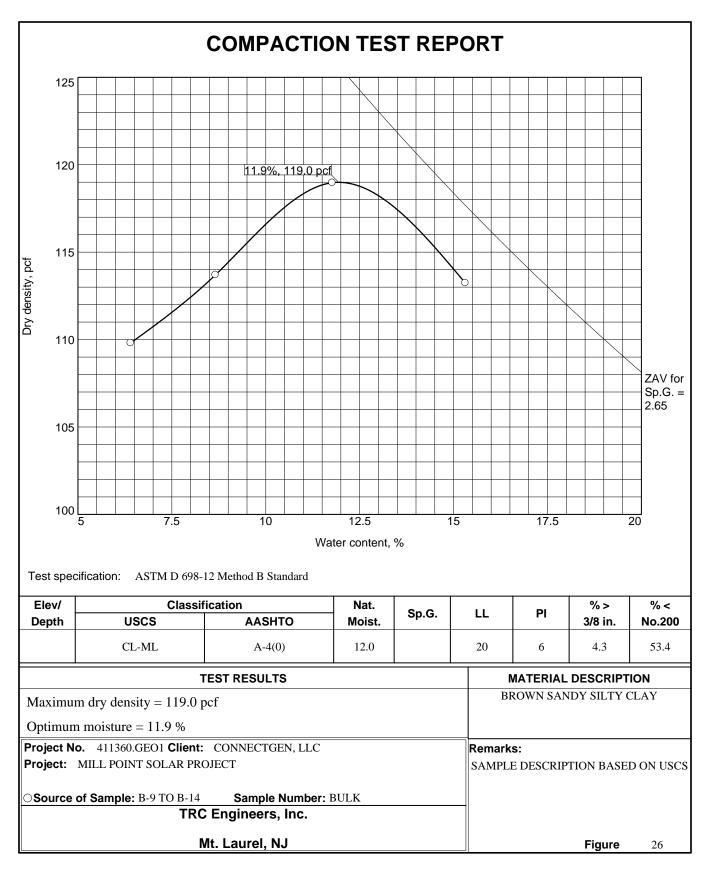
\_ Checked By: <u>JPB 05/28/21</u>

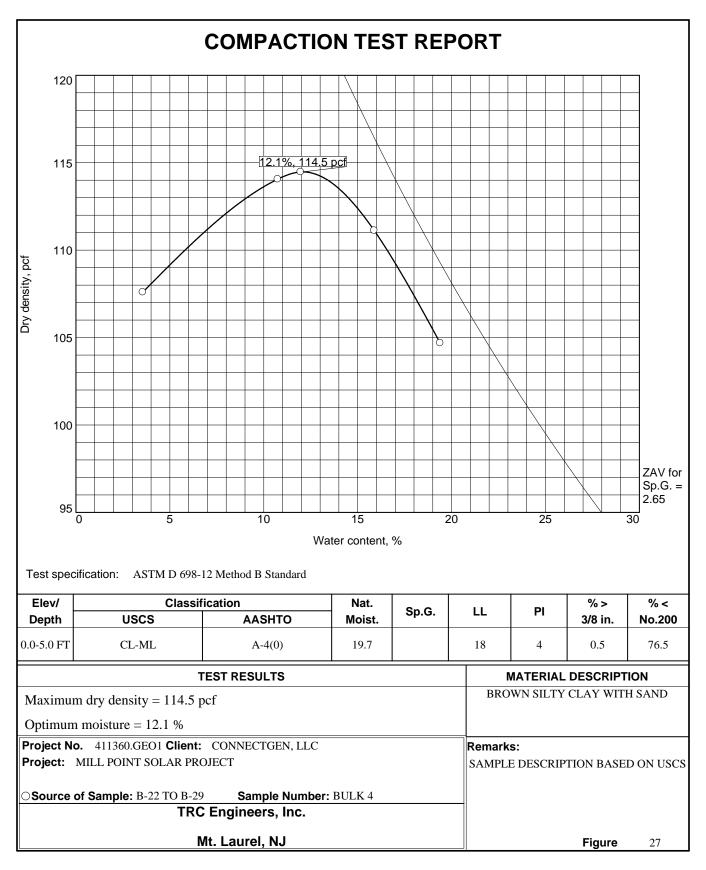


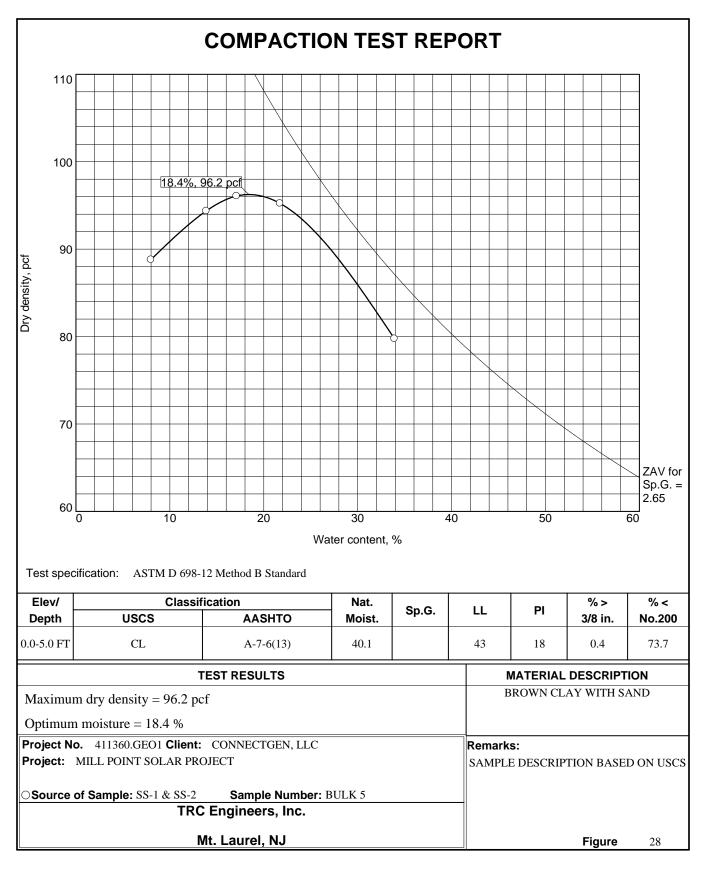












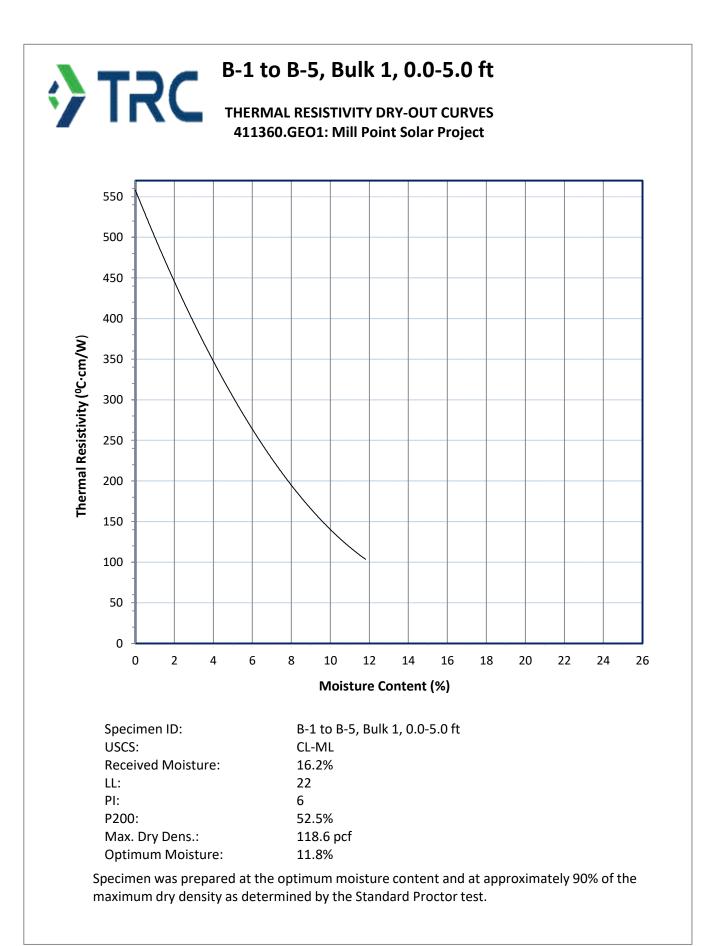
Job # 411360.GEO1	Job Name:	Mill Point Solar Project		
Boring No.         B-2           Sample No.         S-5           Lift #:         8.0-10.0	Client Name:	ConnectGen, LLC		
Height1.9496Diameter1.3584Moist Sample Weight + Tare (g)227.03Dry Sample Weight + Tare (g)218.21Tare weight (g)125.5	Dry Sar Weight Moisture	ample Weight - Tare nple Weight - Tare of Water e % e Content	g 101.53 92.71 8.82 9.5 0.095	lbs 0.223634 0.204207 - - -
Sample Total Area <u>1.45</u> in2				
Total Volume (cu in) 2.82	Total Vo	olume (cu ft) <u>0.0016342</u>	,	
Dry Unit Weight (pcf) <b>125.0</b>				
Wet Unit Weight (pcf) <b>136.8</b>				

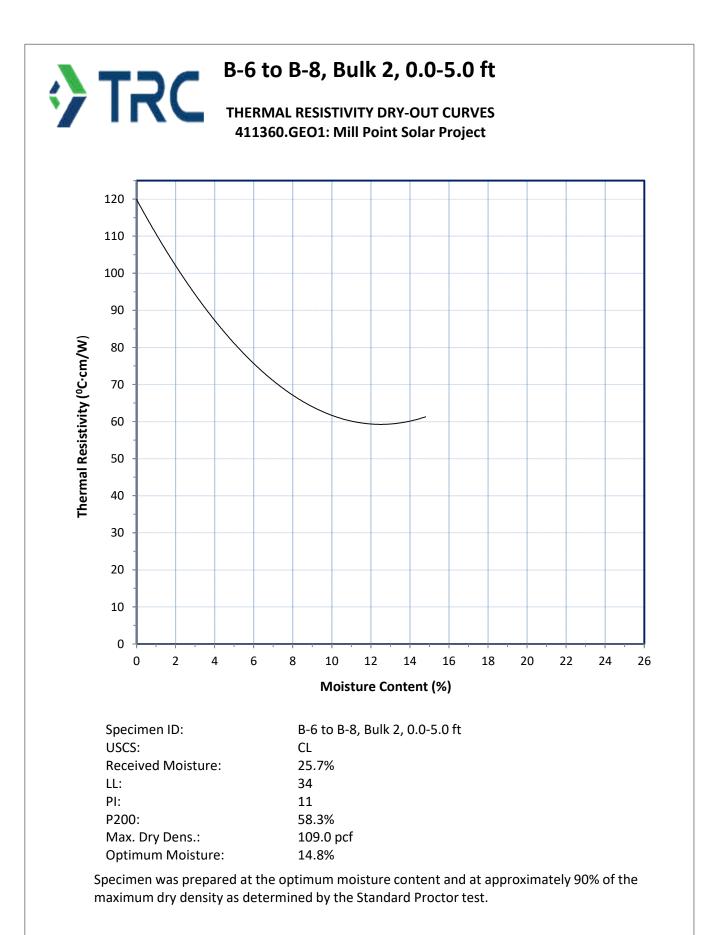
Job #	Job Name:	Mill Point Solar Project		
Boring No.         B-12           Sample No.         S-4           Lift #:         6.0-8.0	Client Name:	ConnectGen, LLC		
Height <u>1.2361</u>				lha
Diameter <u>1.3703</u> g Moist Sample Weight + Tare (g) 228.37	Moist S	ample Weight - Tare	g 66.03	lbs 0.145441
Dry Sample Weight + Tare (g) 222.06		nple Weight - Tare	59.72	0.131542
Tare weight (g)		of Water	6.31	-
	Moisture		10.6	-
	Moisture	e Content	0.106	-
Sample Total Area <u>1.47</u> in2	T-4-1)/	(		
Total Volume (cu in) <u>1.82</u>	lotal Vo	olume (cu ft) <u>0.0010544</u>		
Dry Unit Weight (pcf) 124.8				
Wet Unit Weight (pcf) <b>137.9</b>				

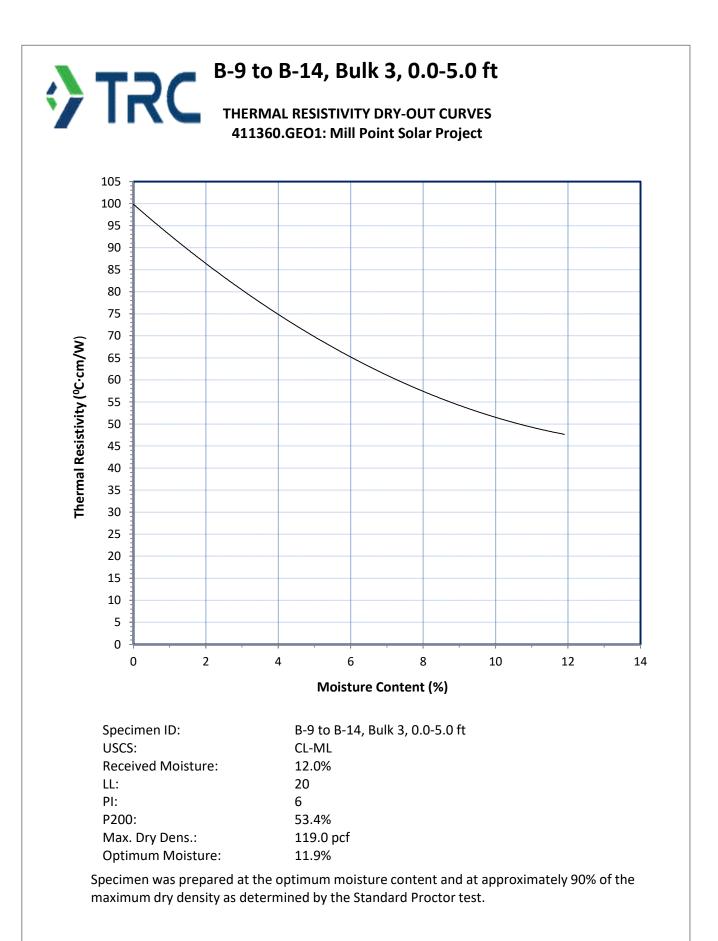
Job # 411360.GEO1	Job Name:	Mill Point Solar Project		
Boring No. B-12	Client Name:	ConnectGen, LLC		
Sample No. <u>S-6</u>				
Lift #: 13.0-15.0				
Height 1.8373				
Diameter 1.3748 g			g	lbs
Moist Sample Weight + Tare (g) 255.53		ample Weight - Tare	97.88	0.215595
Dry Sample Weight + Tare (g) 246.16	,	nple Weight - Tare	88.51	0.194956
Tare weight (g) 157.65	0	of Water	9.37	-
	Moisture		10.6	-
	Moisture	e Content	0.106	-
Sample Total Area <u>1.48</u> in2				
Total Volume (cu in) 2.73	Total Vo	olume (cu ft) <u>0.0015774</u>		
Dry Unit Weight (pcf) 123.6				
Wet Unit Weight (pcf) 136.7				

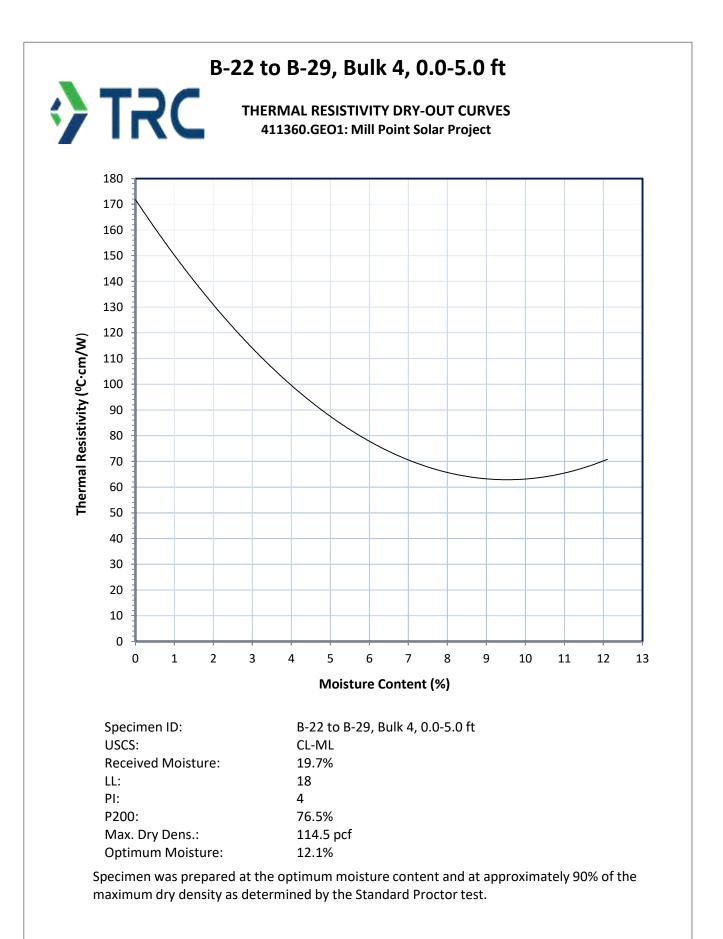
Job # 411360.GEO1	Job Name:	Mill Point Solar Project		
Boring No. B-19	Client Name:	ConnectGen, LLC		
Sample No. S-2				
Lift #: <b>2.0-4.0</b>				
Height <u>2.7996</u>				
Diameter <u>1.3778</u> g			g	lbs
Moist Sample Weight + Tare (g) 267.71		ample Weight - Tare	131.61	0.289890
Dry Sample Weight + Tare (g) 239.02	-	nple Weight - Tare	102.92	0.226696
Tare weight (g) 136.1	0	of Water	28.69	-
	Moistur		27.9	-
	Moisture	e Content	0.279	-
Sample Total Area <u>1.49</u> in2				
Total Volume (cu in) <u>4.17</u>	Total Vo	olume (cu ft) <u>0.0024142</u>		
Dry Unit Weight (pcf) 93.9				
Wet Unit Weight (pcf) 120.1				

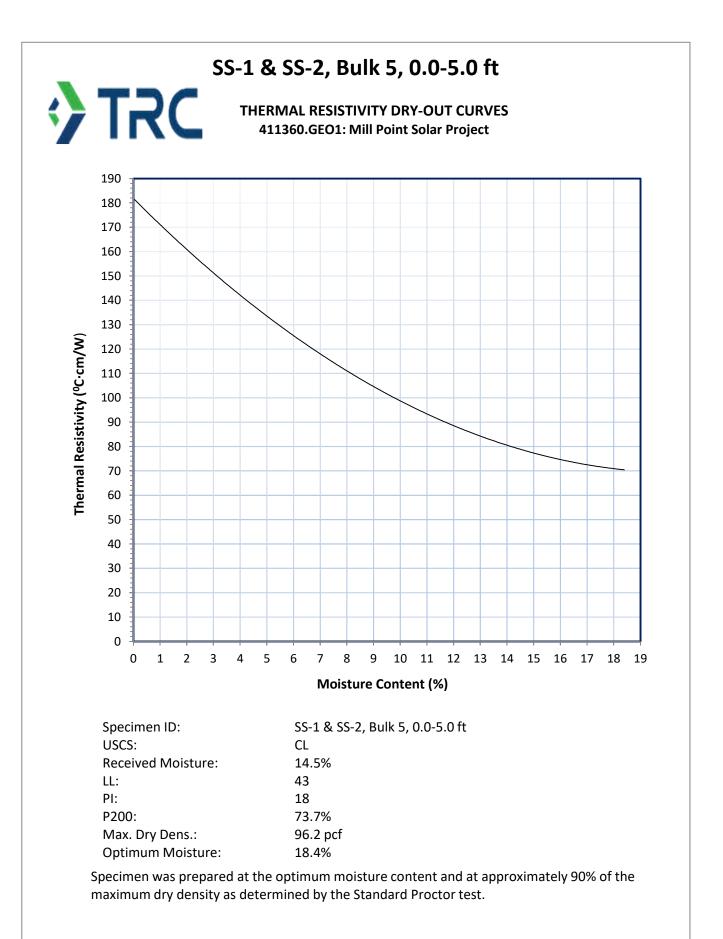
Job Name:	Mill Point Solar Project		
Client Name:	ConnectGen, LLC		
		g	lbs
Moist Sa	ample Weight - Tare	156.49	0.344692
Dry San	nple Weight - Tare	121.16	0.266872
0		35.33	-
		-	-
Moisture	e Content	0.292	-
Total Vo	olume (cu ft) <u>0.0028048</u>		
	Client Name: Moist Sa Dry San Weight Moisture Moisture	Client Name: <u>ConnectGen, LLC</u> Moist Sample Weight - Tare Dry Sample Weight - Tare Weight of Water Moisture % Moisture Content	Client Name: ConnectGen, LLC Moist Sample Weight - Tare Dry Sample Weight - Tare Weight of Water Moisture % 29.2













### 3028 ALDON AVE. LAS VEGAS, NV 89121

702-340-1186 KDE@KECORROSION.COM

### CLIENT

#### **PROJECT NO: 411360**

TRC Solutions, Inc. 1600 Commerce Parkway, Suite B Mount Laurel, NJ 08054

#### PROJECT

Mill Point

**DATE:** June 1, 2021

LAB ID: 21-0068

Sample By: Client

Analyzed By: Kurt D. Ergun

### **RESULTS FOR CORROSIVITY ANALYSIS OF SOILS**

Sample No:	Bulk
Sample Location:	SS-1 to SS-2
Sample Depth:	0.0-5.0
Laboratory Testing Methods	
pH Analysis, ASTM D4972(in H20)	8.34
pH Analysis, ASTM D4972(in CaCl2)	8.00
Water Solube Sulfates, ASTM D516(mg/kg)	185
Clorides, ASTM D512(mg/kg)	75
Resistivity, ASTM G57(ohm-cm)	1568

Lut

Kurt D. Ergun Chemist

Note: The tests were performed in accordance with applicable ASTM, AASHTO, or AWWA methods. Test results submitted are only applicable to samples tested at referenced locations and are not indicative of the results of similar materials.



### 3028 ALDON AVE. LAS VEGAS, NV 89121

702-340-1186 KDE@KECORROSION.COM

#### CLIENT

#### **PROJECT NO: 411360**

TRC Solutions, Inc. 1600 Commerce Parkway, Suite B Mount Laurel, NJ 08054

#### PROJECT

Mill Point

DATE: June 1, 2021

LAB ID: 21-0068

Sample By: Client

Analyzed By: Kurt D. Ergun

### **RESULTS FOR CORROSIVITY ANALYSIS OF SOILS**

Sample No:	Bulk	Bulk	Bulk	Bulk
Sample Location:	B-1 to B-5	B-7 to B-8	B-9 to B-14	B-22 to B-29
Sample Depth:	0.0-5.0	0.0-5.0	0.0-5.0	0.0-5.0
Laboratory Testing Methods				
pH Analysis, ASTM D4972(in H20)	7.71	8.08	8.40	8.21
pH Analysis, ASTM D4972(in CaCl2)	7.36	7.45	7.45	8.03
Water Solube Sulfates, ASTM D516(mg/kg)	58	55	220	235
Clorides, ASTM D512(mg/kg)	50	40	40	38
Resistivity, ASTM G57(ohm-cm)	2548	2940	1260	1176

Kut

Kurt D. Ergun Chemist

Note: The tests were performed in accordance with applicable ASTM, AASHTO, or AWWA methods. Test results submitted are only applicable to samples tested at referenced locations and are not indicative of the results of similar materials.