Appendix 9.14.2 Preliminary Geotechnical Investigation 2/2007

Preliminary Geotechnical Interpretive Report for Silo Ridge Golf Resort Community

> Town of Amenia Dutchess County New York

February 16, 2007



Prepared for:

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> Town of Amenia Dutchess County New York

February 16, 2007



Project Number: 30631.00

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## 1.0 EXECUTIVE SUMMARY

The Chazen Companies (TCC) conducted a subsurface investigation to provide geotechnical recommendations necessary to advance the conceptual site design and estimate construction costs for the proposed Silo Ridge Country Club Resort Community in the Town of Amenia, Dutchess County, New York.

The preliminary geotechnical analyses discussed in this report are provided to aid in design development and included

- Global Stability analysis along the determined critical section,
- Preparation of a site bedrock surface contour map based on explorations that encountered bedrock
- Earthquake engineering considerations such as site coefficient, liquefaction susceptibility of soils, and seismically induced settlements,
- Stability of onsite soils for use as compacted fill, storm water basin liner or for storm water filtration
- Comments on other geotechnical aspects such as excavation and filling, dewatering, and special requirements for protecting strength of undisturbed soils at foundation elevation.

Glacial Till, Weathered Bedrock and Bedrock were encountered in explorations performed across the project site. Weathered Bedrock was encountered between El. 644 feet and El. 501 feet above mean sea level. Groundwater was observed at depths between 10 feet and 23 feet below existing grades within the limits of the exploration.

The soils and bedrock observed on-site, glacial till, weathered bedrock and bedrock, along with placed fill, support the use of shallow foundations (reinforced concrete continuous strip footings and isolated spread footings) for proposed structures with soil supported slabs. The allowable bearing capacities of these strata for shallow foundations and slabs are presented in Sections 5.2 and 5.3. Foundations should be founded on a uniform bearing stratum to minimize differential settlement potential. Additional, structure specific explorations are recommended to verify the subsurface conditions at each structure.

The seismic design category for each proposed structure is approximated to be B; however, this value could vary based on the undulating bedrock surface and location of the structure. Therefore, additional, structure specific explorations are recommended to determine the proper site classification for each structure once final locations are selected. Overburden soils may be suitable for reuse as common fill for general earthwork and landscaping purposes, but are not recommended for use as fill beneath buildings, pavements, or against foundations walls.

Provided the geotechnical recommendations and construction considerations are incorporated in the design and during construction activities, the site is considered suitable for the proposed development.

### 2.0 INTRODUCTION

Higher Ground Country Club Management Company LLC retained The Chazen Companies (TCC) to provide preliminary site geotechnical engineering services described in the Technical Services Change Order dated October 18, 2006. The authorized scope included planning, coordinating and conducting a preliminary site subsurface investigation and preparation of this geotechnical interpretive report. This report includes interpretation of subsurface conditions, preliminary geotechnical recommendations and feasible foundation alternatives for design of the proposed structures. The site is located within the Town of Amenia, Dutchess County, New York as shown on the Site Location Map included as Figure 1.

#### 3.0 PHYSICAL SETTING

The proposed site for the Silo Ridge Country Club Resort Community is located west of NYS Route 22 and south of West Lake Amenia Road and NYS Route 44. A portion of the site extends north of NYS Route 44 for a few hundred feet. Currently, the site encompasses the existing 18-hole Silo Ridge Golf Course. Existing topography indicates that there is a ridge line running north/south along the western boundary of the site with a maximum elevation of El. 980 ft above mean sea level (ft msl) approximately. The existing concept includes structures mid-way up the ridge to an approximate elevation of El. 750 ft msl. The existing golf course contains rolling terrain and ponds. Existing site conditions are depicted in Figure 2, Exploration Location Plan.

Elevations noted herein are based on a site survey performed by others utilizing the National Geodetic Vertical Datum of 1929 (NGVD 29).

### 4.0 SUBSURFACE INVESTIGATION

This section summarizes the results of the subsurface investigation performed at the site in November and December of 2006 in areas of proposed development.

## 4.1 **Previous Investigations**

A subsurface investigation performed by TCC in August 2006 in a report titled "Preliminary Geotechnical Report for Silo Ridge Golf Course Resort Community". Results from the previous investigation, which included three test boring explorations advanced to a maximum depth of 29 feet, and eight auger probe explorations to a maximum depth of 11.5 feet, indicate that glacial till consisting of Silty Sands with gravel (SM) is present in the location of the proposed hotel and was underplayed by a stratum of highly to slightly weathered Gneiss.

The test exploration logs indicate that the glacial till overlaying the bedrock are consistent with those observed during the most recent subsurface investigation. It was found that the gneiss appears to be localized to the area of the proposed hotel.

### 4.2 Explorations

A preliminary subsurface investigation was conducted to characterize the in situ conditions and to recover representative soil and rock samples. Samples were used for visual classification to determine the engineering properties at the site. Twenty-seven test boring explorations, designated SRB-4 through SRB-30, were performed within the limits of the site. These explorations were performed to obtain subsurface information at specific points based on the location of the proposed structures and roadways.

Proposed exploration locations were marked in the field prior to the subsurface exploration by a TCC employee for utility clearance using existing geographic features. In some instances, explorations were relocated from the marked location due to site conditions. Offset measurements were collected by TCC personnel from the original location to the as-drilled location to document the actual location of each exploration as shown on Figure 2, Exploration Location Plan.

Test boring explorations were performed between November 27, 2006 and December 8, 2006 by SJB Services, Inc. of Ballston Spa, New York. Test boring explorations were advanced to a maximum depth of 27 feet below existing site grades. Explorations were advanced using a CME 550 X all terrain vehicle (ATV) drill rig capable of spinning 3 ¼ inch inner diameter (I.D.) hollow stem augers. Soil samples were collected in test boring explorations at approximately 5 foot intervals unless indicated otherwise on the exploration logs. Rock samples were collected in 3 test explorations using a 5-foot long NX size core barrel with an I.D. of 2 inches.

Explorations were monitored by a TCC representative to advise the driller as to location and depth of test explorations, to record subsurface activities, and to

modify the subsurface investigation as necessary. During soil sample collection, a 2inch split spoon sampler was driven approximately 2 feet and the number of blows required to drive the sampler every 6 inches were recorded in accordance with ASTM D 1586 to determine the in situ compactness and consistency. The number of blows required to drive the sampler 12 inches, between the 6 and 18 inch interval, is a Standard Penetration Test (SPT) and the total number of blows recorded in this range is the N-value. Split spoon refusal is defined as 50 blows or more recorded within one 6 inch interval. Soil samples collected during the subsurface investigation were visually classified in the field in accordance with the Unified Soil Classification System (USCS) and ASTM D 2488. Logs detailing the explorations were prepared by TCC to document subsurface conditions at the site and are included in Appendix A.

## 4.3 Subsurface Stratigraphy

Explorations indicate that at least three distinct strata are present within the depth of explorations at the site. However, all strata may not be present at all exploration locations. The stratification lines designating the interface between soil types on the exploration logs represent approximate boundaries. The sequence of strata, starting from existing site grades and working downward, is: Glacial Till, Weathered Bedrock and Bedrock. Each stratum is further defined in the following paragraphs.

**Glacial Till:** A stratum of glacial till as indicated on a report perfomed by the National Cooperative Soil Survey dated March 2006, was encountered, across a majority of the site, from the existing ground surface to a depth up to 27 feet, between elevations El.796 ft an El. 478 ft msl, approximately. This stratum was typically classified as either Sandy Silt (ML) or Silty Sand (SM) on the exploration logs. Each of these substrata are classified as follows:

- The Sandy Silt (ML) stratum consists of dry to moist, gray to brown, very dense to dense silt with some sand and a trace of gravel.
- The Silty Sand (SM) stratum consists of dry, brown, loose to very dense sand with some silt, a little to few gravel, and a trace of clay.

In several explorations, sub-strata of Poorly Graded Sand with Gravel (SP), Silty Gravel with Sand (GM) and Poorly Graded Gravel with Sand (GP) were encountered. These localized layers are not uncommon in Glacial Till, which typically consists of unsorted, unstratified, highly compacted clay, silt, sand, gravel and boulders. Please refer to the exploration logs for a complete description of these minor sub-strata. Weathered Bedrock: A stratum of highly weathered bedrock was encountered within various explorations at the project site at depths between 4 and 25 ft below existing grades, between El. 566 ft msl and El. 575 ft msl, respectively. This stratum was observed to be highly to completely weathered rock and consists of dry, gray, very dense silt with sand, few gravel and a trace of clay.

**Bedrock:** A stratum of bedrock was encountered at various locations across the project site, at depths between 6.5 ft and 26 ft below existing grades, between El. 563.5 ft msl and El. 575 ft msl, respectively. This stratum was classified as Metagraywacke and was observed to be hard, moderate to slightly weathered, fine grained, dark gray, with horizontal bedding with irregular joints with little to no staining. A site bedrock surface contour map is attached as shown in Figure 2 "Boring Exploration Map". Laboratory results indicated that the unconfined compressive strength of sample RC-1 from SRB-4 was 5,390 pounds per square inch (psi), which falls within the typical range for this rock, 725 – 14,500 psi.

Occasional cobbles and boulders were encountered during the investigation. However, greater quantities of cobbles and or boulders could potentially be present within soils encountered at the site.

## 4.4 Groundwater Condition

Groundwater was observed during the site investigation at depths between 10 ft and 23 ft in the explorations performed, elevations El. 612 ft and El. 499 ft msl, approximately. These readings were conducted after termination of each exploration and are considered unstabilized readings. No groundwater was encountered in explorations SRB-28, -29, and -30, which are located on the north side of NYS Route 44.

Groundwater levels recorded on the exploration logs are based on field observations and visual classification of the soil samples. Groundwater levels will fluctuate with season, precipitation, nearby construction activity, and other factors.

### 4.5 Site Seismic Characterizations

The on-site soils have been characterized for seismic conditions in accordance with Section 1615 of the BCNYS. Soils at the site are judged not susceptible to liquefaction due to the absence of water based on the exploration, relative density, soil type, and published peak ground acceleration. Based on the existing site conditions, general proposed location and assuming structure classifications as defined in Table 1604.5 of the Building Code of New York State, we recommend the following:

Category	Structures
Seismic Use Group	Ι
Seismic Importance Factor, IE	1.00
Site Class	B/C <sup>(1)</sup>
Seismic Design Category	B (1)

Notes:

#### 4.6 Laboratory Analysis

Representative soil and rock samples were selected for geotechnical laboratory testing. The samples were delivered to Atlantic Testing Laboratories in Clifton Park, New York for basic classification testing to verify classifications and rock strength. Field classifications were revised, if necessary, based on the laboratory test results. The following laboratory tests were conducted:

- 8 Natural Moisture Content tests,
- 3 Particle-Size Analyses (Mechanical) tests,
- 2 Particle Size Analyses (Hydrometer) tests, and
- 1 Unconfined Rock Compression test

Laboratory test results are provided in Appendix B.

#### 5.0 **RECOMMENDATIONS**

This section presents our geotechnical recommendations for preliminary design and construction of the proposed structures and roadways based on the subsurface exploration. Our recommendations are in accordance with the Building Code of New York State (BCNYS).

### 5.1 Global Stability

TCC analyzed the global stability of the proposed roadway located on the slope along the western boundary of the site. The slope was analyzed along one cross sectional plane, which was chosen to represent worst case conditions based on the conceptual design that indicates a 2 Horizontal: 1 Vertical (2H: 1V) finished slope in this area.

<sup>1.</sup> These values are approximate ranges; more structure specific values should be determined through additional studies once final structure locations are selected.

The result of TCC's analysis indicates that the critical slope analyzed has a safety factor equal to 1.9, based on the following assumptions:

- Loading conditions include a 15-foot wide roadway with a surcharge load of 250 pounds per square foot (psf),
- The proposed roadway will be founded on existing Glacial Till soils,
- Construction of the proposed roadway will include balancing cuts and fills. Required fill at the cross section, will consist of placed and compacted onsite soils with a unit weight,  $\gamma = 120$  pcf, and an internal friction angle,  $\phi = 32^{\circ}$ , and will be benched into existing slope and compacted properly,
- Groundwater is located 15 feet below of the toe of the slope elevation, and
- Erosion control measures will prevent minor sloughing.

TCC used Spencer's method of analysis, which indicates that the failure plane selected by the software extends through the fill soils, disregarding minor sloughing type failures that would be addressed through site maintenance or erosion control protection along the roadway embankment.

TCC modeled the slope using the information derived from the preliminary subsurface investigation and topographic survey and performed a global stability analysis utilizing Galena Slope Stability Analysis Version 4.0 software. The software automatically searches a particular model in accordance with the input parameters until it finds the potential failure with the lowest factor of safety. A diagram and analysis is attached.

In general, slopes are considered to be safe if a factor of safety equal to or greater than 1.5 is calculated under static conditions and 1.1 under seismic conditions. A factor of safety of 1.0 indicates that a slope is in equilibrium.

### 5.2 Building Foundations - Preliminary

Proposed structures, excluding the hotel, will consist of single family residences, town homes, condominiums, villas, maintenance facilities and a water treatment plant. Based on conceptual layout and the subsurface conditions observed during the investigation, the use of shallow foundations, consisting of continuous strip footings and isolated spread footings, if necessary, are suitable foundation alternatives to support the proposed structures in the general locations investigated. However, additional studies will be required. The subsurface investigation indicates that three strata, glacial till, weathered rock and bedrock, are likely to be encountered at the bearing elevations of the structures, assumed to be frost depth. Due to variations in stratigraphy, depth to bedrock and the preliminary location of the structures, foundations may bear on a number of different soils. Therefore, structure specific explorations will be required in order to determine final design parameters. In addition, placement of a significant volume of fill at portions of the site may be required in order to achieve proposed final grades, introducing a third potential bearing stratum, controlled fill. The table below summarizes the preliminary allowable bearing capacity for each stratum.

<u>Stratum</u>	Allowable Bearing Capacity (ksf)
Glacial Till	4  ksf
Controlled Fill	4  ksf
Weathered Bedrock	4  ksf

The proposed Waste Water Treatment Plant includes internal tanks embedded approximately 15 feet below ground surface (El. 611 ft msl). Bedrock was encountered at approximately 9 feet (El. 617 ft msl) below ground surface in SRB-28, which was performed in the approximate location of the facility. Therefore, this structure is likely to be founded entirely or partially on bedrock. Based on the calculated Rock Quality Designation (RQD) and the results from the Unconfined Compressive Strength test, we recommend an allowable bearing capacity of 8 ksf for foundations bearing entirely on the Metagraywacke bedrock observed in SRB-28.

The bottom of spread footing foundations, not bearing on sound bedrock, should be located a minimum of 4 feet below the lowest adjacent ground surface exposed to freezing and subgrade should be protected from freezing during construction. Spread footings not exposed to freezing temperatures during construction and located beneath continuously heated interior spaces should bear at least 18 inches below the top of the soil supported slab.

Care should be taken not to disturb soils at the bearing surface or within the zone of influence of foundations. Exposed subgrades should be lightly compacted (proofrolled) prior to placement of foundation elements using appropriate construction equipment in large, accessible excavations and hand-guided compaction equipment in smaller excavations where access is limited. All unsuitable soils and disturbed soils should be excavated and replaced with placed and compacted structural fill.

We recommend that installed continuous strip footing foundations and isolated spread footing foundations have minimum lateral dimensions of at least 2 feet and 3 feet, respectively. For isolated spread footings with a lateral dimension less than 3 feet, the allowable soil bearing pressure should be reduced to a value equal to one third of the maximum allowable bearing pressure, multiplied by the least lateral footing dimension (in feet). Foundation elements must be constructed in accordance with the BCNYS, Section 1805. Settlement should be evaluated on a structure by structure basis so design loads and other factors can be addressed.

## 5.3 Ground Floor Slabs – Preliminary

Soil supported slabs, designed for an allowable bearing capacity of 2 ksf are recommended for proposed structures. While preparing the slab subgrade, all unsuitable materials, should be over excavated 12 inches and replaced with compacted structural fill before placing and compacting at least 4-inches of stone fill for the slab to bear on, as required by the BCNYS, Section 1807.4.1. A 6 mil (min.) vapor barrier will placed between the moisture sensitive slab and placed on compacted stone fill is recommended as per Section 1807.2.1 of the BCNYS.

Design and construction of the slab should take into account potential differential shrinkage between the top and bottom surfaces of the slab that could result in curling. A coefficient of friction of 0.20 should be used between the slab and vapor barrier and 0.35 for concrete cast directly against proofrolled in situ soils or compacted structural fill.

## Foundation Walls – Preliminary

If below grade foundation walls will be utilized at this site, we recommend using the following equivalent fluid pressure values in pounds per cubic foot (pcf) to model lateral earth pressures assuming a level back slope and that no hydrostatic pressures (drained conditions) will be present, an internal friction angle for backfill soil of 32°, and a unit weight of 120 pcf:

Lateral Earth Pressure Type	Equivalent Fluid Unit Weight
At Rest - Static, (Restrained condition at top of wall)	56 pcf
Active (Wall allows for deflection at top)	37 pcf
Passive	300 pcf
Active with Seismic (PGA, 2% PE in 50 years)	49 pcf

Passive pressure resistance is often excluded in the design to provide an additional factor of safety and for other reasons including the large amount of movement required to mobilize passive resistance and the potential future removal of soil.

Equivalent fluid pressures stated herein do not include safety factors. When recommended equivalent fluid pressures are utilized, appropriate factors of safety for sliding, overturning, and bearing capacity should be applied in the design.

We recommend installation of drainage fill or drainage board against foundation walls to relieve hydrostatic pressures where they could develop by allowing downward flow of water to a perimeter foundation drainage system in accordance with the BCNYS, Sections 1807.4 and 1807.1.3. Installation of a cleanout is also recommended to facilitate maintenance of the drainage system. In addition, we recommend application of damp-proofing materials to the surface of below grade foundation walls, in accordance with the BCNYS, Section 1807.2.2.

## 5.4 Utilities

Utility trenches and established trench invert elevations should be located outside the "zone of influence" of foundation elements.

Trench excavation widths should extend a minimum of 12 inches beyond the outer edges of the utility elements to be installed. Exposed subgrades should be lightly compacted (proofrolled) and filled with placed and compacted bedding fill extending 6 inches (minimum) below and above each utility. When utilities are located in trenches below building slabs and pavements, trenches should be backfilled above this point with compacted structural fill up to the proposed subgrade located beneath the building slab or pavement section. In landscaped areas, utility trenches above this point may be backfilled with common fill.

Visible markers at the surface and an underground trace line should be installed along the utility line to facilitate location of the utility in the future.

## 5.5 Fill Materials

Fill materials shall be free of unsuitable material such as organics, construction debris, cobbles/boulders, frozen material, etc. Stockpiles of fill materials should be maintained to prevent material from fluctuating from the optimum moisture content, freezing, separating due to migration of fine grained soils, and collection of snow or ice within the stockpiles. Fill areas should be cleared of all vegetation, roots, and other organic materials prior to placement of fill.

Stockpiled soils may require installation of run-off protection between drainage channels and the stockpile.

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

## 5.5.1 <u>Stone Fill & Granular Fill</u>

Stone fill, such as a uniformly graded <sup>3</sup>/<sub>4</sub> inch crushed stone, is recommended for prepared subgrades for slab construction and also for use around perforated drain pipes when used with an appropriate geotextile filter fabric.

Stone fill should be placed in loose lifts not to exceed 8 inches in thickness for heavy compaction equipment and 6 inches for lighter compaction equipment. Prior to placement of stone fill, we recommend placement of a non-woven, geotextile, filter fabric on the prepared subgrade to prevent migration of fines into the stone void space. A fabric should be selected based on the gradation of the surrounding soils.

Granular fill used for drainage along foundation walls should be clean, uniformly graded granular fill, which meets the following suggested gradation:

Sieve Size	Percent Passing by Weight
¼ inch	100
No. 4	50-75
No. 40	10-20
No. 200	0-5

Granular fill should be placed in lifts not exceeding 8 inches loose measure and compacted to 90% of the maximum dry density as defined by ASTM D 1557. Stone fill should not be used against damp-proofed foundation walls unless a protective barrier is used to prevent direct contact between the stone and the damp-proofing.

### 5.5.2 <u>Structural Fill</u>

Clean, granular, structural fill meeting the following suggested gradation should be placed in lifts not exceeding 8 inches loose measure and compacted to 95% of maximum dry density as defined by ASTM D 1557. Structural fill materials should be adjusted to within +2% and -1% of optimum moisture content to facilitate proper compaction. Structural fill is recommended for backfill within the "zone of influence", within 1-foot below the bottom of the spread footing foundations and above utilities that are within 18-inches of the finished floor elevation.

Sieve Size	Percent Passing by Weight
3 inch	100
½ inch	50-85
No. 4	30-75
No. 40	10-25
No. 200	0-8

#### 5.5.3 Bedding Fill

Bedding fill should be provided and compacted as recommended by the pipe manufacturer for backfill around utilities. If the manufacturer does not provide recommendations for pipe bedding material, a clean, granular, bedding fill meeting the following suggested gradation should be placed in lifts not exceeding 8 inches loose measure and compacted to 92% of maximum dry density as defined by ASTM D 1557.

Sieve Size	Percent Passing by Weight
<sup>1</sup> / <sub>4</sub> inch	100
No. 4	70-85
No. 40	10-40
No. 200	0-10

#### 5.5.4 Common Fill

Common fill should consist of inorganic, sand based, granular soils that meet the following basic, gradation requirements:

Sieve Size	Percent Passing by Weight
3 inch	100
No. 40	20-80
No. 200	0-20

Common fill used for site grading and landscaping should be placed in lifts not exceeding 9 inches loose measure and compacted to 90% of the maximum dry density as determined by ASTM D 1557. All fill should be placed to promote

positive drainage away from structures. Common fill can be used as fill up to a maximum elevation equal to 12-inches below the bottom of spread footing foundations within their "zone of influence" and up to a maximum elevation equal to 4-inches below the bottom of the floor slab. Common fill can also be used as fill above utilities located within the building foot print, up to a maximum of 18 inches below the finished floor elevation.

## 5.5.5 On-Site Soils

On-site soils are not suitable for use as structural fill as described above due to the high percentage of fine grained material. Excavated glacial till could potentially be used as common or bedding fill if screened to remove the larger particles (ie. coarse gravel, cobbles and boulders) or if compacted properly, could meet the DEC required permeability for storm water basin liners. Additional testing is necessary.

## 6.0 PRELIMINARY CONSTRUCTION CONSIDERATIONS

This section presents our preliminary construction considerations to address excavation and groundwater conditions.

### 6.1 Site Preparation

After completion of clearing, grubbing, and regrading activities at the site, the area should be restored to an acceptable baseline condition. Disturbed natural soils left in-place should proof rolled after excavation activities. However, if during foundation preparation, subgrade materials are determined to be unsatisfactory (i.e. topsoil, pumping, weaving, frozen, organics or cobbles/boulders present) by the site engineer, the area should be overexcavated by 12 inches and backfilled with placed and compacted structural fill to achieve a proper bearing area as previously indicated.

### 6.2 Excavation

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

Excavation of bedrock is anticipated in order to achieve desired bearing elevations for the waste water treatment plant, and for various proposed site grades. Typically, the quality of rock increases with depth. Based on the amount of rock recovered during coring, 85% to 100% and calculated RQD's, 0% to 40%, rock at the site could potentially require alternative methods of excavation such as jack

hammering, hoe ramming or localized blasting. Care should also be taken when excavating due to the presence of existing utilities on the site. It should be noted that, bedrock was encountered at 6 feet below ground surface (El. 563 ft msl) in SRB-22, which coincides with proposed site grades. Depending on the depth of the proposed cut for this location, rock may have to be excavated.

Generally, all temporary cut slope excavations should not be left open or unbraced for extended periods of time. Temporary cuts should be sloped as required for stability in accordance with OSHA regulations and protected from erosion. Based on the subsurface explorations, the on-site soils should, generally, be classified as Type "C" material according to OSHA regulations, but be verified for each excavation. OSHA requires that Type "C" material must be benched at a 1-1/2 Horizontal: 1 Vertical (1-1/2H:1V) slope for temporary excavations.

Excavations in rock may be performed with steeper slopes depending on the orientation of fractures and stability observed during excavation, a qualified person should determine proper sloping during earthwork operations at the site.

## 6.3 Control of Water

Groundwater was observed at depths between 10 and 23 feet below existing site grades, elevations El. 612 ft and El. 499 ft msl, approximately, during the site investigation. Groundwater seepage into open excavations at localized areas could potentially occur, based on proposed below grade levels. Dewatering equipment should be readily available in case seepage into open excavations occurs.

During foundation construction and fill placement, temporary swales and ditches may be necessary to control surface water that could potentially runoff into open excavation and maintain a dry excavation for foundation construction.

Upon completion of fill placement, the final grade should be set to promote positive drainage away from the building. Topsoil with more than 20% fines will limit infiltration of surface water into the subgrade.

## 7.0 CLOSURE

This report and the recommendations contained herein have been prepared for the exclusive use of Higher Ground Country Club Management Company, LLC and its representatives for specific application to the design and construction of the proposed Silo Ridge Country Club Resort Community in the Town of Amenia, Dutchess County, New York. This report was prepared in accordance with generally accepted soil and foundation engineering practices. No other warranty, expressed or implied, is made. The analysis, designs and recommendations submitted in this report are based in part upon the data obtained from subsurface explorations available at the time of this report. The nature and extent of variations between these explorations may not become evident until construction. If significant variations then appear, it may be necessary to reevaluate the recommendations of this report.

Soil samples collected during the subsurface investigation are currently stored at TCC's facilities and will be retained until March 30, 2007, the discard date. If representative does not inquire about the samples prior to the discard date, the samples shall be removed from TCC's facilities and disposed of appropriately.

We recommend that TCC be retained to:

- 1. Perform a Phase II site investigation with explorations at the final locations of the proposed structures,
- 2. Perform final design global stability analyses,
- 3. Design site retaining wall(s), if necessary,
- 4. Design site specific temporary excavation support, if necessary,
- 5. Prepare or review contract documents pertaining to site work and foundations, and
- 6. Provide construction monitoring to observe compliance with design assumptions and to facilitate design changes in the event that subsurface conditions differ from those anticipated.

The estimated fees and detailed scope of services for these additional tasks can be provided at your request.

Please feel free to contact us at (518) 273-0055 if you have any questions. TCC looks forward to working with you on this project.

Sincerely,

Matthew a Kim

Peter J. Steenland, EIT Project Geotechnical Engineer

Kum DO Mall

Kevin B. O'Malley, P.E. Director of Geotechnical Engineering Services

Figures



North Country Office: 100 Gien Street Glens Falls, NY 12801 Phone: (518) 812-0513 Environmental Scientists

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30631.00

FIG 1



CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.						
<i>Dutchess County Office:</i> 21 Fox Street Poughkeepsie, New York 12601 Phone: (845) 454-3980	<i>Capital District Office:</i> 547 River Street Troy, New York 12180 Phone: (518) 273–0055	<b>Orange County Office:</b> 356 Meadow Avenue Newburgh, New York 12550 Phone: (845) 567-1133	<i>North Country Office:</i> 100 Glen Street Glens Falls, New York 12801 Phone: (518) 812-0513		date	description

Appendix A Exploration Logs

#### INTERPRETATION OF SUBSURFACE LOGS

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

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

#### SOIL CLASSIFICATIONS

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

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

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

Additional Notes:

- 1. Utilized c: coarse, m: medium, and f: fine when describing the size of sand or gravel.
- 2. WOH weight of hammer.
- 3. WOR weight of rods.
- 4. bgs below ground surface
- 5. NA Not Available
- 6.  $\underline{\mathbf{V}}$  Phreatic Surface, if observed

#### Refusal:

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

#### ROCK CLASSIFICATIONS

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

	CLASSIFICATION TERM	DESCRIPTION		
$\ge$				
<i>1</i> 0	Very Hard	Unable to scratch with a knife		
les	Hard	Difficulty scratching with a knife		
,dn	Medium Hard	Able to groove 1/16" with a knife		
Iaı	Soft	Easily grooved with a knife		
H	Very Soft	Easily scratched with a fingernail		
$\geq$				
80	Fresh	No visible signs of rock weathering		
rin	Slightly Weathered	Fresh rock with staining at joints		
the	Moderately Weathered	Less than <sup>1</sup> / <sub>2</sub> of rock is discolored or weathered		
/ea	Highly Weathered	More than ½ of rock is discolored or weathered		
М	Completely Weathered	All rock material decomposed to soil, structure intact		
$\ge$				
е	Amorphous	Too small to be seen with naked eye		
tur	Fine Grained	Barely seen with naked eye to 1/8"		
ex	Coarse Grained	1/8" to 1/4"		
Τ	Very Coarse Grained	Greater than 1/4"		
$\geq$				
	Horizontal	$0-5^{\circ}$		
nde	Shallow	6-20°		
tit	Moderate Dipping	$21 - 45^{\circ}$		
Ati	Steep Dipping	$46 - 85^{\circ}$		
	Vertical	86 – 90°		

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

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

#### GENERAL

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

	TH	=			547	River	. Stro	ot	PROJECT SP Bit C I I	
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	<u>CC</u>	DMP	ANIE	<u>S</u>	Fa	n. (51 v· (51	8127	3-8301	PROJECT NO + 20621 00	······
	-	Cont	rootor		ra. Somioo	A. (31	0)21	5-6591	TROJECT NO.: 30031.00	Total Depth: 23.5 ft.
		້ມ	actor		SELVICE	SINC.			Start Date: December 4, 2006 Northing: See Figure 2	Borchole Dia.: 9 in.
		ייע			-330A	AIV			Finish Date: December 5, 2006 Easting: See Figure 2	Water Depth: NA ft.
		Ine	priller	TJONN . Pote 9	Leonna	ardt			El. Datum: NGVD 29 Longitude:	Rock Depth: 20 ft.
-⊢	- 1-	1115	T	T	I	110	-		G.S. Elevation: 686 Latitude:	Sample Hammer: Automatic
		(Ft)	MS			2	La la	िर्वे		
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e la	•	Ele	asi	l le	L L	Ĭ	Į	Į Į	Field Descriptions:	
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	F				1		+		inty sand (SM). Mostry sand, some sin, trace clay, brown, moist	
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	F				2					
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	F		<u> </u>	<u> </u>						
3		683		-		+	<u> </u>	+		
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4		682		<u> </u>		+	1 -	+		
	F			+						
5		681		SS-2	2 1	10		SM	Silty Sand (SM): Mostly sand, some silt few group trace alow how we	
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10	F	676		SS-3	5	24		ML.	Sandy Silt (MI): Mostly silt some cond for ground and	Approximate Strata Change
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<b>"</b>		<u> </u>		SS-4	5	6	·	ML S	andy Silt (ML): Mostly silt, some sand, few gravel grav dry	ļ <b>I</b>
		670			50/2"					Cobble at 15.5 feet
~										500010 at 15.5 lect.
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20		566								Auger Refusal at 20 ft began coring
MET	но	DS:	HSA-	Hollow	Stem	Auger	, RW	H-Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION
SAM	PLF	TY	PES:	AS-Aug	ger, W	S-Was	sh <b>, S</b> S	-Split Sp	oon, RC-Rock Core, GS-Grab, ST-Shelby Tube. PS-Piston	Method: HSA 0 to 20
STAN	IDA	RD	1. San	nples cla	assified	d in ac	corda	nce with	ASTM D-2488 unless otherwise noted.	Method: RC 20 to 23 5
NOTI	ES:		2. Tes	t Boring	g Log P	age 1:	: 0 - 2	0 feet. Ea	ch subsequent page: Additional 25 feet.	Casing Samula Court
			<u>3. Ref</u>	er to the	"Inter	pretati	ion of	Subsurfa	ce Logs" for additional symbology and abbreviation definitions.	Type HSA SC
ADDI	TIC	DNA	L							Int Diam. 4.25 " 2"
NOTI	ES:									Weight 140 lb
										Fall 30"

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·	THE				547 F	River	Stree	t	PROJECT: Silo Ridge Country Club	
	Ċ	ha	izei	1	Troy	, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-4
	CO	MP/	ANIE	S	Phn: Fax:	: (518 · (518	8) 273 R) 273	-0055	CLIENT: Higher Ground Country Club Management	
┢━	T	~	1	T	1 84.	. (510 ]	1	-0591	1 KOJECT NO.: 50051.00	Total Depth: 23.5 ft.
		(Ft	SWO		5	(u)	ater	율		
(Ft		ttion	18	Ž L	low	ery(	ldw.	S'		
epth		lev2	asin		Ē	SCO V	1 no	Ino	Stratum and	
ها	4	E C	Ü	S RC I	S.	Ř	0	U.	Field Descriptions:	Field Notes, Comments:
					i o min	42		1./	(20° - 23.5°) Metragraywacke: hard, slightly weathered, fine grained,	
21	F	665			6	<u> </u>	<u> </u>	$1 \times 1$	norizontar ocuting, dark gray, megular joints with nutle staining.	REC: 100%
,,	[			····	min	<u> </u>		1 X		Unconfined Compression
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24 ·	$\vdash$	662							Test Boring Terminated at 23.5 feet in Bedrock.	
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	'HE			547	River	Stree	t	PROJECT: Silo Ridge Country Club			
-	<u>Un</u>	izei	n	Troy Phr	/, Nev :: (51)	v Yorl 8) 273	k <b>12180</b> -0055	LOCATION: Town of Amenia, Dutchess County, New York CLIENT: Higher Ground Country Club Management	Test Boring No	SR	B-5
		<u>'ANIE</u>	<u>-S</u>	Fax	: (51	8) 273-	-8391	PROJECT NO.: 30631.00	Total Dept	h: 26.3	ft.
	Cont	racto	r: SJB S	ervices	Inc.			Start Date: December 4, 2006 Northing: See Figure 2	Borehole Dia	n.: 9	in.
	Dr	'ill Ríg Drillei	g: CME- r: John I	550X / conhai	ATV			Finish Date: December 4, 2006 Easting: See Figure 2	Water Dept	h: NA	ft.
	Ins	pector	: Pete S	teenlar	ıd			G.S. Elevation: 636 Latitude:	Sample Hamme	n: NA r: Auto	It. matic
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(FT)	) uoi	Blov	No.	SWO	- A	lwat	Sym				
pth (	levat	sing	mple	TBI	COVE	no	dino	Stratum and			
ھ		<u> </u>	- S		<u><u> </u></u>	5	ঠ	Field Descriptions:	Field Notes, Cor	nments:	
		<u> </u>	- 55-1	2			SIVI	Siny Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist			
<b> </b> ′	635			2							
z.	634			3							ľ
	<u> </u>	+									
3	633										
4	632										
	┝								Approximate Ste	to Change	
5	→ 631 		SS-2	1	14		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace	Approximate Sua	ta Change	
б	630		 	2				clay, gray/brown, moist			
				3 20							
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	- 628										
9	627	Ì									ľ
10	- 626	ļ	00.0								
			55-3	16	24	.	ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, grav/brown, moist			
: <i>П</i>	625	<u> </u>		28							
12	624			36							
13	623										
14	622	<u> </u>									
15	- 621		SS-4	5	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace			
16	620			16				clay, gray/brown, moist			
				21							
17	- 619										
18	- 618										
19	- 617										ľ
20	616	110.4	t)-11-	<u> </u>					<u></u>		
SAM	HUDS: PLE TY	HSA PES:	AS-Au	stem	Augei S-Wa	:, KW) sh. SS	H- Kota -Split Sr	ry wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING IN	FORMAT	<u>ON</u>
STAN	DARD	1. Sa	mples cl	assifie	l in ac	corda	nce with	ASTM D-2488 unless otherwise noted.	Method:		4J
NOTI	CS:	2. Te	st Boring	g Log F	age 1	: 0 - 20	0 feet. E	ach subsequent page: Additional 25 feet.	Casing	Sample	Core
ומתא	TIONA	3. Re	ter to the	e "Inter	pretat	ion of	Subsuri	ace Logs" for additional symbology and abbreviation definitions.	Type HSA	SS 2#	
NOTI	ES:								Weight	2" 140 lb	
									Fall	30"	

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·	IHE	E			547 J	River	Stree	et	PROJECT: Silo Ridge Country Club		
	C	ina	izei	n	Troy	', Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRB-5
	CC	DMP	ANIE	S	Pnn Fax	: (51) • (51)	8) 273 8) 273	1-0055	CLIENT: Higher Ground Country Club Management		
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فا	╇	E	Ü			1 Å		<u> </u>	Field Descriptions:	Field Notes, Commo	ents:
	$\mathbf{F}$			33-3	30	24		ML	Sandy Silt with Gravel (ML): Mostly silf, some sand, little gravel, trace		
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	$\mathbf{F}$	<u> </u>		+	<u> </u>	<u> </u>					
25	F	611		SS-6	14	15	<u> </u>	ML	Sandy Silt with Gravel (ML); Mostly silt, some sand little gravel trace		
24	Ľ	610			30		[		clay, gray, dry		
20	Γ	070			50/3"						
27	F	609			ļ	ļ	 	ļ	Terminated due to Split Spoon Refusal on Probable Bedrock at 26.3 feet.		
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	Th	IE .			547	Rive	r Stree	et	PROJECT: Silo Ridge Country Club	
	(	'ha	XZEI	n	Tro	y, Ne	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRR-6
	C	OMF	ANIE	S	Phi	n: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management	
┝	_	0			Fa:	x: (51	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.
		Cont	ractor	SIR 2	ervice:	s Inc.			Start Date: November 30, 2006 Northing: See Figure 2	Borehole Dia.: 9 in.
		יוע	m Kig		-220X	ATV			Finish Date: November 30, 2006 Easting: See Figure 2	Water Depth: NA ft.
		Ine	nector	• Pete S	teenla	irai nd			El. Datum: NGVD 29 Longitude:	Rock Depth: NA ft.
⊢		1113		T		1			G.S. Elevation: 590 Latitude:	Sample Hammer: Automatic
ā	-	01 ( <i>Ft</i> )	Blows	No.	WS	y(in)	water	ymbol		
ł		vati	[B	ple	윩	Ver	par	dr	Stratum and	
		Ele	Casi	l ä	LA	۱. Š	Ē	Į	Field Descriptions:	Field Notes, Community
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MET	L CHC	DDS:	HSA-	Hollow	Stem	Auger	. RMI	I- Rotar	Wash SSA. Solid Stem Augus OUT Class Burgh	
SAM	IPL	ETY	PES:	AS-Au	er. W	S-Was	h. 88	Split Sp	y man, 557 Joint Stellin Auger, Cr 1- Cone Penetrometer	DRILLING INFORMATION
STA	ND.	ARD	1. San	nples cla	ssified	l in ac	cordar	ice with	ASTM D-2488 unless otherwise noted	Method: HSA 0 to 25
тои	ES	:	2. Tes	t Boring	Log P	age 1	: 0 - 20	) feet. Ea	ich subsequent page: Additional 25 feet	Method:
			3. Ref	er to the	"Inter	pretat	ion of	Subsurfa	ice Logs" for additional symbology and abbreviation definitions	Type HSA So
ADD	ITI	ONA	L							Int Diam, 4.25" 2"
NOT	'ES:	;								Weight 140 lb
	_						5			Fall 30"
										HT HE

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ł	TH	IE			547	7 Riv	er St	tree	t	PROJECT: Silo Ridge Country Club			
	C	ואל	aze	n	Tro	oy, N	ew y	York	k 1218(	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRF	3-6
	C	ЭM	PANI	ES	Ph Fe	m: (:	518)	273	-0055	CLIENT: Higher Ground Country Club Management			
	1	_				1	10)	213	-0391	PROJECT NO.: 30631.00	Total Depth:	27	ft.
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Lå		ឝ	S S	Sar	È		ž	Ğ	<u> </u>	Field Descriptions:	Field Notes, Comm	ents:	
	L		1	SS-	5 8	1	0		SM	Sand with Silt and Gravel (SM): Mostly sand, little silt, little gravel, trace			
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22	┝	- 568	·		7								Ĩ
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23	⊦	- 567	·										
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33	Γ	- 365		SS-	69	1	3		SM	Sand with Silt and Gravel (SM): Mostly sand, little silt, little gravel, trace			
26	Ĺ	- 564			4					clay, brown, moist			
	F			ļ	4								
37	-	- 563		<u> </u>	5		_						
	+									Test Boring Terminated at 27 feet.			
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35	⊢	555		<u> </u>			+	+					
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42		348				<u> </u>							
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ann	u I	UNA	AL NO	TES:									

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<b>I</b>	THE 547 River Street								PROJECT: Silo Ridge Country Club	1			
	C	ha	Zev	ı	Troy	, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Bor	ing No.:	SRI	<b>3-</b> 7
	0	MP/	ANIE	S	Phn: East	: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management		10		
		'on fr	o oto n	em e.	Fax	: (31- Inc	8) 273	-8391	PROJECT NO.: 30631.00	Tota	al Depth:	27	ft.
	U	unu. Dell	actor: Il Dias	CME.4	SOY A				Start Date: November 29, 2006 Northing: See Figure 2	Boreh	ole Dia.:	9	in.
		D	riller:	Lohn L	eonhar	dt			Fil. Datum: NGVD 29 Longitude:	Roci	r Depin:	23.5 NA	п. ө
		Insp	ector:	Pete St	eenlan	d			G.S. Elevation: 606 Latitude:	Sample H	Lammer:	Auto	matic
		(I)	~		T	ľ	L.	6		<u>+</u>			
3		n (F	low	, o	SA	(m)	rate	f f					
	ł	atio	E B	ole N	BB	Ver V	A pu	a si					
ept		Slev	asin	an l	E	l Se	no.	Lon	Stratum and Field Descriptions:	Elald Not			
┝┻	╈	_	<u> </u>	SS-1	<b></b>	12	10	SM	Silty Sand (SM): Mostly sand some silt few gravel trace clay brown moist		es, Comm	lears:	
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. 1		605			7			1					
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	<b>-</b> +					<b> </b>							
4	F	602		<u> </u>									
	<u> </u> -												
,	Γ.	001		SS-2	4	12		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist				
6		600			1	<u> </u>	I			ŀ			
					1								
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8	F	598						1					
0	<u> </u>	507								l			
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10	F	396								Approxima	ate Strata (	Change	
				<u>- 88-3</u>	2	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	ĺ			
п		595			3 2 ·					ĺ			Í
				· · ·	3			[					
12		594				-							
В		193											İ
i	Ļ												
14	-	592 -											1
				]									
15	F	591		SS-4	3	16		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	L			ļ
16		590			10		-						Ì
					10								ļ
17		589			16								
18		588											
, I													
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20		586											
MET	HO pr v	DS:	HSA-	Hollow	Stem .	Auge	r, RW	H-Rota	ry Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	<u>DRILLI</u>	ING INF	DRMATI	<u>on</u>
SAWI	TLI VDA	<u>780</u>	1 Sor	AS-Aug	ser, Wi	o-Wa lin∘	isn, Sa	s-Split Sp ance with	DOOR, KU-KOCK CORE, GS-Grab, ST-Shelby Tube, PS-Piston	Method:	HSA	0 to	25
NOT	ES:		2. Tes	st Boring	g Log P	age	1:0-2	20 feet. F	Each subscauent page: Additional 25 feet.	ivietnod:	Casing	Sample	Core
			3. Rei	fer to the	"Inter	preta	tion o	f Subsuri	face Logs" for additional symbology and abbreviation definitions.	Type	HSA	SS	
ADD	TIC	ONA	L					·		Int Diam.	4.25 "	2"	<b> </b>
NOT	ES:									Weight		140 lb	
										Fall		30"	

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T	THE 547 River Street				er St	treet	t	PROJECT: Silo Ridge Country Club				
	U	ba	izei	n	Tre	oy, N	ew Y	fork	12180	LOCATION: Town of Amenia, Dutchess County, New York	<b>Test Boring No.:</b>	SRB-7
	C	DMF	ANI	ES	Ph Ea	in: (5	518): (19)	273- วรว	0055	CLIENT: Higher Ground Country Club Management		
	Т	-	T	 	га	x: (.	10).	215-	-6391	PROJECT NO.: 30631.00	Total Depth:	<u>27</u> ft.
		$(F_t)$	SWO				<u>e</u>	ter	loqu			
(Ft)		tion	ă	N N	MO		Š.	dwa	Syr			
Ę.		eva	sing	du l	E E		ğ	ano	đno	Stratum and		
lå		E	ో	Sar	5		¥ [	Š	ō	Field Descriptions:	Field Notes, Comm	ents:
	Ļ.			SS-:	5 15	<u>i</u> 1	8		ML	Sandy Silt (ML): Mostly silt, little sand, few gravel, trace clay, gray, dry		
31	┝	585		-	16	<u> </u>						
	╞╶				18							
23	<u> </u>	584		-	51		-					
23	-	583		-		-{	-+-	•				
								÷-	• • •			
24		582				1						
25.		581										
				SS-6	16	2	2		ML	Sandy Silt (ML): Mostly silt, little sand, few gravel, trace clay, gray, dry		
26		580		1	16							
					24			-				
27	_	579			21		_	_		Tort Doning Translated at 07 Car		
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28		578		1								
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30		576										
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32	_	574					+					
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<sup>33</sup>	_	373				-		1				
34	_	572										
35		571				1		_				
-	• —						-					
36		570			-							1
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37		569				1						
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	The 547 River Street						:L 1-1-1-00	PROJECT: SHO Ridge Country Club	
1 1	SI	IZEI	$\underline{n}$	Troy	, ivev	Y YOP.	к 12180 Поосс	LUCATION: 10wn of Amenia, Dutchess County, New York	Test Boring No.: SRB-8
	COMP	PANIE	S	Phr	1: (51)	8)273	-0055	CLIENT: Higher Ground Country Club Management	
				Fax	: (51)	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.
	Cont	ractor	: SJB S	ervices	s Inc.			Start Date: November 29, 2006 Northing: See Figure 2	Borehole Dia.: 9 in.
	Ðı	rill Rig	: CME-	550X .	ATV			Finish Date: November 29, 2006 Easting: See Figure 2	Water Depth: NA ft.
1	]	Driller	: John I	.eonha	rdt			El. Datum: NGVD 29 Longitude:	Rock Depth: NA ft.
	Ins	pector	: Pete S	teenlar	ıđ			G.S. Elevation: 612 Latitude:	Sample Hammer: Automatic
	8					5	ō		
		low	ļ.	SA SA	LE)	vate	Į į		
E.	1 🛱	8	l e	l õ	l é	P P	S		
E.	lev.	Isi	l fr	Ē	5	l III		Stratum and	
ě	띧	Ŭ	S.	SF	Ř	ى	Ū	Fleid Descriptions:	Field Notes, Comments:
			SS-1	1	14		SM	Silty Sand (SM): Mostly sand, some silt, trace gravel, trace clay, brown,	
1	611			2	<u> </u>	1		moist	
	L	_	.ļ	4		ļ			
2	610			5					
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3 1	609					L			
ł				<u> </u>	<u> </u>				
4	608		ļ	1					
	L		<u> </u>	<b> </b>	ļ				
5	607				<u> </u>				
			SS-2	8	12		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay	5
6	606			14				brown, moist	
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°	- 004								
									Approximate Strata Change
	- 003		1						
		1							
10	- 602	<u> </u>	SS-3	8	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moi	st
	<b>.</b>			14					
"	- 601			11					
				11					
	- 600								
13	_ 399								
		<u> </u>							
14	598						·		
l I	•						·		
''	597		SS-4	9	24		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, mois	t
11	• •••			19			· · ·		
10	- 596			15					
				21					
"	- 595								
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18	- 594					[			[ i
	·								Į
19	- 593					[			1
20	592								
METI	HODS	HSA	- Hollow	Stem	Auge	r, RW	H- Rota	ry Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION
SAMI	LET	(PES:	AS-Au	zer. W	S-Wa	sh. SS	-Split Sr	2000. RC-Rock Core, CS-Grab, ST-Shelby Tube, PS-Dieton	Method: USA 0.40 25
STAN	DARD	1. Sa	mples cl	assifie	l in ac	corda	nce with	ASTM D-2488 unless otherwise noted	Methodi
NOTE	S:	2. Te	st Borine	Z LOG F	age 1	:0-2	() feet 14	ach subsequent nage: Additional 25 feet	
		3. Re	fer to the	~6 - "Inter	metet	tion of	Subeurf	ace Loge" for additional symbology and abbreviation definition -	Trans VIAA CO
ADDI	TION	UL.			<u>r</u> .oia		Jaobuli	and 2050 for additional symbology and appreviation definitions.	Int Diana 4 25 # -
NOTE	S:								Int Diam. 4.25 " 2"
									Rell 140 lb
·				· · · · ·					ran 30"

Г	THE 547 River Street						r Stre	et	PROJECT: Silo Ridge Country Club	
	$\Box$	ha	Zel	1	Troy	y, Ne	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-8
Ī	0	MP/	ANIF	S	Phn	ı: (51	8) 273	8-0055	CLIENT: Higher Ground Country Club Management	
	<u>г (</u>	7.0.7		<u></u> T	Fax	:: (51	8) 273	3-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.
		(Ft)	SM			) i	ter	l da		
(Ft)		ioi	Blo	Ž	SWO	UNC	dwa	Syn		
튚		eval	sing		E E	No.	Ĩ	dig	Stratum and	
å	l	ធ	S.	Sar	, S	2	5	5	Field Descriptions:	Field Notes, Comments:
	L			SS-5	4	24	·	ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
21	$\vdash$	591			10					
ļ			ļ		10	_		<u> </u>		
22	-	590			14					
						+				
23	<u> </u>	589						1		
74	-									
25	:	587			<u> </u>					
	-			55-6	6	24		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
26		586		<u> </u>	12	+	<u> </u>			
					8		+			
27	t	285			··· · ·	1			Test Boring Terminated at 27 feet.	
28		184								
							<u> </u>			
29		83								
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30	s	82								
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<i>"</i>		<u> </u>								
32	5	80 -					í 			
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33	- 5	79								
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<sup>34</sup>		18								
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37	57	"  -				.				
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43 -	- 565	∘⊢								
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45	567	,								
DDI	[10]	NAI	LNO	TES:					· · · · · · · · · · · · · · · · · · ·	

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	THE	HE 547 River Street							PROJECT: Silo Ridge Country Club		<u> </u>		
	Chazen Troy, New York 12							- 	LOCATION: Town of America Dutchess County New York	. Tast B.	nring No.	. CD	DO
		<u>'IN</u>	<u>~~</u>	<u>v</u>	Phr	. (51)	8) 273	-0055	CLIENT: Higher Ground Country Club Management	Lest De	oring No.	· SU	D-7
	$\underline{CO}$	MP/	ANIE	<u>s_</u>	Fax	: (51	8) 273	-8391	PROJECT NO.: 30631.00		tal Donth		•
-		onfr	actor	SIRS	muices	Inc			Start Data: November 20, 2006 Novehing O. E.		tal Depti	26.2	п. 
	U	Dati Dati	actor:		COV	ATTA			Start Date: November 29, 2006 Northing: See Figure 2	Bore	ehole Dia	.: 9	in.
		ווע	n Kiga	CIVIE	550A /	-1. 			Finish Date: November 29, 2006 Easting: See Figure 2	Wat	ter Depth	13.5	ft.
		ע עריים	rmer	Dete Of	eonna	rat			E. Datum: NGVD 29 Longitude:	Ro	ock Depth	II NA	ft.
	-	insb	ectora	Fele 5	leemar				G.S. Elevation: 602 Latitude:	Sample	Hammer	: Auto	omatic
		(Ft)	SM			1	ter	Iođ					
$\tilde{L}_{1}$	`	ion	8	2°	SMO	1×	Ma	Syn					
- e		vat	ы Ц	ble	Ē	Nel 1	n an	<u>e</u>	Stratum and				
e l	•	Ele	asi	and and and and and and and and and and		l s	L.	Ê,	Field Descriptions:	Field No	tes Com	monter	
		_	<u> </u>	SS-1	1	10	<u> </u>	SM	Silty Sand (SM): Mostly sand some silt trace clay brown moist				
						+			and carry month said, some sin, there easy, stown, moist				
1		601		1	1	+							
					<u> </u>								
2		600						í ·					
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3	-	599				1	· ·	· · · - · ·		1			
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1		598				-							
	Γ-		·										
1,		397		SS-2	2	12		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist				
					4		1						
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	<b>–</b>				19	1							
1		393											
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8.		594											
	Ľ	502											
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10	_	592											
	L			SS-3	7	12		SM	Silty Sand with Gravel (SM): Mostly sand, little silt, little gravel, trace clay,				
"	L	591			10				brown, moist				
	L				6	[							
12	L	590			6								
	<b> </b>	_											
13	L :	589											
	<u> </u>						<u> </u>						
14	<u>ہ</u> ۔۔۔۔	88				-							
	┝												
15	F	87			10								ļ
1	┝ ─		{	58-4	-19	16		SM	Siny Sand (SM): Mostly sand, some silt, trace gravel, trace clay, brown,	Moisture	Content ≃	19.6%	1
16	، ا	86 -			-14			l'					
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17	┝╴᠈	85				-+							
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18	ء ا	84 -											
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. 19	، ح	83 -	-										
20		82								Approvim	ate Strata	Change	
MET	нон	DS:	HSA-	Hollow	Stem.	Auger	, RWI	I- Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRIL	LING INI	FORMAT	
SAM	PLE	TY	PES:	AS-Aug	er, W	S-Was	sh, SS-	Split Sp	oon, RC-Rock Core, GS-Grab, ST-Shelby Tube. PS-Piston	Method.	HSA	0 to	25
STA	NDA	RD	1. San	nples cla	ssified	l in ac	cordar	ice with	ASTM D-2488 unless otherwise noted.	Method:			
NOT	ES:		2. Tes	t Boring	Log F	Page 1	: 0 - 20	) feet. E	ach subsequent page: Additional 25 feet.	S	Casing	Sample	Core
			3. Ref	er to the	"Inter	pretat	ion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type	HSA	SS	-
ADD	ITIO	NA	L							Int Diam.	4.25 "	2"	<b>   </b>
NOT	ES:									Weight		140 lb	
										Fall		30"	

1	THE 547 River Street Chargen Troy, New York 1						Stree	et .	PROJECT: Silo Ridge Country Club		
	C	'hi	IZEI	n	Trey	, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRB-9
	CC	DMF	ANIE	ES	Phn	: (51)	8) 273 8) 273	-0055	CLIENT: Higher Ground Country Club Management		
$\vdash$	T				Fax	: (51)	5) Z 73 T	-8391	PROJECT NO.: 30631.00	Total Depth:	26.2 ft.
Ì.		(Ft)	MS		1	2	fer	P P P			
$F_{t}$		ЮП	l B	Ž	SWG	1 E	Wal	Syn			
۴.		evat	ing.	d	Ā	OVe	Ĭ	da	Stratum and		
Det		ធ	Cas	San	E	l ag	3	E S	Field Descriptions:	Field Notes, Comment	s:
	Γ			SS-5	10	15		GP	Poorly Graded Gravel with Sand (GP): Mostly gravel, some sand, trace silt,	······································	
21	L	- 581			11				brown/gray, dry (Highly Weathered Rock)		
<u> </u>	L			_	22						
22		· 580			15						
	F			1			Í				
23		579	ļ		<u> </u>				·		
I	+					<b> </b>		<u>.</u>			
24	-	578						<u> </u>			
	╞╵										
25	$\vdash$	577		SS-6	7	8		GP	Poorly Graded Gravel with Sand (GP). Mostly gravel some cand trace ail		
	ŀ		1		39	Ļ			brown/gray, dry (Highly Weathered Rock)		
26	F	576		1	50/2"	-	<u> </u>		· · · · · ·		
,77									Terminated due to Split Spoon Refusal on Probable Bedrock at 26.2 feet.		
"	[										
28	L	574		ļ							
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29	L	573		ļ							
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30	┝	572									
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ADDI	TI	ONA	L NO	TES:	····		[				

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	THE 547 River Street Troy, New York 12							eet	PROJECT: Silo Ridge Country Club		-
		az	en		Tro	y, Ne	w Yo	rk 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-16	
	COM	1PAN	IES	•	Ph	n: (51	8) 27	3-0055	CLIENT: Higher Ground Country Club Management		1
					Fax	x: (51	8) 27	3-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.	-
	Co	ntrac	tor: S	SJB Se	ervice	s Inc.			Start Date: November 29, 2006 Northing: See Figure	2 Borehole Dia.: 9 in	۲
	I	Drill F	Rig: (	ME-	550X	ATV			Finish Date: November 29, 2006 Easting: See Figure	Water Denth 18 ft	
	•	Dril	ler: J	ohn L	eonha	rdt			El. Datum: NGVD 29 Longitude:	Pock Donthy MA A	
- E	Ĭr	ispect	or: F	ete Si	teenlai	nd			G.S. Elevation: 630 Latitude:	Sample Hammers Automatio	
	-	2	<u> </u>			T	T			Sample Hammer. Automatic	-
<b>h</b> (Fi)			lg Blows	ole No.	Blows	very(în)	ndwater	p Symbo			
Den	· 6			Sam	SPT	Reco	0 Co	Grou	Field Descriptions:	Field Notes, Comments:	
				SS-1	1	10		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist		٦
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				SS-2	5	12		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace cla	<i>v</i> .	I
					9				gray, dry		I
ľ	021	, L		_	11	1		-			I
<b>,</b>	[				10						ľ
11	Γ"										ł
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ľ	F 622					1				1	l
	F	-				<u> </u> -		- <u> </u>			l
9	► 62/					<u> </u>				Approximate Strata Change	I
ļ							·				ļ
10	620			SS-3	4	10		ML	Sandy Silt with Gravel (MI): Mostly silt some cond little ground trace to		ľ
	┝	+			6				grav. moist	2	
"	F 619				5			<u> </u> [		·	
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12	<b>⊢</b> 618	h			-			{{			
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13	617	-	- <u> </u>					<u> </u>			
	┝										ĺ
14	- 616				-		• •				
Ι,	┝ ──	1 -		-  -				<b>├─── </b>			
15	- 615		5	S-4	19	12		MI	Sandy Silt with Gravel (MI): Moethy silt game and thus and the		l
	h•		+		14				ray, moist	· · · · ·	
16	- 614	-		-	8			<u>├</u>  '			
		1			6					]	
17	613		+		-						
ļ	•	1	+				••••				
18	- 612	{	+			ŀ	<u> </u>	[			
		†	+	<u> </u>							
19	- 611		- <u> </u>								
20	610				+			{		[ ·	
MET	HODE	110	 A 11~		Store 7				West SOA S PLOS		
SAM	1003 PT E T	VPRO	- HO	now 2	m 11/2	uger,	KW.	n- Kolar	wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION	
OANI	TLE T	X TES	AS	Auge	r, WS	was	n, 88	-Split Sp	bon, KC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA 0 to 25	
NOT	WARL	- 1.5	ampie	s clas	sified	in acc	corda	nce with	AS1M D-2488 unless otherwise noted.	Method:	
נוטה	503 <b>:</b>	2.1	est Bo	oring	Log Pi	age 1:	: 0 - 2	U teet. Ea	cn subsequent page: Additional 25 feet.	Casing Sample Core	
4		<u>3. R</u>	eter t	o the	Inter	oretati	on of	Subsurfa	ce Logs" for additional symbology and abbreviation definitions.	Type HSA SS	
AUDI	110N/	4L								Int Diam. 4.25 " 2"	
NUTI	10:									Weight 140 lb	
				_						Fall 30"	

Ĩ	THE 547 River Stree Chazen Troy, New York					Rive	er Stre	eet	PROJECT: Silo Ridge Country Club	
	C	ba	izei	n	Tro	y, N	ew Yo	rk 1218	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-10
ī	C	OMP	ANIE	S	Ph	n: (5	18) 27	3-0055	CLIENT: Higher Ground Country Club Management	
			7	<u> </u>	Fa	x: (> T	18) 27	3-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.
		(Ft)	SA S				e la	- Iq		
(i)		ion	Blo	° 2	SMO		wat	L L		
ŧ,		vat	E	ple	1 a			ĥ	Stratum and	-
Å		Ele	Cas	Sam	I I I			l g	Field Descriptions:	Field Notes, Comments:
	Ľ			SS-	5 40	1	8	ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay,	
21	Ľ	600	L		47				gray, moist	
					20	]				
22	L	608			27					
	L .									
23	L	607	<u> </u>	•		-	-		_	
	┝ .				-					
24	┝	606								
	╞╶								4	
25	F	605	<u> </u>	SS-6	30	8		GP	Poorly Graded Gravel with Sand (GP): Mostly gravel come cand trace site	Approximate Strata Change
	<b>-</b> -				50	+	-		brown/gray, dry (Highly Weathered Rock)	
26		604		1	55			-	··· - · · · · · · · · · · · · · · · · ·	
77		601			17					
"		005							Test Boring Terminated at 27 feet.	
28		602		ļ	<u> </u>					
									· · · · ·	
29		601				ļ				
						+ •				
30	_	600					- <u>-</u>			
							-	· · ·		
31	_	599 -			<u> </u>	<u>†                                    </u>				
1	_	898					1			
33	_	597								
-						ļ	- <b> </b>			
34		596								
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35	_	595								
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36	-	594  - 						<u>                                      </u>		
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38	_	592								
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"	- 3	589						<b>!</b>		
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43 L		87								
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44	- 5	86								
<i>"</i>  -					.					
npr	5	85	NO	FPC.						
NNI.]	110	ANAL	- INO,I	LES:						

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Г	THE				547	River	Stree	et	PROJECT: Silo Ridge Country Club			<u> </u>	
	$\bar{C}$	ho	1701	n	Tro	y, Nei	v Yor	k 12180	LOCATION: Town of Amenia. Dutchess County. New York	Test R	oring No	CD1	R_11
	$\frac{\smile}{\sim}$			<u>v</u> :c	Phr	n: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management	4 651 10	mg 110-	. SU	D-TT
	$\overline{\mathbf{c}}$	<u>יייי</u> רי		:5	Fax	c (51	8) 273	-8391	PROJECT NO.: 30631.00	To	tal Depth	: 25.4	£
	C	Cont	ractor	: SJB S	ervices	Inc.			Start Date: November 30, 2006. Northing: See Figure 2	Bor	ehole Dia	: 9	in
		Dr	ill Rig	CME-	550X .	ATV			Finish Date: November 30, 2006 Easting: See Figure 2	Wa	ter Denth	: 18	111. ft
		I	Driller	: John L	eonha	rdt			El. Datum: NGVD 29 Longitude:	R	ock Denth	: NA	л ft
		Insp	pector	Pete S	teenlar	nđ			G.S. Elevation: 608 Latitude:	Sample	Hammer	: Auto	omatic
		'n)	6				<b>L</b>	0				··	
		E F	0 Mi		\$	(iii	ate	Q E					
E		atio	8	e N	l of	ery	- Å	S					
		leva	l sin	du	E.	000	10	Ino	Stratum and				
Lå	+	Ш	<u>ů</u>	Sa Sa	5	<u>l z</u>	Ū	উ	Field Descriptions:	Field No	otes, Com	ments:	
				SS-1	1	10	1	SM	Silty Sand (SM): Mostly sand, some silt, trace clay, trace gravel, brown,				
1	F	607			1			ļ	moist				
	┣.				0		ļ						
2.	<b></b>	606			2	4	ļ						
	+ -		<u> </u>										
3	F	605			<u> </u>	-		<b> </b>					
	+ -			1				i					
4	$\vdash$	604			<b> </b>								
			<u> </u>										
5	$\vdash$	603		00 1	4	24	· · ·	МТ	Condy Cilt (MT). Marthur ilt anno 1 Constant	Approxir	nate Strata	Change	
			·· · ·	- 33-2		24			Sandy Sitt (ML): Mostly sitt, some sand, few gravel, trace clay, gray, moist		•		
6	-	602			5	•		[					
					7		i			1			
7	$\vdash$	601			/								
	. – –												
8	F	600											- F
	<b>⊢</b> -												
9	F	599				1	<u> </u>						1
1													!
10		598		SS-3	3	16		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel trace clay, gray, mojet				i i
ł.	<u></u> ⊢−				6				the start of the s				
"	F	597			5	[]				1			
<b>I</b>	F -				14								
"		390											
л	Ľ	105								·			
[ <sup>13</sup>	Γ_										-		
14	L	594											
	L _												1
15	Ŀ.	\$93											
f .	╞╧			SS-4	9	17		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist				1
16	F .	592  -			6					ĺ			
	┣ —	-+			5								1
17	<u>├</u> _ :	592			7								
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19	د	89								· .			
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MET	י ער	<u>"</u>	164	Hallow	Starr	4.0000	DW	u nete	Wheel COL Calid Change And Courts of the				
SAM	DI F	00: TV	DEC.	WOIIOT -	otem A	Auger	, KW)	Colis Co	y wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILI	LING INI	ORMATI	<u>ON</u>
STAR		n n 12 m	1 60-	no-Aug	er, wi	o-was Lin oc	511, 33 <sup>.</sup>	opin Sp	ASTM D 2489 unloss others in the second strength of the second stren	Method:	HSA	0 to	25
NOT	ES.	ΛV	1. Jal	npica Cla at Roring	asmed Loo n	ына¢ 1 <sub>900</sub> 1	-010al	nee with A feet 12	no in 2-2400 unitss onerwise noted.	Method:			
			3. Ref	fer to the	"Inter	ugu I Dretat	2' ion of	Subcurf	an subsequent page. Additional symbology and althoutistics definitions		Casing	Sample	Core
ADD	ITIC	)NA	L	.5. 10 (116	mei	protat	1011 01	Subsull	and appreviation definitions.	Type	HSA	SS	<u></u>
NOT	ES:	-1 1634	~							int Diam.	4.25 "	2"	30000000
										Weight		140 lb	
			- · · ·							raii		30"	

Undergeneration         Trans. New York 12180 Print (13) 273-039 Print (13)	T	THE 547 River Street Chazen Troy, New York						Stree	t	PROJECT: Silo Ridge Country Club	1	
CUMPANIES         Pine (38) 271-003         CLEARN III Ingler Ground Caumy Club Management         Total Depth.         2.5.4         6           2         2         2         2         2         2         4         2.5.4         6           2         2         2         2         2         2         2         4         7         <		C	iha	tzer	1	Troy	, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRB-11
Image: Construction         Charles of the second seco	Ī	20	DMP	ANIE	S	Phn	: (51)	8) 273 9) 273	-0055	CLIENT: Higher Ground Country Club Management		
Product         Product <t< th=""><th><u> </u></th><th>T</th><th></th><th></th><th></th><th>Гах</th><th>1 (51)</th><th>8) 2/3</th><th>-8391</th><th>PROJECT NO.: 30631.00</th><th>Total Depth:</th><th>25.4 ft.</th></t<>	<u> </u>	T				Гах	1 (51)	8) 2/3	-8391	PROJECT NO.: 30631.00	Total Depth:	25.4 ft.
B       State       State <thstate< th="">       State       Stat</thstate<>	ŀ		(Ft)	MS	.		2	te	1 A			
Participation         Participation         Participation         Participation         Participation           11         - <th><math>\hat{E}</math></th> <th></th> <th>ion</th> <th>Blo</th> <th>Ž</th> <th>SWG</th> <th>l ů</th> <th>Mai</th> <th></th> <th></th> <th></th> <th></th>	$\hat{E}$		ion	Blo	Ž	SWG	l ů	Mai				
R         R         R         R         R         R         S         Pidd Description:         Pidd Notes, Comments:           1         4	Ť,		evat	ing	] aldc	Ā	0 Vel	n n	di	Stratum and		
Image: Second second	Dep 1		ä	Cas	San	Ids	Rec	3	l S	Field Descriptions:	Field Notes, Commer	nts:
11		L			SS-5	3	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist		
1	21	L	- 587			4						
27       38       14       14         17       38       14       14         18       38       14       14         19       38       14       14         19       38       14       14         19       38       14       14         19       38       14       14         19       38       14       14         19       38       14       14         19       38       14       14         19       38       14       14         19       19       14       14         19       19       14       14         19       19       14       14         19       19       14       14         19       19       14       14         19       19       19       19       19         19       19       19       19       19       19         19       19       19       19       19       19         19       19       19       19       19       19         19       19       19       19       <						6						
11       32       11 <td< th=""><th>22</th><th></th><th>586</th><th><u> </u></th><th></th><th>14</th><th> </th><th></th><th> </th><th></th><th></th><th></th></td<>	22		586	<u> </u>		14						
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1         3         3         4         5         ML         Sardy Sit (ML): Mostly all, some sind, few gravel, trace clay, gray, moint           1         4         4         4         4         4         4         4           1         4         4         4         4         4         4         4           1         4         4         4         4         4         4         4           1         4         4         4         4         4         4         4           1         4         4         4         4         4         4         4           1         4         4         4         4         4         4         4           1         4         4         4         4         4         4         4           1         4	24 .		584									ĺ
27       48       50/5       5       MU       Sandy Silt (M1): Mostly silt, some sand, few gravel, trace clay, gray, moist         28       50       4       4       4       4         29       50       4       4       4       4         20       50       4       4       4       4         21       50       4       4       4       4         22       50       4       4       4       4         23       50       4       4       4       4         24       50       4       4       4       4         25       50       4       4       4       4         26       50       4       4       4       4         27       4       4       4       4       4         28       500       4       4       4       4         29       500       4       4       4       4         210       500       4       4       4       4         211       500       4       4       4       4         212       500       4       4       4       <		╞╶			· ·		<u> </u>	<u> </u>	<u> </u>			
Image: Second	25	┝─	583		89.6	50/5"	5	<u> </u>	м	Sandy Silt (MI): Mostly silt come cand free much to a to		
10       10       10       10         11       10       10       10         12       10       10       10         13       10       10       10         14       10       10       10         15       10       10       10         16       10       10       10         17       10       10       10         18       10       10       10         19       10       10       10         10       10       10       10         11       10       10       10         12       10       10       10         13       10       10       10         14       10       10       10         15       10       10       10         16       10       10       10         17       10       10       10         18       10       10       10         19       10       10       10         19       10       10       10         10       10       10       10         10		╞᠂			0.00	50/5	۲,	<u> </u>	WIL	moist		
11       11       11       11       11         12       13       11       11       11         13       13       11       11       11         14       13       11       11       11         15       13       11       11       11         16       13       11       11       11         17       13       11       11       11         18       13       11       11       11         19       13       11       11       11         19       13       11       11       11         19       13       11       11       11         19       13       11       11       11         19       13       11       11       11       11         19       13       11       11       11       11       11         19       13       11       11       11       11       11         19       13       11       11       11       11       11         19       13       11       11       11       11       11	26	-	587		<u> </u>		···			Terminated due to Split Spoon Refusal on Prohable Bedrock at 25.4 feat		
11       11         12       11         13       11         14       11         15       11         16       11         17       11         18       11         19       11         10       11         11       11         12       11         13       11         14       11         15       11         16       11         17       11         18       11         19       11         19       11         10       11         11       11         12       11         13       11         14       11         15       11         16       11         17       11         18       11         19       12         19       13         19       14         19       14         19       14         19       14         19       14         19       14	~*			ļ								
11       11       11         12       130       11         13       11       11         14       11       11         15       11       11         16       131       11         17       11       11         18       131       11         19       131<	17	Γ	381					1	<u> </u>			
10       10       10         10       10       10         10       10       10         11       10       10         12       10       10         13       10       10         14       10       10         15       10       10         16       10       10         17       10       10         18       10       10         19       10       10         19       10       10         19       10       10         10       10       10         11       10       10         12       10       10         13       10       10         14       10       10         15       10       10         16       10       10         17       10       10         18       10       10         19       10       10         10       10       10         11       10       10         12       10       10         13       10       10	28		180									
17       19       10         18       99       10         19       19       10         10       19       10         11       10       10         12       11       10         13       111       10         14       19       10         15       19       10         16       19       10         17       10       10         18       17       10         19       17       10         19       17       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       19       10         19       10       10									_			
10       59         11       59         12       59         13       59         14       59         15       59         16       59         17       50         18       59         19       59	29	_	579									-
10       59       11         11       591       11         12       593       11         13       593       11         14       593       11         14       593       11         14       593       11         15       593       11         16       593       11         17       593       11         18       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19       593       11         19												
11       101         12       101         13       503         14       504         15       1         16       101         17       1         18       102         19       101         10       101         11       101         12       101         13       101         14       102         172       101         18       102         19       101         10       101         11       101         12       101         13       101         14       102         150       101         16       101         172       101         18       102         19       101         101       101         101       101         101       101         102       101         103       101         104       101         105       101         104       101         105       101	30	_	578									
1       97       97         11       97       97         13       97       97         14       97       97         15       97       97         16       97       97         17       97       97         18       97       97         19       97       97         19       97       97         19       97       97         19       97       97         10       599       97         10       599       97         10       599       97         11       97       97         12       97       97         13       599       97         14       599       97         159       97       97         10       549       97         11       97       97         12       549       97         13       549       97         14       549       97         150       97       97         151       97       97         152       97												
37       190         38       535         44       534         35       1         36       192         37       1         38       192         39       539         40       539         41       539         42       539         43       539         44       549         45       549         46       549         47       549         48       549         49       549         41       549         42       549         43       549         44       549         459       549         46       549         47       549         48       549         49       549         549       1         549       1         549       1         549       1         549       1         549       1         549       1         549       1         549       1         549	31		577									ļ
11       170         12       170         13       175         14       171         15       171         16       171         17       171         18       172         19       171         19       171         19       171         19       171         19       171         19       171         19       171         19       171         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         19       170         190       170         191       170         192       170         193       170												
33       - 533         34       - 534         35       - 531         36       - 532         37       - 531         38       - 532         39       - 569         40       - 568         41       - 568         42       - 568         43       - 568         44       - 564         54	32	_	576									
37       37         38       571         39       572         31       572         32       571         33       570         34       570         35       570         36       570         37       570         38       570         39       560         40       564         41       564         42       564         43       565         44       564         45       565         46       564         47       564         48       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565         565       565												1
34     - 574       35     - 572       36     - 572       37     - 571       38     - 570       39     - 580       40     - 586       41     - 586       42     - 586       43     - 555       44     - 554       45     - 554       46     - 564       47     - 566       48     - 554       49     - 564       40     - 564       41     - 564       42     - 564       43     - 564       44     - 564       45     - 564       46     - 564       47     - 564       48     - 564       49     - 564       564	"	_	375				·					
35     373       36     372       37     571       38     370       39     569       40     564       41     564       42     565       43     553       44     564       45     564       46     564       47     564       48     565       49     564       40     564       41     564       42     565       43     565       44     564       45     565       46     564       47     564       48     564       49     564       40     564       41     564       42     564       43     564       44     564       564     1       45     564       46     564       47     564       48     564       49     564       40     564       41     564       42     564       43     564       44     564       45     564       46 <t< th=""><th>34</th><th></th><th>574</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>1</th></t<>	34		574									1
35     572       36     572       37     571       38     570       39     560       40     564       41     567       42     565       43     553       44     564       45     564												
36     372       37     571       38     370       38     370       39     360       40     568       41     567       42     568       43     553       44     564       45     564	35	_	573									
36     572       37     571       38     570       39     560       40     560       41     567       42     566       43     555       44     564       45     554       46     554	ļ											
37     571       38     570       39     560       40     560       41     567       42     566       43     565       44     565       45     564	36		572									
37     570       38     570       39     560       40     568       41     567       42     566       43     565       44     564       45     564	ŀ	•										
38     570       39     560       40     568       41     567       42     166       43     565       44     554       45     164       44     554	37	-	571				-+					
38 570 39 569 40 568 41 567 42 566 43 565 44 566 44 566 45 564 44 566 45 564 45 564 46 568 47 567 47 567 48 567 49 568 49 568 40 568	┝	•										
39 - 569	38	_	570									-
40 568 4 41 567 4 42 - 566 4 43 - 565 4 44 - 564 4 563 1 DDITIONAL NOTES:	_	•						+				
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41 567	40 L	_	568							,		
41     567       42     566       43     565       44     564       45     563       503     1	Ĩ [			]								
42     566       43     565       44     564       45     563       563     1	<i>"</i>		567									
42     566       43     565       44     564       45     563       563     563	Ļ	-										
43 - 565 44 - 564 45 563 DDITIONAL NOTES:	43		566							1		
43 - 565 44 - 564 45 - 564 1001TIONAL NOTES:	┢	-	-+				-					
44 - 564	43	··• .	565					-+				
44 - 564	$\vdash$							[-				1
es 563 DDITIONAL NOTES:	44  -	→ <u>-</u>	564	-+				-+				
DDITIONAL NOTES:	45 F		563							· .		
	DDI	П	ONA	L NOT	CES:	<sup>_</sup> <sup>_</sup>		ł	I		<u></u>	
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	THE 547 River Street							et	PROJECT: Silo Ridge Country Club	
	C	ha	Zev	1	Tro	y, Ne	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRR_12
		N/D		<u>-</u>	Phr	n: (51	8) 273	3-0055	CLIENT: Higher Ground Country Club Management	- SILD-12
		VIP	NNIE	<u> </u>	Faz	k: (51	8) 273	3-8391	PROJECT NO.: 30631.00	Total Denth: 20.6 ft
	C	ontr	actor	SIB S	ervices	s Inc.		··	Start Date: November 30 2006 Northing: See Figure 2	Borsholo Dia a O in
	-	Dri	ll Rio	CME	550X	ATV			Finish Date: November 20, 2000 Forthing: See Figure 2	Borenoie Dia.: 9 m.
		n	rillor	Tohn I	oonho				Filmsh Date: Novembel 50, 2000 Easting: See Figure 2	water Depth: NA ft.
		ע Inen	ector.	Dote S	teenlo	nd.			C S. Elevation: NGVD 29 Longitude:	Rock Depth: NA ft.
	·····	map		1000	leema	<u> </u>			G.S. Elevation: 555 Latitude:	Sample Hammer: Automatic
		F	SA SA				ิป	2		
E	5	E C	9	<sup>9</sup>	ws	۱ŝ	vat	g		
2	2	ati	100	le le	8	Le L		Sd		
ent	5	lev	asir	Ē	E	1 2	1 2	Ē	Stratum and	
<u> </u>	<u> </u>	HH	Ű	ů_	<u> </u>	<u>∣ĕ</u>	10	Ö	Field Descriptions:	Field Notes, Comments:
				SS-	1 2	10	ļ	SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay,	Moisture Content = 11.9%
,	<b>—</b>	554		ļ	4				brown/gray, dry	
	L _				8					
,	·	553			8					
	L .			ļ						Grinding at 2.5 feet
Ι.		~				1				
ľ	Γ	332					1			
						·†		1	1	
1		551				1	- <u> </u>			
I					· · ·					
5		550		\$5.2	11	0.		SM	No Recovery (Probable Cobble)	
				00-2	24			SIVI	The Recovery (Flobable Cobble)	Silty Sand (SM) based on observed
6		549		•	24	+				cuttings
ŀ					23					
7	- L	548			22		<u> </u>			
I								<u> </u>		
8		547						ļ		1 1
					ļ					
9	L	546			1					
10										
10	<b>–</b> 1	, ce		SS-3	16	14		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay,	
	Γ-				16				brown/gray, dry	
"	· ۲	44			17					
				·	16		<u> </u>			
12		43								
	h —	$\rightarrow$			· ·					
13	- s	42 -								
		+				<u> </u>				
14	- 1	41								
1	F	$\rightarrow$	ŀ					<b> </b>		
15	F >	10 -		00		<u> </u>	i			
1	<b>├</b> —	-+		55-4	00	0		SM	No Recovery (Probable Cobble)	Silty Sand (SM) based on observed
16	F 2	39 L			50/3"					cuttings
1	L						.			
17		18								
I	L_									
18	L.,					ļ				
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	Γ		1							
19										
20	53	15						—		Anneovienata Starte Oliver
ME	гног	)8:	H84-	Hollow	Stem	Ange	r 12W	H. Roter	w Wash SSA. Solid Stem Auger CBT Cone Development	Approximate Strata Change
SAM	IPL F	TV		48.A.	Ter M/	S_W_	ch SC	-Solit Co	y musi, son- ond sign Adger, UP 1- Cone renetrometer	DRILLING INFORMATION
STA	NDA	111 0Th	1 9	no-nu	501, YY1		an, 33	-opin op	ACTM D 2498 miles sites	Method: HSA 0 to 20
NOT	אערו ססני	ω.	i∴oan o∵r	ipies ela	assiile(		COTOA	nce with	AS LM D-2488 unless otherwise noted.	Method:
	E2:		2. 1es	свотт	g Log F	age I	: 0 - 2	U feet. E	acn subsequent page: Additional 25 feet.	Casing Sample Core
			3. Ref	er to the	e "Inter	pretat	tion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type HSA SS
AÐD	OITIO	NAI	Le la							Int Diam. 4.25 " 2"
NOT	ES:		. *							Weight 140 lb
				<u>.</u> .						Fail 30"

1	THE 547 River Street Classican Troy, New York 121					Rive	Stre	et	PROJECT: Silo Ridge Country Club	
	Chazen Phn: (518) 273-0055			w Yoi	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-12			
Ĩ	C	MP	ANI	ËS	Phn	: (51	8) 27	3-0055	CLIENT: Higher Ground Country Club Management	
					Fax	: (51	8) 27	3-8391	PROJECT NO.: 30631.00	Total Depth: 20.6 ft.
		(Ft)	SM				5	2		
Ê		ion	Blo	ź	SWG	1ê	Wat	jym		
ŧ	].	evat	ing B	ple	<b>H</b>	OVE		<b>F</b>	Stratum and	
a d		E	Č	San	Las	12	18	18	Field Descriptions:	Field Notes, Comments
				SS-5	5 22	5		GM	Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace clay,	
21	Ē	534			50/1	'			gray, dry	
	L-								Terminated due to Split Spoon Refusal on Probable Bedrock at 20.6 feet.	
22	F	533				<u> </u>				
		-				ļ	ļ			
23	H	532								
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24	-	531		• • •			-			
	F -									
25	F	\$30		-		<u> </u>	+			
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27		528								
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29		526						<u>├</u> ──-{		
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33	_ :	522 -						l		
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35	- 5	520			[					
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37	_ \$	18	]			[				
F		-								
38	- 5	<i>m</i>  -	]			-+		]	1	
$\mathbf{F}$	·									
39	- 5,	16								
*	- 51	15								
"[		14								
Ϊ										
42	- 51	13								
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43	• 51	12  -								
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14	- 51				<del> </del> _		-+			1
45	51	0								
DDI	CIO	NAL	NO3	TES:	·		L			

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Γ	TH	HE _			547	River	Stree	et	PROJECT: Silo Ridge Country Club				_
	(	In	aze	n	Tro	y, Nev	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Bo	oring No.	SR	R-13
	C	OM	PANI	ES	Ph	n: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management		_		<b>U</b> 15
F	_				Fa	x: (51	8) 273	-8391	PROJECT NO.: 30631.00	To	tal Depth	: 18	ft.
		Con	tracto	er: SJB S	Service	s Inc.			Start Date: November 28, 2006 Northing: See Figure 2	Bore	hole Dia.	: 9	in.
		D	Dalla Dalla	g: CME	-550X Loombo	ATV			Finish Date: November 28, 2006 Easting: See Figure 2	Wat	ter Depth	: NA	ft.
		Inc	Driffe meeto	r: John : r: Pete S	Leonna Steenla	nd			El. Datum: NGVD 29 Longitude:	Ro	ck Depth	: NA	ft.
H			Peeco	1. 1000	, coma		1		Gist Dievation: 519 Latitude:	Sample	Hammer	: Aut	omatic
anth /54)	/i.r) mda	Slevation (Ft	asing Blows	ample No.	PT Blows	ecovery(in)	roundwater	roup Symbo	Stratum and				
┝	┥			<u> </u>			0	SM SM	Silty Sand (SM): Months and some silt for some till	Field No	tes, Com	ments:	
	ł	·			5		-	IVIC.	Sing Sand (SW): Wostry sand, some sin, new gravel, trace clay, brown, dry				
'	ŀ	518			6		-{						
Ι.	Ē				5	1		ĺ					
ľ	:[	- 317					1						
,		- 516			1								
	-						<b> </b>	ļ		1			
4	⊢	- 515		· ·	Approximate Strata Change								
	┢			·			[						
5	-	- 514		89.7		0		<u>ed</u>	Poorty Graded Sand with Crown (CD). Marthan 1 Val				
	┢		-	0012		+-			trace clay, brown, dry				
6	F	- 513			$\frac{1}{2}$				· · · · · · · · · · · · · · · · · · ·				
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1 ′	Ε	- 513			-								
8		- 511								ľ			
	F		·										
,	⊢	- 510			<u> </u>	<b> </b> .							
1	ŀ		<u> </u>		Í								
10	┝	- 509		00.2		12							
	┢		ļ	- 55-5		13		<u></u>	recercitly Graded Sand with Gravel (SP): Mostly sand, little gravel, trace silt,	1			
11		508	<u> </u>	+	9				1.400 Day, 010 mi, 01 y				
	F		1	+	13			· · ·					
12		507	<u> </u>							Seam of O	luartz at 1	2 feet	
1	Ľ	505									un 12 ut 1.	2 1000.	
				SS-4	55	18		SP	Poorly Graded Sand with Gravel (SP): Mostly sand, some gravel, trace silt,				- 1
14	F	505		· ·	40			1	brown, dry (Highly Weathered Rock)				
	<b> </b>				15								
15	┢	504		00.0	34				People Credit And to 1000 March 1				
	F			00-0	23				brown, dry (Highly Weathered Rock)	1			[
16	F	503		· · · ·	15	+		—[					
17	ľ	(07			48			P		ĺ			
<i>″</i>	Γ	302								1			
18	L	501					-						
	Ļ.							1	Auger Refusal at 18 feet on probable bedrock.				
19	L	500		[						ļ			
74					[								
ME	 ∩µ≉	499 DDG-	Цех	- Hollow	Starr	A.1.0.00	D11/4	J. Deter	w Week CCA Calid Game An CDT C				
SAM	IPI	<u>.</u> Е Т\	PES	AS-An	er W	S-Was	h. 88-	solit So	y wash, SSA- Solid Stem Auger, UPT- Cone Penetrometer	<u>DRILL</u>	ING INF	ORMATI	ION
STA	ND	ARD	1. Sa	mples cla	Method:	HSA	0 to	18					
NOT	ES	:	2. Te	wiethod:	Casina	Samela							
			<u>3. R</u> e	efer to the	Type	HSA T	SS	Core					
ADD	IT	IONA	L		Int Diam.	4.25 "	2"						
NOT	ES	:							ľ	Weight		140 lb	
	_									Fall		30"	

	THE 547 River Street Chazen Troy, New York 1						Stree	t	PROJECT: Silo Ridge Country Club		
	C/s	az	(ev	l	Troy	, Nev	v Yorl	< 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-14	
1	CON	<u>APA</u>	NIE:	5	Phn Fay	: (518 • (518	8) 273 8) 273	-0055	CLIENT: Higher Ground Country Club Management		
	Co	ntra	ctore	SIB Se	rvices	Inc	5) 213	-0391	FROJECT NO.: 50051.00	Total Depth: 27 ft.	
		Drill	Rig:	CME-	550X A	ATV			Finish Date: November 28, 2006 Facting: See Figure 2	Borehole Dia.: 9 in.	
		Dr	iller:	John L	eonhai	rdt			El. Datum: NGVD 29 Longitude:	Rock Depth: NA II.	
	I	nspe	ctor:	Pete St	eenlan	ıđ			G.S. Elevation: 505 Latitude:	Sample Hammer: Automatic	
		ť)	8					6			
	'		low	ġ	S.	(ii)	ate	q			
H (F	1 :	atio	1g B	le	Blo	Ver J	Apg	b S			
ept		Elev	asir	and	L	eco l			Stratum and	Field Materia Community	
		Ì	<u> </u>	SS-1		12	- <u></u>	ML	Sandy Silt (ML): Mostly silt some sand trace clay gray moist	Field Notes, Comments:	
	<b>F</b>				1	<u> </u>					
11		<i>U</i> 4			3	1					
2	- 5	03			2						
	L					<u> </u>	ļ	 			
3	51	02 L			<u> </u>						
					ļ						
1	se	"  -								Approximate Strata Change	
			ĺ	· · · ·							
5	_ %	»  -		SS-2	4	12		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray,		
6		,,			11				dry		
					15						
7	- 49	18			12						
8	- 49	"									
	┝										
9	- 49	ه <del> </del>									
10		1		SS-3	6	16		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray,		
i ii	49	۰			15				dry		
					20						
12	- 49.	₃  _			15						
			-								
13	<u> </u>	₹ <u> </u>	-+			·· · †					
		. [									
14	491	<u> </u>									
15	490	,∟									
				SS-4	6	12		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray,	ľ	
16	485	,			10				ury -	í I	
	<b>_</b>	+-			14	-+	<del> </del> -			1 1	
17	488						-+			]	
<b>,</b> ]	•			1			-				
<i>"</i>	- 487				Ī						
19	486									l i i i i i i i i i i i i i i i i i i i	
	-									. <b>!</b>	
SAM	PLFT	э: Н гүр	BA-L	AS-Aug	er W	uger.	h se	n- Kotai Split C-	y wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION	
STAN	DAR	DI	. Sam	ples cla	ASTM D-2488 unless otherwise noted	Method: HSA 0 to 25					
NOT	ES:	2	. Test	Boring	Log P	age 1	: 0 - 20	) feet. E	ach subsequent page: Additional 25 feet.	Meulou: Casing Sample Core	
		3	. Refe	r to the	"Inter	pretati	ion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type HSA SS	
ADDI	TION	AL								Int Diam. 4.25 " 2"	
NOT	ES:						Weight 140 lb				
										Fall 30"	

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T	THE 547 River Street Chargen Troy, New York							et	PROJECT: Silo Ridge Country Club	
	C	ba	izei	r	Troy	, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-14
Ē		OMF	ANIE	S	Phn	: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management	
	1		1		Pax	: (51 T	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.
		(Ft)	SW			È	ter	pq		
(Ft)		tion	B	l v	OWS	1 Sh	дwа	Syn		
pth		eval	sing	Įdu	E E	0Ve	I	dīng	Stratum and	
å		Ē	ğ	Sai	A.S	l Å	5	5	Field Descriptions:	Field Notes, Comments:
	L			SS-5	7	13	<u> </u>	SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray,	
21	L	484			9	ļ			dry	
Í	╞		ļ		13					
22	⊢	483			24					
	<b>-</b> .		<u> </u>			• •	-			
23	⊢	482	<u> </u>					-		
						<u> </u>				
		481				Ţ	1			
25	Ľ	480								
	Ļ.			SS-6	13	10		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray,	
26	L	479			20				ary	
	<b>.</b> .				22					
27	<b>—</b>	478	<u> </u>		20		<u>├</u>	i	Test Boring Terminated at 27 feet	
			···· <b>-</b> ···						rost Bornig reminated at 27 feet.	
28	•	477				ļ	1.			
29	_	476								
30	_	475								
3/	-	474						{		
ŀ	-									
32		473								
33		477								
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34	_	471		· · · ·						
ŀ	•	-				-				
35	-	470	-							
	•									
36	-	469								
" [	_	468								
38	-	167						[		
ŀ					<del> </del> -					
39	-	166								
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42		163 -				[				
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43 <b> </b>	- 4	162 -		···						
ŀ	_	-+				-+				
14 <b> </b>		161				+	-+			
45		60								
DDI	<b>FIC</b>	DNA	L NOT	res:		<u> </u>				······································

	THE 547 River Street Clanzon Troy, New York 1							et	PROJECT: Silo Ridge Country Club		
	Chazen Troy, New York 121							k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	<b>SRB-15</b>
	C	OM	PANI	ËS	Ph	n: (51	8) 273	8-0055	CLIENT: Higher Ground Country Club Management		
⊢		Com	fun ata		Fa	x: (51	8) 273	5-8391	PROJECT NO.: 30631.00	Total Depth:	15.3 ft.
		Con	rill Rh	r: OME n. CME	-550Y	S INC.			Start Date: November 28, 2006 Northing: See Figure 2	Borehole Dia.:	9 in.
			Drille	r: John	Leonha	ardt			El Datum: NGVD 20 Longitude:	Water Depth:	NA fl.
		Ins	pecto	r: Pete S	Steenla	nd			G.S. Elevation: 562 Latitude:	Sample Hammer	NA ft.
		r,								Gample manmer.	Automatic
-	5	E E	- Mol	ġ	2	(iii	ater	- Maria			
. 5	5	atio	8	de N	Blov	l Ser	h	p Sy			
	- Thr	Slev	asin	amp	E	ec	rou	rou	Stratum and		
┝	4		+	SS-		12		SM	Silly Sand with Gravel (SM): Mostly gand game ailt little small to a sho	Field Notes, Comm	ients:
		•			1	_ <u></u>	+		brown, dry		
1		- 561			3		-	-			
		560		_	4	•					
3	Ĺ	_ 559				_					
	╞			<u> </u>	· + ···		<b>_</b>				
4	┢	- 558									
	ŀ		ļ				·				1
5	┢	- 557		SS-2	2 4	12	<u> </u>	SM	Silty Sand with Gravel (SM): Mostly sand some gravel little silt trace along		10 (0)
	f		-		11				brown, dry	Moisture Content =	12.6%
l °	ľ	- >>0			15						
,	Ĺ	- 555			12						
	Ļ		ļ	<u> </u>	<u> </u>						
8	F	- 554	<u> </u>				<u> </u>				
	ł		·		<u> </u>	<u> </u>					
,	┢	- \$\$\$	<u> </u>								
1	ł					+					Í
10	F	- 552		SS-3	4	16		SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay		
l	F		1		9				brown, dry	1	
"	Γ				10						
12		\$50	ļ		50/5"	1				Cobble at 11.5 feet	
	┝			ļ							
13	$\vdash$	549		<u> </u>						Approximate Strata C	Change
	<u>}</u>			ļ		<u>   </u>					
14	1	548			[	[]					
<b>.</b>	ŀ										
ľ	Γ			SS-4	50/4"	0		SM 1	No Recovery (Probable Bedrock)		
16	Ŀ	546						/	Auger and Split Spoon Refusal on probable bedrock at 15.3 feet.		
											i i
17	-	545									1
	+										
18	Η	544									l l
	<u> </u> -										I
19		543				$\neg$					
20	[	542									
ME	CHO	ODS:	HSA	- Hollow	Stem	Auger	, RWJ	I- Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFO	DRMATION
SAN	IPL	ETY	PES:	AS-Au	ger, W	S-Was	h, SS-	Split Spo	oon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA	0 to 15
SIA	ND. TPP	AKD	I. Sai	mples cla	assitiec	i in ac	cordar	ice with	ASTM D-2488 unless otherwise noted.	Method:	
1101	120	•	2. 10 3. Re	si BUTIN fer to the	s Lug I "Inter	age I	. v - 21 ion of	Superré	ach subsequent page: Additional 25 feet.	Casing	Sample Core
ADD	ITI	IONA	L		- 11101	protat	.01 01	Juosuin	To additional symbology and appreviation definitions.	Type HSA	<u>SS</u>
NOT	'ES	:							La construction de la constructi	Weight	140 lb
										Fall,	30"
											1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1

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	THE 547 River Street					Rive	r Stree	et	PROJECT: Silo Ridge Country Club	7	
	(	'hi	AZEI	n	Tro	y, Ne	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No .:	SRB-16
	C	OMF	ANI	ES	Phi	1: (51	8) 273	8-0055	CLIENT: Higher Ground Country Club Management		
+		Cert				k: (51	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth:	20.8 ft.
		Cont	nacio	1: SIB S	ervices	s inc.			Start Date: November 27, 2006 Northing: See Figure 2	Borehole Dia.:	9 in.
Í		1	na Ang Deillior	s: Civic-	oorho	AIV rdt			Finish Date: November 27, 2006 Easting: See Figure 2	Water Depth:	13.5 ft.
		Ins	pector	r: Pete S	teenla	nd			G.S. Elevation: 546 Longitude:	Rock Depth:	NA ft.
	Т	2			T	T-	T		Sidi Listations 540 Elanuut,	Sample Hammer:	Automatic
		LEI LEI	SMO		5	(iii	ater	1 e			
Ŕ	Ē	tioi	E E	Z	low l	ery(	dw	Sy			
	<u>,</u>	leva	l sin	l de	Ĩ	0	ļ	Ino	Stratum and		1
ľ	1	띺	<u> </u>	S I		L Ř	5	<u>ö</u>	Field Descriptions:	Field Notes, Commer	nts:
	┝			SS-1		13		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown,		
1	╵┝	- 545			5			<u> </u>			
	ᅡ				4			<u> </u>			
2	' <b> </b> -	- 544	·								
1	ŀ	·			1			·			
3		- 543		+		·[		-		Cabble at 2 5 fast	
	ſ		1	+	<u> </u>	<u> </u>	1			Coopie at 5.5 feet	
ľ	Γ	- 342				1					
,	E	541								Í	
	L			SS-2	6	12		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown,		
6		- 540		1	2				moist		
	4		-		2	ļ					
2	⊢	539		1	1	ļ					1
	+			+							
8		538				<b> </b>	 				l l
	F	<u>.</u>		+							
9		537	<u> </u>	i		<u> </u>					l l
	F										
10		536		SS-3	WOH	14		SM	Silty Sand (SM): Mostly sand, some silt, few gravel trace clay, trace		
	1				2				organics, brown, moist		
"	Γ	333			1		-				
12	Ľ	534			6						
										Unidentified object at 1	2.5 feet
13	F	533								-	
14	1	532									
				I							
15	$\vdash$	531		55.4	-	0		SM 1	No Bosovoru (Drokakla Calila)		
	-				2				TO INCOMPLY (LIUVAUE COUVE)	Suty Sand from Cutting	gs)
16	F	530	···		0		-				
1,2	ŗ				1						1
l ″	Γ	440									
18		578								Approximate Strata Cha	nge
	F.										
19	L	527						]			
	╞-										
20	 	526	1101	17.4							
IVILE'	THODS: HSA- Hollow Stem Auger, RWH- Ro MPLE TYPES: AS-Auger WS-Wash SS-Split							- Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFOR	MATION
STA	WPLE 1 YPES: AS-Auger, WS-Wash, SS-Split NDARD 1 Samples classified in accordance w							Split Spo	bon, KC-Kock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA (	0 to 20
NOT	<b>(ES:</b> 2. Test Boring Log Page 1: 0 - 20 fee								no un D-2400 UNIESS OTHERWISE NOTED.	Method:	
			3. Re	fer to the	"Inten	oretat	20 ion of	Subsurfs	ice Logs" for additional symbology and abbreviation definitions	Turnel 110 A	ample Core
ADD	ITI	ITIONAL 1. Augers stuck at 16 feet. Had							ove rig 5 feet and restart	I ype HSA	20
NOT	ES:									Weight 1	40.16
		8:							ŀ	Fall	30"
					-					1	1. A. S. B.

Ţ	THE 547 River Street				Rive	r Stre	et	PROJECT: Silo Ridge Country Club				
<u> </u>	<u> </u>	NAZ	ev	1	Tro	y, Ne	w Yoi	rk 1218( 2.0055	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRB	-16
2	CON	APAN	VIE:	<u>S</u>	Faz	n: (51 k: (51	8) 27	3-8391	PROJECT NO.: 30631.00	Total Donth.		A
		2			T	Ţ	Ť.			Total Deptil:	20.8	<u> </u>
		E	OWS		~	(ii)	ater	4 E				
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epti	,	Slev	asin	dun	Ē			Ino	Stratum and			
<u>⊢</u> ≏	<u> </u>		ς Γ	Ň SC-4	50/2		10		Pield Descriptions:	Field Notes, Comm	ents:	
	<u> </u>				13013		+		gray, wet (Highly Weathered Rock)			
21	، –	25			+				Terminated due to Split Spoon Refusal at 20.8 feet			
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23	۰ ا	23				1	1					
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24	ء 🗕	22			1							
4e <sup>3</sup>			-+		1	-	+					
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42	- 504	1						[				
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43	- 503											
<u> </u> †	602	- <u> </u>				†						Į
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45	501											
ADDI.	TION	ALN	ΟT	ES:								

	THE 547 River Street					River	r Stree	et	PROJECT: Silo Ridge Country Club	1				7
	(	Jh	aze	n	Tro	y, Nei	w Yorl	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Bo	oring No.:	SR	B-17	,
	C	OM	PANI	ES	Phi	n: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management					
F	_	0			Fa:	x: (51	8) 273	-8391	PROJECT NO.: 30631.00	Tot	tal Depth	: 20	ft.	
		Con	tracto	r: SJB X	Services	s Inc.			Start Date: November 27, 2006 Northing: See Figure 2	Bore	hole Dia.	: 9	in.	]
		ມ	riii Ri D'ii	g: CME	-330X .	ATV			Finish Date: November 27, 2006 Easting: See Figure 2	Wat	er Depth	: NA	ft.	
		Ind	Drine	r: Jonn v: Poto 9	Leonha	rdt			El. Datum: NGVD 29 Longitude:	Ro	ck Depth	: NA	ft.	
$\vdash$	-	143	I	r: reter	I	nu T			G.S. Elevation: 626 Latitude:	Sample I	Hammer	: Auto	omatic	_
		(Ft)				1	er	log						
Ĩ	e l	lon	B B B	Ž	SW6	Q(i)	wal	L L						
ł	Ĭ	vat	b E	, 11	Ā	0VE	pun	da	Stratum and					
Į	ġ	E	ရှိ	an an	L L	l Se	8	l g	Field Descriptions:	Field Not	tes Com	monte		ł
f				SS	1 1	6		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown	1 Iciu I Ioi		incerta.		┫
	ſ				3	1		1	moist					I
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Ι.	Γ	- 434			2			· · · · · ·						ļ
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],		er 627												ļ
	L													I
4	L	- 622								Approxim	nate Strate	Change		ļ
	L			SS-	2 4	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray/brown	4		v		I
5	L	- 621			5	<u> </u>	ĺ		moist					ļ
	F				10					Cobble at	5 feet			ſ
6		- 620			5	<u> </u>	ļ							l
	┢													l
7	┝	- 619				ļ				1				l
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8	⊢	- 618					i 							ł
	┢					<b> </b>	l- í							
9	┝	- 617												l
I	╞		·	- 58-3	3	21		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray/brown,	Moisture C	Content =	14.6%		
10	$\vdash$	- 616			4				moist					
l	┢				5									
п	┢	- 615		· ··			-							
	$\mathbf{F}$				<u> </u>	<u> </u>								
12	+	• 614			+									
	F		·	1										
13		- 6/3			-					1				i
·	F		1	1	<u> </u>									
14		613		SS-4	5	22		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray/brown					
16	Γ				7			[i	noist					
1.5					14									
16	Ĺ	610			21									
										1				
17	L	609	Ĺ		]									
	L.													
18	L	608		ļ										
	L.													
19	-	607												
	<b>.</b>			SS-5	4	4		ML (	0-2) Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay,					
20	<u> </u>	606			50/3"		Ĺ	g	ray/brown, moist	Approximat	te Strata (	Change		
ME:	THODS: HSA- Hollow Stem Auger, RWH- Ro						, RWI	I- Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILL	ING INF	ORMATI	<u>ON</u>	
SAN	1PL	ETY	PES:	AS-Au	ger, Wa	S-Was	h, SS-	Split Sp	oon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method:	HSA	0 to	20	
STA	NDARD 1. Samples classified in accordance v							ice with	ASTM D-2488 unless otherwise noted.	Method:				
nOl	ES	:	2. Te	st Borin	g Log P	age 1	:0-20	) teet. Ea	ach subsequent page: Additional 25 feet.		Casing	Sample	Core	
4.00	100	3. Refer to the "Interpretation of Sub							ace Logs" for additional symbology and abbreviation definitions.	Туре	HSA	SS		
adi) Not	u II vee	TIONAL FS:							- 	(nt Diam.	4.25 "	2"		
ivui	Еð	3S:								Weight		140 lb		
·								-		Fall		30"		

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	THE 547 River Street						River	r Stre	et	PROJECT: Silo Ridge Country Club	
	(	K	Iaz	ev	ı	Troy	, Net	w Yoi	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-17
	C	ON	APA	<b>TIE</b>	S	Phn	: (51	8) 27.	3-0055	CLIENT: Higher Ground Country Club Management	
-	-					rax	.: (51 T	8) 27.	3-8391	PROJECT NO.: 30631.00	Total Depth: 20 ft.
		Ę	(1-1)	SWI			3	fer	loda		
ā				Big	Š	ows		dwa	Syn		
Ę		_	leva	sing	Ē	TB	No.	l Ino	dīno	Stratum and	4.4 U
å_	4	<u> </u>	ц Ц	Ű	Sa Sa	<u>s</u>	l z	<u>ت</u>	<u>5</u>	Field Descriptions:	Field Notes, Comments:
	ŀ							_	GP	(2-4): Poorly Graded Gravel (GP): Mostly gravel, few sand, trace silt,	
21	ŀ	- 6	os					.   ·		brown, dry (Moderately Weathered Rock)	
	$\mathbf{h}$	•							+	Auger Refusal at 20 feet on probable Bedrock.	
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25	┢	- 60	<i>u</i>   _								
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39	┢	587		+							
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	THE 547 River Street					r Stree	t	PROJECT: Silo Ridge Country Club			
	Ch	aze	n	Tro	y, Ne	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.	· SRB	-18
	COM	PAN	FS	Ph	n: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management		~1C	
				Fa	x: (51	8) 273	-8391	PROJECT NO.: 30631.00	Total Depti	: 25.8	ft.
	Con	itracti	or: SJB 3	Service	s Inc.			Start Date: December 4, 2006 Northing: See Figure 2	Borehole Dia	.: 9	in.
ł	D	rill R	ig: CME	-550X	ATV			Finish Date: December 4, 2006 Easting: See Figure 2	Water Depth	: 10	ft.
		Drill	er: John	Leonha	urdt			El. Datum: NGVD 29 Longitude:	Rock Depth	NA NA	ft.
	In	specto	r: Pete	Steenla	nd	- T	· · · ·	G.S. Elevation: 600 Latitude:	Sample Hammer	: Autor	natic
	(E4)				2	L L	Poq				
$F_{\ell}$	E.		Ż	SWG	a) C	wat					
E E	tev itev		ple	ă	I ave		đ	Stratum and			
e l	E -	į	mag	T	l se	1 B	Ê.	Field Descriptions:	Field Notes, Com	menfs:	
			SS	1 4	3		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace	6" Gravel Path		
1.				5	1	-	-	clay, brown, dry			
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4	590	s				- · ·	ļ				
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5	595	s		_	<u> </u>	· ·					
				2 4	4		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			
6	594	ı		9	-		[	ciay, orowingray, dry			
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7	593	·		23							
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8	592	'			-						
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9	591	·									
	h	1			-	▼ :					
10	- 590		SS-	3 6	15		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			ŀ
Ι				22				clay, brown/gray, dry (Highly Weathered Rock)			
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				50/3"	1						
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13	587										
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14	586	-	-	ļ	<u> </u>						
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15	585		00		12			Rilly Cand with Gravel (CM). Marthe and an and the the			
			00-4	20	12		51V1	ony oand with Gravel (SM): Mosily sand, some silt, little gravel, trace			
16	- 584			28	· ··			any, are multipling, any milling meaniful Rocky			
	h	+	+	29		<u> </u>					
17	583		+		<u> </u>		·[				
	<b></b>	1	+								
18	582		·[ ·····								
				1			·				
19		<u> </u>		1							
20	\$80										
MET	HODS	: HŞ	A- Hollo	w Stem	Auge	r, RW	H- Rota	ry Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING IN	FORMATI	ON
SAM	PLE T	YPE	: AS-A	uger, W	/S-Wa	ash, SS	-Split Sp	poon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA	0 to	25
STAI	NDAR	D 1.8	amples o	lassifie	ed in a	iccorda	nce with	ASTM D-2488 unless otherwise noted.	Method:		
NOT	ES:	2.7	est Bori	ng Log	Page	1:0-2	0 feet. E	ach subsequent page: Additional 25 feet.	Casing	Sample	Core
	H	3. F	efer to the	ie "Inte	rpreta	tion of	Subsur	face Logs" for additional symbology and abbreviation definitions.	Type HSA	SS	
ADD	ITION	AL						<u>1</u>	Int Diam. 4.25 "	2"	
TOR	ES:								Weight	140 lb	
L									Fall	30"	

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1	THE 547 River Street						Stree	et	PROJECT: Silo Ridge Country Club			
	C	ind	UZEI	n	Troy	, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRB-	-18
	CC	OMF	ANIE	S	Phn	: (51) • (51)	8) 273 8) 273	-0055 1 8301	CLIENT: Higher Ground Country Club Management			
	Т	-			1.47	. (51)	5) 213	-0391	PROJECT NO.: 30031.00	Total Depth:	25.8	it.
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(Ft)		tion	B	Ň	Mo	- No	L and	Syr		Í.		
臣		eva	sing	du	L A	8	ano	dino	Stratum and			
<u> </u>		ם	<u></u>	Sar	) Š	Å.	Ō	Ğ	Field Descriptions:	Field Notes, Commen	nts:	
	F		<u> </u>	SS-5	5 8	8		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			
21	<u> </u>	579			44		<u>.</u>		clay, brown/gray, dry (Highly Weathered Rock)			i
	┢	·			50/2	,						
22	╞	578										
	F		+		†	-	1					
23	F	577			+		<u> </u>					
	F		1		1	1	1					
2	Γ	. 370						-				
25	Ĺ	\$75										
ľ	╞	-	ļ	SS-6	38	4		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			
26	⊢	574		1	50/3"	<u> </u>			clay, brown/gray, dry (Highly Weathered Rock)			
1	╞╶					<b> </b>	<u> </u>		reminated due to Split Spoon Refusal at 25.8 feet.			
27	┝	573								1		
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28		572						<u> </u>				
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ADDI	TI	ONA	L NO	TES:								

	THE 547 River Street						Stree	t	PROJECT: Silo Ridge Country Club		
	Ēh	07	'n	Т	roy, l	New	Yorl	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No · SDD 1	O
		DAN		I	hn: (	(518	3) 273	-0055	CLIENT: Higher Ground Country Club Management	Test boring ros. SND-1	2
	LON	IPAN	IE2	J	Fax: (	, (518	() 273	-8391	PROJECT NO.: 30631.00	Total Denth • 27 f	
	Cor	atract	or: SJB	Servi	ces In	10.			Start Date: December 4 2006 Northing: See Figure 2	Roroholo Dia : 0 i	
	Ľ	)rill R	ig: CM	E-550	х ат	٢v			Finish Date: December 4, 2006 Easting: See Figure 2	Water Donth, NA 6	<b>I</b> .
		Drill	er: Joh	1 Leon	harđt	t			El Datum: NGVD 29 Longitude:	Posk Depth: NA h	
	In	spect	or: Pete	Steen	land				G.S. Elevation: 622 Latitude:	Sample Hammer: Automati	 o
		<u> </u>						7		Toampie Hammer, Automati	
	9	Ĕ   j				ju)	ter	<u>-</u>			
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a a		5   8			5	Rec	5	8	Field Descriptions:	Field Notes, Comments:	
			Š	5-1	i	14		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist		
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5	F %	7	SS	-2	1	18		SM	Silty Sand (SM): Mostly sand, some silt trace clay, brown moist		
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	╞									American Strate Change	ļ
10	6/3	'	SS	3 4		24		MI.	Gravelly Silt with Sand (ML). Mostly silt some gravet little sand trace	Approximate Strata Change	
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	•	_		2							
12	610	' <b>i</b>									
13	609										
			1		+	-+	-+				
14	- 608	ļ		+	+						
	-										
15	- 607		SS	4 10	) 2	0		ML	Gravelly Silt with Sand (ML): Mostly silt, some gravel little sand trace		
				22	:   -			,	slay, gray, dry	1	
16	606		-	29		1		[			ļ
			-	50/2	2"		- f				
17	- 605			1			-	{			
		1	-	1							
18	- 604			1		1					
	•	-		-	· • · ·						
19	- 603			-†	1	-					
20	602										I
MET	HODS: HSA- Hollow Stem Auger, RWH- Rc								v Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DDILLING INFORMATION	-
SAM	PLET	YPES	: AS-A	uger.	WS-V	Vasl	n. 88-	Split Sp	non, RC-Rock Core, CS-Grab, ST-Shelly Tube, DS Diston	Mathada USA A A A	1
STAN	DAR	D 1. S	amples	classif	ied in	acc	ordan	nce with	ASTM D-2488 unless otherwise noted	Method	
NOT	ES:	2.1	est Bori	nglo	g Pao	re 1.	0 - 20	) feet Fe	ach subsequent nage: Additional 25 feat	Method:	
		3. R	efer to f	he "In	∍ - <del>•</del> 6 ternr∉	etati	onof	Subsurf	ace Logs" for additional symbology and approximation definitions	Trad USA 00	re
וחתא	TION	AL.			- mpro		011 01	Juoguile	and appreviation definitions.	1 ype HSA SS	
NOT	CS:									Int Diam. 4.25" 2"	
										Fall Fall	
										ran 30"	

T	THE 547 River Street					River	Stre	et	PROJECT: Silo Ridge Country Club	T
	ĊĬ	ba	zer	r	Troy	, Nev	v Yor	k 1218	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-19
17	0	MP/	ANIF	S	Phn	: (51)	8) 273	3-0055	CLIENT: Higher Ground Country Club Management	
	1		* (IE	<u></u>	Fax	: (51)	8) 273	3-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.
		(Ft)	S.M.			R	ter	1 Page		
(Ft)		ion	욻	N N	SWO		dwa	Syn		
뒻		eval	sing	1 de	B	0 Ne	Į	1 g	Stratum and	
Del		E	C	Sar	A.	Re M	5	5	Field Descriptions:	Field Notes, Comments:
	L _			SS-5	11	24		ML	Gravelly Silt with Sand (ML): Mostly silt, some gravel, little sand, trace	
21	L	601		ļ	23				clay, gray, dry	
	╞				2.5	ļ	ļ			
22	F	600			31	<u> </u>				
				-						
23		599		· ·						
						-	+	+		
24		598				Í.				
25		597								
	L _			SS-6	14	24		ML	Gravelly Silt with Sand (ML): Mostly silt, some gravel, little sand, trace	
26	L :	596		ļ	29	ļ	ļ	<b> </b>	ciay, gray, dry	
	-	-			32	ļ				
27	. ــــا	595			44				Test Doring Terminated at 27 feat	
		-t							Test boing remnated at 27 reet.	
- 28		594								
20								<u> </u>		
~										
30	s	192								
31	_ s	91 -								
						• •				
32	5	90								
,,										
<i>"</i> [		ay								
34	54	88								
-	•									1
35	- 58	87 -								
ŀ	•									
36	58	86								
_, †	· ·	<u> </u>		-						
″[		~ [								
38	58	14								
ŀ										
39	- 58	13  -			· · · ·	-+				
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40 -	58	2								Í
		-+-				-+		{		
" [	- 58	<u>'</u>  -								
42 L	<b>-</b> 58	۰L								
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43	- 579	,⊢								
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44	- 578	•  -								
45	573	,	-+							
ADDI'	rioi	NAL	. NO'	res:	<u></u>		I			

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	THE 547 River Street						et	PROJECT: Silo Ridge Country Club			
	Ch	0701	n	Troy	y, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No	SI	R-20
		DANIE		Phr	n: (51	8) 273	8-0055	CLIENT: Higher Ground Country Club Management			
			<u></u>	Fax	:: <b>(5</b> 1	8) 273	8-8391	PROJECT NO.: 30631.00	Total Dept	h:	27 ft.
	Con	tractor	r: SJB Se	ervices	Inc.			Start Date: December 5, 2006 Northing: See Figure 2	Borehole Di	a.:	9 in.
	D	rill Rig	: CME-	550X /	ATV			Finish Date: December 5, 2006 Easting: See Figure 2	Water Depf	h: 1	8.5 ft.
		Driller	: John L	eonha	rdt			El. Datum: NGVD 29 Longitude:	Rock Dept	h: Ì	VA ft.
	In	spector	·: Pete Si	teenlar	ıd	_		G.S. Elevation: 560 Latitude:	Sample Hamme	er: Z	Automatic
1	E E	\$				ы Б	E I				
E)		Blo	Ŝ	SMO	N.	wat	mý				
8	vati	<b>a</b>	E	Ble	1 N		l é	Stratum and			
Gep	Ele	Casi	am	L.L.	ĕ	Ĩ	j Ž	Field Descriptions:	Field Notes, Cor	nments:	1
			SS-1	1	12		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, trace organics, brown,	1		
Ι,	Γ.,			I				moist			
ľ				2							
2	550			3			-				
	_										
3	557					ļ					
				<u> </u>							
4	550	·	· · · · ·								
	<b></b>				-						
5	- 555		55.2	4	6	<u>-</u>	SM	Silty Sand with Gravel (SM). Mostly sand some silt little gravel trace			
			00-2	2				clay, brown, moist			
6	554			3	1	<u> </u>					
	-		1	2	· ·						
7	- 553				1	[					
				1	1						
, °											
9	- 551										
	L		ļ <b>.</b>								
10	\$\$0					<b> </b>					
	┣ ──		SS-3	4	8		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, dry			
n.	549			4							
	<b></b>										
12	548							· · · · · · · · · · · · · · · · · · ·			
											:
13	547										
<i>'*</i>											
15									l		
	L	ļ	SS-4	2	15		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace	I.		
16	\$44	<u> </u>		5				clay, brown, moist			
				6							
17	543			4							
18	542				· · ·	T					
	_	-				<u> </u>					
19	- 541					• • • • •					1
20	540	<u> </u>									
MET	HODS	: HSA	- Hollow	Stem.	Auge	r, RW	H-Rota	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING IN	FORM	ATION
SAM	PLE T	YPES:	AS-Aug	er, W	S-Wa	sh, SS	-Split Sp	oon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA	0 t	o 25
STAP	DARI	) 1. Sa	mples cla	ssified	l in ac	corda	nce with	ASTM D-2488 unless otherwise noted.	Method:	<u> </u>	
NOT	ES:	2. Te	st Boring	g Log F	Page I	l:0-2	0 feet. E	ach subsequent page: Additional 25 feet.	Casing	Samj	ple Core
4.77.77		3. Re	ter to the	e "Inter	preta	tion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type HSA	SS	
ADD)	LTION. FR-	AL						ļ	Int Diam. 4.25	2"	
[IVI]	LJ:							F	Weight	140	lb
			<u> </u>						Fail	30'	

Ī	HE 547 River Street						er S	Stree	t	PROJECT: Silo Ridge Country Club			
	<u>_</u>	<u>ha</u>	izer	n	Tro	iy, N	ew	Yorl	k 1218(	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRB	-20
1	20	MP	ANIE	<u>.</u> S	Fa	n: (3 x: (5	518)	273	-0055 -8391	PROJECT NO.: 30631 00	Total Donth		<u>A</u>
Depth (Ft)		Elevation $(Ft)$	Casing Blows	Sample No.	SPT Blows		Kecovery(in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comm	27	<u></u>
				SS-	5 2	1	0		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			
21	L	539	ļ		3					clay, brown, moist			
	╞ -		<u> </u>		6								
22	$\vdash$	538		+									
.,					1	- [							
13		337											
24	_	536	• ·	<u> </u>							· ·		
						+	+						
25	_	535		SS-6	5	1	1		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			
26		534		ļ	8					clay, brown, moist			
					18								
27		533			15					Test Boring Terminated at 27 feet.			
28	_	532								_			
	• _			ļ		_							
29	-	531				+	+						
30		530											
	•				· ·	<u> </u>							
31		529											
"						+	╡						I
"		20											
33		527 <b>-</b>				+							
	•						+-						
"		20											
35	د ب	125											
	-												
30	_ s							·					
37	- 5	23		· •									
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38	- 5												
39	- 5	21							]				1
┢							-	+	[				
40 L	- 5.	20											
" [	- 5,	19					1						
┝							-	_					
42 F	- 51	18  -					+-	-					
43 L	- 51	,											
┝													
44	- 51	6					+	+					
15	SI	5					Ė						
DDI	01)	NAI	LNO	TES:									
			1										

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	THE		547	Rive	r Stre	et	PROJECT: Silo Ridge Country Club		
	Ch	aze	n	Tro	y, Ne	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-21
	COM	PANI	ES	Ph	n: (51	8) 273	3-0055	CLIENT: Higher Ground Country Club Management	
		••••		Fa	x: (51	8) 273	3-8391	PROJECT NO.: 30631.00	Total Depth: 16 ft.
	Con	tracto	r: SJB (	Service	s Inc.			Start Date: December 5, 2006 Northing: See Figure 2	Borehole Dia.: 9 in.
	n	THI KI	g: CME	-330X				Finish Date: December 5, 2006 Easting: See Figure 2	Water Depth: NA ft.
	In	Drine snecto	r: Jonn r: Petel	Leonna Steenla	arat nd			G S Elevation: 660 Longitude:	Rock Depth: NA ft.
-				T			т <u> </u>	Gist Extrainin. 000 Lannine;	Sample Hammer: Automatic
		e ve		\$	(in)	ater	qu		
4 1	atio	B	le D	Blov	Ver 1	- Maria	b S		
epti	l Slev	asir	ang la	ΙĒ	l og	rou	rou	Stratum and	
	+ -		<u> </u>		17		SM	Silly Sand (SM): Mostly sand some silt trace group tone also because	Field Notes, Comments:
				3	+		1	moist	
1	659	>		3		+			
				3		1	+		
1	- <sup>658</sup>	,	-						
<b>.</b>		,							
4	656	;	-						Approximate Strata Change
		655							
5	655	655 SS-2 2 18							
		653 SS-2 2 18 654 2						Sandy Silt (ML): Mostly silt, some sand, trace gravel, trace clay, brown,	
б	654	654 2 3						moist	
7	653			- <u> </u>					
	F					+			
8	652			-	1	†			
Ĺ									
10	650	ļ	-	1					
			SS-3	3 2	16	<u> </u>	ML	(0-8): Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, moist	Approximate Strata Change
п	- 649			3	_	· -	SP	(8-16): Poorly Graded Sand (SP): Mostly f. to m. sand, few silt, brown,	
İ.	h			3				110181	
12	- 648	·							
	┣ ──				+				
13	- 647			-		<u> </u>			
		<u> </u>							Approximate Strata Change
~									
15	- 645			L					
1			SS-4	50/4"	3		GM	Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, gray, dry	
16	- 644			<u> </u>	<u> </u>		Į	(Highly Weathered Rock)	
	<b>.</b>	-						Auger Refusal on Probable Bedrock at 16 feet.	
17	643		+		ł				
		- <u> </u>	+						
18	- 642								
19	641								
20	640								
MET	THODS: HSA- Hollow Stem Auger, RWH- Ro							ry Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION
SAM	IPLE TYPES: AS-Auger, WS-Wash, SS-Split							oon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA 0 to 16
STAN	NDARI	▶ 1. Sa	amples c	lassifie	d in a	ccorda	nce with	ASTM D-2488 unless otherwise noted.	Method:
UVUT)	L9:	2. Te	est Borin	Ig Log	rage	1:0-2	U teet. E	ach subsequent page: Additional 25 feet.	Casing Sample Core
ADD	TION	5. K		ie mte	preta	uon of	Suosurt	ace Logs for additional symbology and abbreviation definitions.	Type HSA SS
NOT	ES:							}	Int Diam. 4.25 " 2"
		5:							Fall 30"
		-		_					

	THE 547 River Street					Stree	t	PROJECT: Silo Ridge Country Club			
	Chi	aze:	n	Troy	y, Nev	y Yorl	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	SRB-2	22
i	COM	PANI	ES	Phr	n: <b>(</b> 51	8) 273	-0055	CLIENT: Higher Ground Country Club Management			
				Fax	:: (51)	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth	: 11.5 <sup>d</sup>	ft.
	Com	tracto	r: SJB S	ervices	Inc.			Start Date: December 6, 2006 Northing: See Figure 2	Borehole Dia.	: 9 i	in.
	Ð	rill Ri D.::D.	g: CME	550X .				Finish Date: December 6, 2006 Easting: See Figure 2	Water Depth	: NA i	ft.
ľ	Ĭne	Drille	r: Jonn J r: Pete S	.conna teenlar	rat			C.S. Elevistion: NGVD 29 Longitude:	Rock Depth	: 6.5 f	ft.
-	1113	T	1			T		G.S. Elevation: 570 Latitude:	Sample Hammer	- Automat	1C
	Ft	ŝ		~	(u)	tter	Å Å				
$(F_t)$	tion	Ē	Š	low	) Xa	dw:	Syl				
E.	leva	Sing	Í du	E E	0	L no	dno	Stratum and			
å	je je	<u> </u>	Sai	ŝ	L &	ট	উ	Field Descriptions:	Field Notes, Com	ments:	
			SS-	1 2	12	ļ	SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, dry			
1	569			5		<u> </u>					
				5							
2	<u> </u>					+					
	<u>}</u>										
3	567			1	-						
	566								Approximate Strata	a Change	
	566										
5	565 88-2 14 6 0										
	L	565 SS-2 14 6						Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace			
6	564	- 50/3"						clay, gray, dry (Highly Weathered Rock)			
	<b>-</b>	RC-1 3 57							Í.		
7	563	- 563 RC-1 3 57						(6.5-11.5) Metagraywacke: hard, slightly weathered, fine grained,	REC: 95%		
		<u> </u>		2	ļ –		N /I	nonzonial ocuoling, dark gray, joints are integular with nittle staining	RQD: 40%		
8	562	<u> </u>					$  \setminus /  $		RQD - 5 pieces ove	r 4 inches	1
	┝╸───			3					totaling 24 inches		
9	561			min			X				1
		†		3			$ \Lambda $				
10	- 360			min							Í
,,	150			3			/ \				
				min							1
12	\$58	L		 				Test Boring Terminated at 11.5 feet in Bedrock.			
13	357		-{								
14	556										
15	\$\$\$\$		1								
14											
Ĩ											
17	553		ļ								
											1
18	- 552		ļ								
	••										
19	551		·								
20	550							, 			
MET	HODS	HSA	L Hollow	/ Stem	Anger	1 r. RW	H- Roter	ry Wash SSA, Solid Stem Auger CPT Cone Donationation		ODMAATON	
SAM	PLE T	YPES	: AS-Au	ger, W	S-Wa	sh. SS	-Split St	2000, RC-Rock Core, GS-Grab. ST-Shelby Tube PS-Picton	Method LIGA	DI to 6.6	
STAN	IDARD	1. S	amples cl	assifie	d in a	ccorda	nce with	ASTM D-2488 unless otherwise noted.	Method: RC	65 to 11	1.5
NOT	ES:	2. T	est Borin	g Log I	Page 1	1:0-2	0 feet. E	ach subsequent page: Additional 25 feet.	Casing	Sample Co	ore
		3. R	efer to th	e "Inter	preta	tion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type HSA	SS N	IQ
ADD	TION	AL _						I	nt Diam. 4.25 "	2" 2	2
NOT	ES:								Weight	140 lb	
									Fall	30"	224

Characterization     Construction     <	Т	HF			547	Rive	r Strac	əf	PROJECT: Sile Ridge Country Club	<u> </u>		
COMPART     Philes (310) 373-055       COMPART     Philes (310) 373-055       COMPART     Philes (310) 373-055       Contrastner 810 Services The Drill Big (300-506)     Sam Their Docenber 3, 2006     Northing: See Pigner 2       Devices The Location 3, 2006     Sam Their Docenber 3, 2006     Northing: See Pigner 2       Differs (100-500-00)/r0     File Differs (100-500-00)/r0     File Differs (100-500-00)/r0       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Northing: See Pigner 2       Differs (100-500-00)/r0     File Differs (100-500-00)/r0     File Differs (100-500-00)/r0       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Lasting: See Pigner 2       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Lasting: See Pigner 2       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Lasting: See Pigner 2       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Lasting: See Pigner 2       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Differs (100-500-00)/r0       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Differs (100-500-00)/r0       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Differs (100-500-00)/r0       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Differs (100-500-00)/r0       Differs (100-500-00)/r0     Sam Their Docenber 3, 2006     Differs (100-500-00)/r0   <		"In	NYDA	<b>a</b>	Tro	v. Net	w Yor	k 12180	LOCATION: Town of America Dutchers County New York	Test Baring Ma		D:43
Construction     PROJECT More 10631.00     The During Construction of 2000     Participation       Construction     Provide During Construction of 2000     Participation of 2000			<u>izer</u>	<u>v</u>	Phr	n: (51	8) 273	3-0055	CLIENT: Higher Ground Country Club Management	Test Boring No.	SK	<b>B-</b> 23
Outlaster: SUB Sarvises fin:       Start Date:       Start Date:       Deriter: SUB Sarvises fin:       Sarvises fin:       Deriter Sarvises fin:       Deriter Sarvises fin:       Note: Sarvises fin:       Sarvises fin:       Note: Sarvises fin:       Sarvises fin:       Note: Sarvises fin:       Sarvises fin:       Note: Sarvises fin:       Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       Note: Sarvises fin:       <		_QMF	ANIE	<u>S_</u>	Fay	k: (51	8) 273	8-8391	PROJECT NO.: 30631.00	Total Denth	14	A
DPUIR Big: CARE-SSX ATV     Fielde Date     Tasting: So Elympic 2     Tasting: So Elympic 2     Number 10, 10, 10, 10, 10, 10, 10, 10, 10, 10,		Cont	ractor	SJB S	ervices	s Inc.			Start Date: December 6, 2006 Northing: See Figure 2	Borehole Die	· 10	in.
Drifter:         John Longhult         II. Datum:         NGVD 20 Signification         Longitude:         No. Rock Depuis:         No. R. A. Rock Depuis:         No. R. Automatic           Egg gr gr gr gr gr gr gr gr gr gr gr gr g		Dr	ill Rig:	: CME-	550X .	ΑΤν			Finish Date: December 6, 2006 Fasting: See Figure 2	Water Denth	• NA	ш. А
Lingtetor:         Pees Stemland         G.S. Rievation         css         Latitude:         Sample Hammer:         Automatic           0		J	Driller:	: John I	eonha	rdt			El. Datum: NGVD 29 Longitude:	Rock Depth	• 16	п. А
Structure       Structure       Structure       Structure       Field Neter, Comments:         1       11       1       1       1       1       1       1         1       11       1       1       1       1       1       1       1         1       11       1 <t< td=""><td></td><td>Ins</td><td>pector:</td><td>Pete S</td><td>teenlar</td><td>nd</td><td></td><td></td><td>G.S. Elevation: 558 Latitude:</td><td>Sample Hammer</td><td>: 10 : Auto</td><td>n. omatic</td></t<>		Ins	pector:	Pete S	teenlar	nd			G.S. Elevation: 558 Latitude:	Sample Hammer	: 10 : Auto	n. omatic
Stratum and provided     Stratum and provided     First tum and provided     First tum and provided     First tum and provided     First tum and provided       1     1     1     4     SM       1     1     1     4     SM       1     1     1     4       1     1     1     4       1     1     1     4       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1		2			T	T						
Strip         Strip <th< td=""><td></td><td>E E</td><td>OWS</td><td>6</td><td></td><td>(ii</td><td>ater</td><td>ÌĚ</td><td></td><td></td><td></td><td></td></th<>		E E	OWS	6		(ii	ater	ÌĚ				
Product         Product <t< td=""><td>E,</td><td>tion</td><td>E E</td><td>Z</td><td>low</td><td>) ju</td><td>dw</td><td>Sy</td><td></td><td></td><td></td><td></td></t<>	E,	tion	E E	Z	low	) ju	dw	Sy				
B         C         C         C         C         Field Descriptions:         Field Notes, Contractis:           -	臣	eva	ŝ		Ê	l õ	1 10		Stratum and			
SS-1         4         SM         SNIP Start (SM): Mostly and, some silt, ince ciny, trace organics, brown, noist           1         37         2         4         50         1         4         50           2         10         2         10         10         10         10         10         10           3         10         10         10         10         10         10         10         10         10           3         10 <t< td=""><td>å</td><td>E</td><td>ů</td><td>Sar</td><td>SP</td><td>, Å</td><td>ق</td><td>5</td><td>Field Descriptions:</td><td>Field Notes, Com</td><td>ments:</td><td></td></t<>	å	E	ů	Sar	SP	, Å	ق	5	Field Descriptions:	Field Notes, Com	ments:	
1       507       2	1	L		SS-	1 1	4		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, trace organics, brown	,		
2	1	557			2				moist			
2       58       1       1       1         3       59       1       1       1         3       59       2       12       SM       Slity Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace         4       59       2       12       SM       Slity Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace         4       59       3       4       SM       Slity Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace         4       59       2       6       Glay, brown, moist         7       59       2       6         10       52       1       6         11       59       2       6         12       58       3       4         13       2       6         14       503       3       4         15       2       6         16       3       6       Shy brown, moist         14       503       4       SM         15       503       4       Ager Refual on probable Bedrock at 16 feet.         16       14       503       4       Ager Refual on probable Bedrock at 16 feet.         17       44       <					2	1						
3       30       30       4	2	556			1							
1       10		L										
1         1	3											
a		L			. · .							
3	4	554					ļ	.L				
3       552       2       12       SM       Silly Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist         4       33       3								<b> </b>				
a       SS-2       12       SM       SM Silly Sand with Gravel (SM): Mostly sand, some sill, little gravel, trace         a       3       a       a       a       a         a       3       a       a       a       a         a       3       a       a       a       a       a         a       3       a       a       a       a       a         a       3       a       a       a       a       a         a       33       a       a       a       a       a         a       33       a       a       a       a       a         a       44       SS-3       4       SM       Silly Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace       a         b       44       SS-3       4       SM       a       a         b       44       SS-4       14       8       GM       A         b       503*       a       a       a       a       a         b       503*       a       a       a       a       a         b       44       SS-4       14       8       GM       A <td>5</td> <td> \$\$3</td> <td></td>	5	\$\$3										
a       537       2       a       clay, brown, moist         a       539       a       a       a         a       549       a       a       a         a       549       a       a       a         a       540       2       a       clay, brown, moist         b       540       2       a       clay, brown, moist         a       540       a       a       a         a       390       a       a </td <td></td> <td></td> <td> </td> <td>SS-2</td> <td>2</td> <td>12</td> <td><b></b></td> <td>SM</td> <td>Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace</td> <td></td> <td></td> <td></td>				SS-2	2	12	<b></b>	SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			
2       31       3       4         3       3       4         4       58       4       58         50       2       4         6       58       3       4         10       56       2       4         10       56       2       4         11       56       2       4         12       56       2       4         13       4       SM       Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace         14       56       2       4         15       2       4         16       2       4         17       56       2         18       503°       6         19       503°       6         10       503°       6         11       503°       6         12       503°       6         13       4       8         14       503°       6         15       503°       6         16       40       6         17       41       8       6         18       14       8 </td <td>6</td> <td></td> <td></td> <td></td> <td>2</td> <td><u> </u></td> <td></td> <td></td> <td>clay, brown, moist</td> <td></td> <td></td> <td></td>	6				2	<u> </u>			clay, brown, moist			
7       531       3       1         8       530       1       1         9       540       1       1         10       547       553       3       4         10       547       2       1       1         10       547       2       1       1         11       547       2       1       1         12       548       2       1       1         13       549       2       1       1         14       549       2       1       1         15       4       2       1       1         16       2       1       1       1         18       502*       Clay, gray, moist       1       1         19       509       1       1       1       1         10       58.4       14       8       GM       Slity Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace         10       502*       Clay, gray, moist       Highly Weathered Rock)       1       1         19       -39       1       1       1       1       1         19       -39					3							
a	7	551			3	<u> </u>						
a       .59       .50									·			
a       in	8 :	550			ļ							
10       140       141       SS-3       3       4       SM       Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace       Image: Clay, brown, moist       Clay, brown, moist       Clay, brown, moist       Clay, brown, moist       Image: Clay, brown, moist       Approximate Strata Change         11       344       2       Image: Clay, gray, moist       Clay, gray, moist       Approximate Strata Change         12       346       2       Image: Clay, gray, moist       Auger Refusal on probable Bedrock at 16 feet.       Approximate Strata Change         14       541       50/3°       Clay, gray, moist (Highly Weathered Rock)       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.         19       39       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.         19       39       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.         10       39       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.         13       39       Image: Refusal on probable Bedrock at 16 feet.       Image: Refusal on probable Bedrock at 16 feet.       Image: Refu		-			<u> </u>	ļ						
10       34       34       SS-3       4       SM       Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace         11       347       2	9	549			ļ	ļ	•					
10       544       S83 3       4       SM       Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace         11       547       2												
11       SS-3       3       4       SM       SNty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace         11       317       2       1       clay, brown, moist         12       36       2       1       clay, brown, moist         13       34       34       34       Approximate Strata Change         14       344       344       6M       Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace         14       344       344       6M       Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace         16       543       50/3*       clay, gray, moist (Highly Weathered Rock)       Approximate Strata Change         17       544       4       6M       Auger Refusal on probable Bedrock at 16 feet.       BRILLING INFORMATION         18       349       349       349       349       Method: HSA       0 to 16         19       339       34       349       349       340       16       16         341       349       349       349       340       16       16         342       349       349       349       340       16       16         344       349       349       349       340 <td>10</td> <td> 548</td> <td>  </td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	10	548										
11       317       2				SS-3	3	4		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace			í
17       2	п	- 547			2		_		clay, brown, moist			
11       - 366       2		-			2							
13       565	12	- 546			2							
13       - 545				-						1		
14       364       364       Approximate Strata Change         13       541       SS-4       14       8       GM       Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace       Approximate Strata Change         15       542       S0/3*       Clay, gray, moist (Highly Weathered Rock)       Auger Refusal on probable Bedrock at 16 feet.       Auger Refusal on probable Bedrock at 16 feet.       BRILLING INFORMATION         18       360       Auger, Refusal on probable Bedrock at 16 feet.       BRILLING INFORMATION         19       339       Auger, Refusal on probable Stem Auger, CPT- Cone Penetrometer       BRILLING INFORMATION         AMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, CS-Grab, ST-Shelby Tube, PS-Piston       Method: HSA       0 to 16         TANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       Type       HSA       SS       -         (OTES:       2. Refer to the "Interpretation of Subsurface Logs" for additional 25 feet.       Type       HSA       SS       -         3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS       -         Weight        140 lb       Fall        140 lb       Fall        140 lb	13	54S										
14       364       -	∣∤											
13       - 543       - 544       8       GM       Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace       Approximate Strata Change         16       - 542       - 50/3"       - clay, gray, moist (Highly Weathered Rock)       Auger Refusal on probable Bedrock at 16 feet.	14	_ 544										
15       - 343       - 4	_  -					[						
SS-4       14       8       GM       Sity Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace         16       50/3"       clay, gray, moist (Highly Weathered Rock)         17       541       Auger Refusal on probable Bedrock at 16 feet.         17       541       Auger, Refusal on probable Bedrock at 16 feet.         18       540       Auger, Refusal on probable Bedrock at 16 feet.         19       540       Barbon and and and and and and and and and an	15	543								Approximate Strata	Change	
16       507       Ciay, gray, moist (Highly Weathered Rock)         17       507       Auger Refusal on probable Bedrock at 16 feet.         17       507       Auger Refusal on probable Bedrock at 16 feet.         17       507       Store         18       500       Store         19       539       Store         20       Store       Store         AMETHODS:       HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer       DRILLING INFORMATION         AMPLE TYPES:       AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method:         TANDARD       1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:         VOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Store         3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type         Type       HSA       SS       -         Weight       140 lb       Fail <td>۱</td> <td>•</td> <td></td> <td>SS-4</td> <td>14</td> <td>8</td> <td></td> <td>GM _</td> <td>Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace</td> <td>1</td> <td></td> <td></td>	۱	•		SS-4	14	8		GM _	Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace	1		
17       541       10 <t< td=""><td>16</td><td>_ 542</td><td></td><td></td><td>50/3"</td><td></td><td></td><td></td><td>ciay, gray, moist (Highly Weathered Rock)</td><td>]</td><td></td><td></td></t<>	16	_ 542			50/3"				ciay, gray, moist (Highly Weathered Rock)	]		
17       541       10 <t< td=""><td>┝</td><td>·[</td><td></td><td></td><td></td><td></td><td></td><td>/'</td><td>Auger Refusal on probable Bedrock at 16 feet.</td><td>1</td><td></td><td></td></t<>	┝	·[						/'	Auger Refusal on probable Bedrock at 16 feet.	1		
18       540       19       550       19       550       19         19       539       539       1	<i>"</i>	541	[									
18       540       19       550       19       539       10	F	·	]									
19       - 539       - 539	18	_ 540		ĺ						Į		
19       - 539       - 539	_			]								
20       338       DRILLING INFORMATION         AETHODS: HSA-Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer       DRILLING INFORMATION         GAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method: HSA       0 to 16         GAMPLE TYPES: AS-Auger, US-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method: HSA       0 to 16         TANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       Method:         NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Type       MSA       SS          ADDITIONAL       Int Diam.       4.25 "       2"           Weight        140 lb       Fall        30"	19	539								ļ		
20       333       33	_											
METHODS:       HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer       DRILLING INFORMATION         AMPLE TYPES:       AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method:       HSA       0 to       16         STANDARD 1.       Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       Method:       Casing       Sample       Core         3.       Refer to the "Interpretation of Subsurface Logs" for additional 25 feet.       Type       HSA       SS          ADDITIONAL       Int Diam.       4.25 "       2"          Weight        140 lb       Fall	20	538							·			
AMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method:       HSA       0 to       16         TANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       Method:       Method:       16         NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Casing       Sample       Core         3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          IOTES:       Int Diam.       4.25 "       2"           Weight        140 lb       Fall        30"	METI	IODS:	HSA-	Hollow	Stem 4	Auger	, RWI	H-Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INF	ORMATI	ION
FTANDARD       1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:         NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Xeffer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Method:       Xeffer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Method:       Xeffer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          NDDITIONAL       Int Diam.       4.25 "       2 "        Weight        140 lb       Yeight          Weight        30 "       Xeight        30 "       Xeight	SAMP	LETY	PES: /	AS-Aug	ger, WS	S-Was	sh, SS-	Split Sp	bon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA	0 to	16
Corres:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Casing       Sample       Core         3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          IDDITIONAL       Int Diam.       4.25 "       2"          Weight        140 lb       Fall	STAN.	DARD	1. Sam	ples cla	ssified	l in ac	corda	nce with	ASTM D-2488 unless otherwise noted.	Method:		
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions. Type HSA SS ADDITIONAL INT Diam. 4.25 " 2" Weight 140 lb Fall 30"	NOTE	S:	2. Test	Boring	, Log P	age 1	:0-20	0 feet. Ea	ach subsequent page: Additional 25 feet.	Casing	Sample	Core
Int Diam.         4.25 "         2"            ROTES:         Weight          140 lb            Fall          30"			3. Refe	er to the	"Inter	pretat	ion of	Subsurfa	ace Logs" for additional symbology and abbreviation definitions.	Type HSA	SS	
Weight          140 lb           Fall          30"	ADDI'	FIONA	L							Int Diam. 4.25 "	2"	
Fali 30"	VOTE	S:								Weight	140 lb	
										Fall	30"	64-71 54-71

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٠F	Th	HE			547	Rive	r Stre	et	PROJECT: Silo Ridge Country Club	1			
	(	The	izev	1	Trog	y, Ne	w Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Bo	oring No.	SRE	3-24
	C	OMF	ANIE	S	Phr	ı: (51	8) 273	8-0055	CLIENT: Higher Ground Country Club Management			~	
┝		-			Fa>	:: (51	8) 273	8-8391	PROJECT NO.: 30631.00	То	tal Depth	: 27	ft.
		Cont	ractor:	SJB St	ervices	Inc.			Start Date: December 5, 2006 Northing: See Figure 2	Bore	hole Dia	.: 9	in.
		Dr	ill Rig:	CME-:	550X .	ATV			Finish Date: December 5, 2006 Easting: See Figure 2	Wat	ter Depth	: 14	ft.
		Inc	Driller	: John L	eonha	rdt			El. Datum: NGVD 29 Longitude:	Ro	ck Depth	: NA	ft.
⊢		ins	pector:	Pete Si	teenlar	na T	-		G.S. Elevation: 513 Latitude:	Sample	Hammer	: Auto	omatic
		(Ft)	S M			2	្រុង	Tog		ŀ		•	_
	2	ion	l 🖁	2°	SWG	1ª	Mai	L.					
	ŧ.	vat	ing	iple	Ĩ.	0 Vel	D an	d d	Stratum and			-	
	2	Ĕ	Cas	Sam	LAS	1 22	ß	ß	Field Descriptions:	Field No	tes. Com	ments:	i
Γ		_	1	SS-1	2	14		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, dry	<u></u>			
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1	⊦	•	<u> </u>		3			SIM	dry Sand (SM): Mostly sand, some silt, trace gravel, trace clay, brown,	l			
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	7 F	- 506			··· ·	+	<u> </u>					0	
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Ι,	٦									1			
ľ	Ľ	- ,03		SS-3	3	12		SP	Poorly Graded Sand (SP): Mostly f. sand, few silt, brown, wet				
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1	'  -	- 498		SS-4	3	19		ML	Sandy Silt (ML): Mostly silt some sand trade along brown wet				ł
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19	L	494											
	L												
20		493			لے								
MI	TH	ODS:	HSA-	Hollow	Stem	Auge	r, RW	H- Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILL	ING INI	ORMAT	<u>ION</u>
SA ST	MP)		PES:	AS-Aug	ger, W	S-Wa	ish, SS	-Split Sp	boon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method:	HSA	0 to	25
ST.	ANE (TE)	DARD	L San	npies cla	issifie	t in a	ccorda	nce with	ASTM D-2488 unless otherwise noted.	Method:			
INO	1165	<b>;</b>	2. Tes	L BOLING	LOGI	age l	1:0-2 Mai:	U Ieet. E	acn subsequent page: Additional 25 feet.		Casing	Sample	Core
	DIT.	10314	э. кеі т	er to the	inter	preta	uon of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Туре	HSA	SS	<u> </u>
NO			Ъ						<u>I</u>	nt Diam.	4.25 "	2"	
ľ V	A 476								and the second second second second second second second second second second second second second second second	Weight		140 lb	
							·			rall		30"	

Ĩ	HE			547	Rive	r Stre	et	PROJECT: Silo Ridge Country Club	
	Ċh	aze	n	Tro	y, Ne	w Yoi	k 1218(	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-24
1	COM	PANI	ES	Pht	n: (51	8) 273	3-0055	CLIENT: Higher Ground Country Club Management	
	1	_		Fax T	C (51	8) 27.	3-8391	PROJECT NO.: 30631.00	Total Depth: 27 ft.
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(Ft)	ļ	E E	Ž	lows	1 N	dwa	Syn		
뒾		Sing	'  <mark>'</mark>	I A	N N	Ĩ		Stratum and	
å		<del>ٿ</del> ا	San	ŝ	Re R	5	5	Field Descriptions:	Field Notes, Comments:
	L	_	SS-	5 2	20		ML	Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, wet	
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<i>"</i>					-	1	- ··· · · · · · · · · · · · · · · · · ·		
25	488				1				
			SS-6	5 2	21	<b> </b>	ML	Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, wet	
26	487			2	<b> </b>	<u> </u>			
	<b>-</b>		-	2	<b> </b>				
27	- 486	-	+		-	┢	├	Test Boting Terminated at 27 fact	4
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	TH				547	River	Stree	t	PROJECT: Silo Ridge Country Club	<u> </u>	
	C	'ha	izei	n	Tro	y, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.:	<b>SRB-25</b>
	CC	OMP	ANI	ES	Phr	): (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management		
-		Cont			Fax	(51	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth:	13 ft.
		Dru Dr	ill Di	r: old o n: CME.	SSOY	ATV			Start Date: December 6, 2006 Northing: See Figure 2	Borehole Dia.:	9 in.
		1	Drille	r: John I	eonha	ndt			Finish Date: December 6, 2006 Easting: See Figure 2	Water Depth:	NA ft.
		Ins	pecto	r: Pete S	teenlar	nd			G.S. Elevation: 560 Latitude:	Rock Depth:	13 ft.
	Т	3			Т	1	1.	1 7		Sample Hanniel.	Automatic
		n (F	OWS		ş	E	ater	Ĩ			
E E		atio		Z P	Now	ery	N.	S			
eoth	.	Jev:	asir	Î	E	ecov		Ino	Stratum and		
h	╈	HR .				<u> </u>	1 Ö	<u>Ö</u>	Freid Descriptions:	Field Notes, Comm	ents:
1	ŀ				3	10		511	moist		
1	┢	- 559			3		+				
	F		1	1	3	•	+				
2		558		1	1		1				
	۱Ľ	557									1
		· · · ·									
4		556		<u> </u>			ļ				
	┢		<b> </b>		ļ			<u> </u>		1	
5	-	\$\$\$	<u> </u>	00 7				014	City Construction Construction of the State	]	
	$\mathbf{F}$			00-2	2	8		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace		Í
6	F	\$54		+	2	·					1
	F				2				~		
1		553			†						
8	Ľ	552									
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,	L	551			ļ						
	╞╶			<u> </u>							1
10	$\vdash$	550		00.2			.				
l I				55-3	0	9		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace		
н	F	549			22				ous, storn, noist (meny weathered Rock)	İ	
	<u>-</u>				62						1
12	Γ	548									
13	Ľ	547									
	Ļ.								Auger Refusal at 13 feet on Probable Bedrock.		
14		546									
	<u>-</u> -							]			
15	$\vdash$	545	•								[
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19		541									ľ
20 MD-1	-11-0	ne-	Uex	Hallas	Starr	<u> </u>	1211/1	1 12-4-	West SOA GUILOU A CONTRACT		
SAM	PL	2031 C T V	PES	AS-Aug	er W	-suger	, KWI	a- Rotar Sulit Sou	y wasil, 55A- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFO	RMATION
STAI	ND/	RD	1. Sa	mples cla	ssified	in ac	cordar	ice with	ASTM D-2488 unless otherwise noted	Method: HSA	0 to 13
NOT	ES:		2. Te	st Boring	Log P	age 1	: 0 - 20	) feet. Ea	ach subsequent page: Additional 25 feet	Incinou:	Samula Cara
			3. Re	fer to the	"Inter	pretat	ion of	Subsurfa	ace Logs" for additional symbology and abbreviation definitions.	Type HSA	SS
ADD	TI	ONA	L						[]	nt Diam. 4.25 "	2" _
NOT	ES:									Weight	140 lb
										Fall	30"

-	THE			547	River	Stree	t	PROJECT: Silo Ridge Country Club			
	Chi	azet	n	Troy	, Nev	v Yorl	k 1 <b>218</b> 0	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.	· SRB-	26
i	COM	ANIE	S	Phn	: (518	8) 273	-0055	CLIENT: Higher Ground Country Club Management		· · · · · · · · · · · · · · · · · · ·	
				Fax	(51)	8) 273	-8391	PROJECT NO.; 30631.00	Total Depth	1: 27	ft.
	Con	iractor	SJB Se	TVICES	Inc.			Start Date: December 6, 2006 Northing: See Figure 2	Borehole Dia.	.: 9	in.
1	D	FIII Kiy Deillor	: CME-3	eonhai	4 I V			Finish Date: December 6, 2006 Easting: See Figure 2	Water Depth	14	ft.
	Ins	Dector	Pete St	eenlar	nd		la chai	G.S. Elevation: 534 Latitude:	Rock Depth	n: NA automo	tt. atio
		<u>,                                     </u>	<u> </u>	1	Ţ	T	-		Sample Dannier	: Autoina	
	6	SMO		\$	(iii	ater	Å				
$(F_{t})$	tion	E E	e N	low	- i	wp	Sy				
1 de	leva	lsing	ld m	Ē	100	Ino.	dno.	Stratum and			Ì
ľ	<u> </u>		S .	<u> </u>	1 <u>s</u>	Ő	Ū	Field Descriptions:	Field Notes, Com	ments:	
ł	<b>-</b>	+	SS-1	2	18		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown,			
1	533			4				moist			
				5							
2	532	-									
	-			<u> </u>							
3	- 531		- <u> </u>		1						
						1					
ľ									1		
5	529										
	L		SS-2	4	10	<u> </u>	SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace	Moisture Content =	= 10.4%	
6	528			2				clay, brown, moist			
			· ·	3	<u> </u>						
7	- 527			2							
	<b>-</b>	·   · · ·									
8	526		1		[····						
	h		····			i					
9	- 525						· · · ·				
	F		1								
10	524		SS-3	8	3		SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace			
.,				6				clay, brown, moist			
l"				8							
12	- 522	<u> </u>		5							
	L		ļļ								
13	- 521	<u> </u>									
ĺ		· · · ·									
14	- 520		<u>├</u>			<u> </u>					
					{						
15	- 519		SS-4	7	0		SM	No Recovery (Probable Cobble)	Silty Sand with Gra	vel (SM) hase	no b:
ا <u>د</u> ا	•		[]	3					observed cuttings	(only base	3 011
16	518		<u> </u>	3					<u> </u>		
17	517			3					ļ.		
[ "											
18	516								1		I
			<b> </b>								
19	515										
20											
" Мгт	-HUD6	HeA	- Hollow	Stem	Ance	r 10 10/	H_ Rate	ry Wash SSA Solid Stam Auron CDT Care Device of	DDITY		
SAM	PLET	YPES:	AS-And	er. W	S-Wa	sh. 88	-Split S	2000. RC-Rock Core, GS-Grab ST-Shelby Tube, DS Diston	Method: USA	D to 2	ž
STA	NDARI	) 1. Sa	mples cla	assifie	d in a	ccorda	nce with	ASTM D-2488 unless otherwise noted.	Method:	0 to 2	5
NOT	ES:	2. Te	st Boring	, Log I	Page 1	:0-2	0 feet. E	ach subsequent page: Additional 25 feet.	Casing	Samule (	Соте
		3. Re	efer to the	"Inter	pretat	tion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type HSA	SS T	
ADD	ITION	4L							Int Diam. 4.25 "	2"	
NOT	ES:							· · · ·	Weight	140 lb	
									Fall	30"	

Companie Compan	Troy           Phm           Fax           ON           add           BA           SS-5           3           2           4           7           SS-5           3           2           4           7           SS-6           5           3	, New Yc : (518) 2' : (518) 2' ( <i>i</i> ii) 2' <b>Kecon</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b> <b>G</b>	Dirk 12180 73-0055 73-8391 10 10 10 10 10 10 10 10 10 10 10 10 10	LOCATION: Town of Amenia, Dutchess County, New York CLIENT: Higher Ground Country Club Management PROJECT NO.: 30631.00 Stratum and Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Test Boring No.: SRB-26 Total Depth: 27 ft. Field Notes, Comments:
Combanding (Ft)	Phm Fax Fax SS-5 SS-5 SS-5 SS-5 SS-5 SS-5 SS-5 SS-	(518) 2' (518) 2' (11) (1))	73-0055 73-8391 International Contraction of Contra	CLIENT: Higher Ground Country Club Management PROJECT NO.: 30631.00 Stratum and Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Total Depth: 27 ft.
Casing Blows         Casing Blows		9 <b>Second Parts of Control of Con</b>	MS Croup Symbol	Stratum and Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Total Depth: 27 ft. Field Notes, Comments:
All         Depth (Ft)           015         12           115         12           115         12           115         12           115         12           115         12           115         12           115         12           115         12           115         13           115         14           115         15 </th <th>SP-7 2 SP-7 2 SP-7 3 2 4 7 - - - - - - - - - - - - -</th> <th>6 Recovery(in)</th> <th>Croup Symbol</th> <th>Stratum and Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist</th> <th>Field Notes, Comments:</th>	SP-7 2 SP-7 2 SP-7 3 2 4 7 - - - - - - - - - - - - -	6 Recovery(in)	Croup Symbol	Stratum and Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Field Notes, Comments:
Casing Blo         Casing Blo	N         Smoother           SS-5         3           2         4           7         -           4         7           -         -           SS-6         7           -         -           -	6 Recovery(	M Group Syn	Stratum and Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Field Notes, Comments:
21 - 511 22 - 512 23 - 511 24 - 510	Ydu         IA           SS-5         3           2         4           7         -           -         -           SS-6         7           -         -	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	SM CLOND	Stratum and Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Field Notes, Comments:
and         fill         fill           21         513	Image: bit with second secon		SM SM	Field Descriptions: Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Field Notes, Comments:
21 513 22 512 23 511 24 510	SS-5     3       2     4       7     -       -     -       SS-6     7       5     3	9	SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	
21     513       22     512       23     511       24     510	2 4 7 5 SS-6 7 5 3	13		clay, brown, moist	
22 5/2 23 5/1 24 510	4 7 	13			
22 512 23 511 24 510	SS-6 7 5 3	13			
23 511	SS-6 7 5 3	13			
23 511 24 510	SS-6 7 5 3	13			
24 510	SS-6 7 5 3	13			
24 510	SS-6 7 5 3	13			
	SS-6 7 5 3	13			
25 500	SS-6 7 5 3	13			· ·
	5	1	SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace	
26 508	3			clay, brown, moist	
│					
27 507				Test Boring Terminated at 27 fact	
► <u>+</u>				rest boring remniated at 27 feet.	
28 506					
20 505					
30 504			_		
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31 503					
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32 502					
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37 497			1[		
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39 495			-		
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<b>b</b> łł-			<b> </b> ]		
41 - 493 -			<u> </u> ]		
42 402					
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43 491			ļ		
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45 - 480			<b> </b>		
DDITIONAL NO	ES:		<b>L</b> .		

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Г	THE			547	Rive	r Stre	et	PROJECT: Silo Ridge Country Club	
	Ch	are	ท	Tre	oy, Ne	w Yo	rk 12180	LOCATION: Town of America, Dutchess County, New York	Test Boring No · SDD 37
		DAN		Ph	m: (5)	18) 27:	3-0055	CLIENT: Higher Ground Country Chub Management	Test borning ton: SKD-2/
	COM	PAINI	<u> </u>	Fa	ix: (5)	8) 27:	3-8391	PROJECT NO.: 30631.00	Total Denth: 26.2 ft
	Con	tracto	r: SJB	Service	es Inc.			Start Date: December 6 2006 Northing: See Figure 2	Roraholo Dia e O in
	D	rill Ri	g: CMi	3-550X	ATV			Finish Date: December 6, 2006 Facting: See Figure 2	Water Derthe MA D
		Drille	r: John	Leonh	ardt			Fl Datum: NGVD 20 Lasting: See Figure 2	water Deptn: NA it.
	In	specto	r: Pete	Steenla	and			G.S. Elevation: 572 Longhude:	Rock Depth: NA ft.
			1			1		Jan Sisteration J72 Latitude:	Sample Hammer: Automatic
	E E	ŝ SA			12	fer	l ĝ		
$E_{1}$			ž	SWO		Ma	- Syn		
j j	te a	i e	°   월	Ē	- A		di la	Stratum and	
	1 2	Cas	am	L L	le le	2	l g	Field Descriptions:	Field Notes Comments
			SS	-1 3	16	5	SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown	Tient Hotes, Comments.
				5	1			moist	
1	57	/		5				-	
				5			<u> </u>		
2	570	° (				-	1 ·		
	· [					+	+		
3	565	,							
							·······		
1	568	'				+			
			_						
5	- 567	'	SS	2 3	1		SM	Silty Sand (SM). Mostly sand some silt faw gravel trace alou brown	
		1		4	+		1	moist	
6	566	;		4					
				- 3	+				
7	565					+			1
							· · · ·		
8	564			·   · ·		·			
	┣				+				1
9	— 563						<u> </u>		
	h								
10	562		SS-	3 4	20		MI	Sandy Silt (MI): Mostly silt come and trace alow brown maint	Approximate Strata Change
	<u>├</u> —		00	4				Sandy Sin (ME). Mostly sin, some sand, hace clay, brown, moist	
".	561			7	1		ļ —		
	<u>├</u> —			9					
12	560		1.						
		-				ļ			
- 13	559			+	· · ·				
		1			+	-			
14	558			1					
	r —	1	1		1				j I
15	557	}	SS-4	7	24	-	ML	Sandy Silt (ML): Mostly silt, some sand, few pravel, trace clay, brown	i I
1	<b>-</b>	1	1	20				moist	
16	556		1	23	1				
Ι	<b></b>	1	1	26	1				
<b> </b> ″	555	<b></b>		1	1				
<b>I</b>	Γ	1	1	1	1				
18	- >54			1					
		· · · ·							
19	553								
20	552	····		<u> </u>	·				
мет	HODS	: HSA	- Hollo	w Stem	Auge	r, RW	/H- Rota	ry Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION
SAM	PLET	YPES	AS-A	iger. W	VS-Wa	ash, SS	S-Split St	0000, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA 0 to 25
STA	NDARI	) 1. Sa	amples o	lassifie	ed in a	ccorda	ance with	ASTM D-2488 unless otherwise noted	Method: 115A 0 10 25
NOT	ES:	2. Te	est Borin	ng Log	Page	1:0-2	20 feet. H	ach subsequent page; Additional 25 feet.	Casing Samula Car
		3. R	efer to th	ie "Inte	rpreta	tion of	f Subsurf	ace Logs" for additional symbology and abbreviation definitions	Type HeA ee
ADD	ITION	AL					,	, storegy and deservation definitions.	Int Diam 4.25" 2"
NOT	ES:								Weight 140 lb
									Fall 30"

	T	S27 ONA	L NO	TES:						
, ,	•	528								
" I	•	528								
43		529								
42		530	· · - ·							
47		531								
40	_	532					[			
39		533								
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38		534								
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36		536					-			
	-		ļ							
35	Ŀ	517								
34	L	538								
33	F	539				, 				
32	F	- 540	ļ				<b> </b>			
,,	$\mathbf{F}$		<u> </u>							
31	F	• 547			···-		1			
30	┢	- 542								
29	F	- 543	ļ		<u> </u>		+			
	$\mathbf{F}$									
28	F	- 544								
27	F	- 545				<b> </b>	<u> </u>		Terminated due to Split Spoon Refusal at 26.2 feet.	
26	$\left  \right $	- 546			40 50/2"				moist	
25	F	- 547		SS-6	5 21	10		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown,	
	╞				+		+			
24	Ļ						·			
23	$\left  \right $	- 549								
22	F	- 550			/0		_			
<i>"</i>	F				50	-		1		
	ŀ	•	.	<u> </u>	5 14 37	14	•		Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
Dept		Elev	Casin	Samp	SPT	Reco	Grou	Grou	Stratum and Field Descriptions:	Field Notes, Comments:
E.		ation	g Blo	le No.	Blows	ierv(i)	Idwar	o Sym		
Γ		$F_{1}$	SM	<u> </u>			er	lod		20.2 ft.
	C	ОM	PANI	ES	Phr Fav	n: (5) c: (5)	18) 27 18) 27	3-0055 3-8391	CLIENT: Higher Ground Country Club Management PROJECT NO.: 30631.00	Total Denth: 200 A
	Ċ	Th	aze	n	Tro	y, Ne	w Yo	rk 1218(	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-27
	TH	HE			547	Rive	r Stre	et	PROJECT: Silo Ridge Country Club	

									TEST BORING LOG	Page 1 of 1
		<b>b</b> MF	<b>ize</b> ANIE	<u>n</u> =s	547 Tro Phi Fa:	<b>Rive</b> y, Ne n: (51 x: (51	r Stre w Yoi 8) 27 8) 27	et rk 12180 3-0055 3-8391	PROJECT: Silo Ridge Country Club LOCATION: Town of Amenia, Dutchess County, New York CLIENT: Higher Ground Country Club Management PROJECT NO.: 30631.00	Test Boring No.: SRB-28
	C	Cont Dr I Insj	ractor ill Rig Driller pector	r: SJB S ;: CME :: John :: Pete S	Service -550X Leonha Steenla	s Inc. ATV urdt nd			Start Date:December 7, 2006Northing:See Figure 2Finish Date:December 7, 2006Easting:See Figure 2El. Datum:NGVD 29Longitude:G.S. Elevation:626Latitude:	Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: 9 ft. Sample Hammer: Automatic
Depth (Ft)	-	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes Comments:
				SS-	1 1	10		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown,	Freid Hotes, Comments:
,	ļ.,	625	<u> </u>		2		1		moist	
2		624			2					
	+ -									
3	-									
Ţ	F-		<b></b>	ļ						
5	<b> </b> -	621		SS-2	2 10	16	<u> </u>	GM	Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, grav.	
б	Ľ	620			20	ļ			dry, (Highly Weathered Rock)	
					26					
7	E	619	<u>}</u>	<u>+</u>						
8	<b>[</b>	618								
			· ·							
9	Ľ_	617		RC-1	3 min	51				Split Spoon Refusal at 9 feet on Bedrock - Began Coring
10	L	616				·		A /		REC: 85%
					3 min	·		$\left  \Lambda \right $	(9' - 14') Metagravwacke: hard slightly weathered fing grained	RQD: 13.3%
"	<b>-</b>	615			3 min			1 V I	horizontal bedding, dark gray, joints are irregular with little	totaling 8 inches
12		614					·	$ \Lambda $	staining	-
					3 min			1/ \ [		
13					3 min			/ \		
14	-	\$12						<u> </u>	Test Boring Terminated at 14 fast in Datas It	
15		577							test bornig remniated at 14 feet in Bedrock.	
							-			
16	(	570								
17										
}		-+								
18	- 6	08								
19	6	07								
20	- <u>-</u> 6	00				-				
AET.	юн	DS:	HSA	Hollow	Stem .	Auger	, RW	'H- Rotar	y Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION
AM)		TY	PES:	AS-Au	ger, W	S-Was	sh, SS	-Split Sp	oon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston	Method: HSA 0 to 9
I AN	DA S:	κIJ	1. Sat 2. Tes	npies cla st Borina	assified g Log F	i in ac Page 1	corda: : 0 - 2	nce with 10 feet. E	AS1M D-2488 unless otherwise noted. ach subsequent page: Additional 25 feet.	Method: RC 9 to 14
			3. Rei	fer to the	e "Inter	pretat	ion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type HSA SS NO
DDI 10Ti	TIO	NA:	L							Int Diam. 4.25 " 2" 2"
										Weight 140 lb Fall 30"
_	_	_								

Г	THE				547	River	Stree	ŧ	PROJECT: Silo Ridge Country Club	
	C	sa	Zev	ı	Tro	y, Nev	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-29
	CON	MP/	<b>NIE</b>	S	Ph	n: (51	8) 273	-0055	CLIENT: Higher Ground Country Club Management	
					Fa	x: (51	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth: 24 ft.
	Co	ontr	actor:	SJBS	ervice	s Inc.			Start Date: December 7, 2006 Northing: See Figure 2	Borchole Dia.: 9 in.
		Dri	I Rig:	CME-	550X.	ATV			Finish Date: December 7, 2006 Easting: See Figure 2	Water Depth: NA ft.
	r	U mm	riller:	John L	eonha	urdt			El. Datum: NGVD 29 Longitude:	Rock Depth: NA fl.
		usp	ector:	Pete 5	teenia	na	-	T	G.S. Elevation: 760 Latitude:	Sample Hammer: Automatic
(14)	~	ttion (Ft)	g Blows	le No.	lows	ery(in)	idwater	Symbol		
Dent		Elev:	Casin	Samp	SPT E	Recov	Grout	Groul	Stratum and Field Descriptions:	Field Notes, Comments:
				SS-1	1	19	1	SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown,	
1	;	759			1				moist	
					2	-				
2	- '	758			3			ļ		
						+	<u></u>			
3	- '	757				-	<u> </u>			
	F-	1					†			
1	<b>–</b> '	756				+				
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				SS-2	4	8		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace	
6		54			12				clay, brown, dry	
		$\square$			7					
7	_ 7.	33 -			7					
8	- 7.	52 -								
9	- 75	51 -								
10	- 75	<sup>50</sup>  -	+	SS-3	3	19		ML	Sandy Silt (ML): Mostly silt some sand few gravel trace glay because	Approximate Strata Change
1					5	h=			moist	
"	[	<u> </u>			6					
12		18			_8					
13	- 74	,, ↓								
I.		_								
14	- 74	6  -					<u> </u>			ļ
1										
15	- 14:	5 -	·	\$5.4	11	4		MI	Sandy Silt with Group (MI). Mastherile same south that	
	F —	+			22				blay, gray, dry	
16	F 74	⁴ ├			29	[		[	· - · · ·	1 1
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18	742	, Ľ								
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19	- 741	,  _								
	⊢ <u> </u>									j l
MET		ĽĻ,	16 4	Jollow	Ctory :	<u> </u>				
SAM	PLF	5; 1 TVP	ES /	S-Auc	otem /	Luger,	KWI L CC	1- KOTAL	y wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION
STAT	NDAR	$\frac{1}{10}$	Sam	nles cla	ssified	in eco	ii, 53- iordan	opin opi	ASTM D. 2488 upless otherwise meted	Method: HSA 0 to 20
NOT	ES:		. Test	Boring	Log P	age 1	:0 - 20	feet. Fo	ich subsequent nage: Additional 25 fast	Method:
		3	. Refe	r to the	"Inter	pretati	on of	Subsurf	ner bussequent page. Autonomin 25 1881. 1866 Logs" for additional symbology and abbraviation definitions	Casing Sample Core
ADD	ITION	NAL							and approved a supported and approximation definitions.	Int Diam 4.25 "
NOT	ES:									Weight 140.16
										Fall 30"

Ĩ	ΉE				547 1	River	Stree	et	PROJECT: Silo Ridge Country Club	
1	Cl	na	701	1	Troy	, Nev	y Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-29
		JD/		<u>×</u>	Phn	: (518	3) 273	-0055	CLIENT: Higher Ground Country Club Management	
				<u>.)</u>	Fax	: (518	3) 273	-8391	PROJECT NO.: 30631.00	Total Depth: 24 ft.
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			low	ġ	s	(ii)	/ate			
E	1	ŝ	. ä	Z e	ò	ery	- Đ	S.		
pth		eva	sing		E E	Ś	l B	Ino	Stratum and	
å		ଳି	ű	Sa Sa	SP B	Å	υ	5	Field Descriptions:	Field Notes, Comments:
	L			SS-5	18	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace	
21	L	230			17				clay, gray, dry	
				1	22					
	Γ	210			24					Spoons taken consecutively
11	Г	-30		SS-6	22	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace	due to time constraints
	r —				29	- ···	1	1	clay, gray, dry	
23		737			31	1		1		
	F —			1	38					
34	F '	736					· · ·	<del> </del>	Test Boring Terminated at 24 feet	-1
<b>I</b> '	F			†····-		ĺ				
25	<sup>*</sup> ۲	35						<u> </u>		]
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38	- 72	2	[							
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45	715									
ADDI	TIOI	NAL	NO	TES:						·····

Contraction     Test Bording New York 12180     LOCATION: Tomo of Ameria, Duckess County, New York     Test Bording Nei: SRB-30       Contraction: Sills Sorvices in: Differ: Sills Sorvices in: Differ: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sill Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvices in: Differ: Mail Contraction: Sills Sorvice (SM): Monthy annet, Stores Sill, few gaved, Bate clay, Berown, mothst     Test Bording Sorvices in: Differ: Mail Contraction: Sills Sorvice (SM): Monthy annet, Stores Sill, few gaved, Bate clay, Berown, mothst     Test Antonia Contraction: Sills Sorvice (SM): Monthy annet, Stores Sill, Few gaved, Bate clay, Berown, mothst       I     IIII Sorvice in: Sills Sorvice in: Sills Sorvice in: Differ: Mail Contraction: Mail Convol (SM): Monthy annet, Stores Sill, Few gaved, Bate clay, Berown, mothst     Test Antonia Contraction: Mail Convol (SM): Monthy annet, Stores Sill, Store Contraction: Mail Convol (SM): Monthy annet, Stores Sill, Bate Contraction: Mail Convol (SM): Monthy annet, Stores Sill, Bate Contraction: Mail Convol (SM): Monthy annet, Stores Sills Sorvice in: Store Mail Contraction: Mail Convo		ΉE			547	River	Stree	t	PROJECT: Silo Ridge Country Club	-	
CLAPYE         Prin: (51) 273-005         CLAPYE: Thigher Ground County: Club Management         Total Depth:         24         6           Dottimeter:         Sil: Strickel Inc.         Sil: Strickel Inc.         Sil: Strickel Inc.         Name         Na		Chí	azev	1	Tro	y, Nev	v Yorl	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-30	
Constractor         Pick (21) 27,497         PROMICT No. 3051.60         Northing: See Figure 2         Total Decrements 3,2000           Definition Constration         Pick Date:         Decrements 3,2000         Restling: See Figure 2         Borcabe Date: 9         In           Definition Londonation         Fisch Date:         Decrements 3,2000         Restling: See Figure 2         Borcabe Date: 9         In           Importor:         Pick Date:         Decrements 3,2000         Restling: See Figure 2         Sectorplate:	Ĩ		ANIE	S	Phr	n: <b>(</b> 51	8) 273	-0055	CLIENT: Higher Ground Country Club Management		
Contractor:         Star Date:         December 9, 2006         Northing:         See Figure 2         How the Date:         9         in           Differ:         Joint Exc. Mission X ATV         Fib. Date:         December 9, 2006         Longitude:	_				Faz	k: (51	8) 273	-8391	PROJECT NO.: 30631.00	Total Depth: 24 ft.	
Drift Ng:         Control A 1V         Prink Data:         Descript of scales         Easting:         See Figure 2         Year Perface         NA B.           Image: Control acids         C.S. Elevation:         750         Latitude:         -         Sample Harmer:         Automatic           Image: Control acid         C.S. Elevation:         750         Latitude:         -         Sample Harmer:         Automatic           Image: Control acid         Sample Harmer:         Automatic         750         Latitude:         -         Sample Harmer:         Automatic           Image: Control acid         Sample Harmer:         Automatic         Field Notes, Commenta:         Field Notes, Commenta:         -           Image: Control acid         Sample Harmer:         Automatic         Field Notes, Commenta:         -           Image: Control acid         Sample Harmer:         Sample Harmer:         Automatic         -           Image: Control acid         Sample Harmer:         Sample Harmer:         Automatic         -           Image: Control acid         Sample Harmer:         Sample Harmer:         Automatic         -           Image: Control acid         Sample Harmer:         Sample Harmer:         -         -           Image: Control acid         Sample Harmer:		Cont	ractor	SIB S	ervices	s Inc.			Start Date: December 8, 2006 Northing: See Figure 2	Borehole Dia.: 9 in.	
Line:         Difference         Difference </td <td></td> <td>וע</td> <td>ul Rig:</td> <td>CME-</td> <td>550X /</td> <td>ATV</td> <td></td> <td></td> <td>Finish Date: December 8, 2006 Easting: See Figure 2</td> <td>Water Depth: NA ft.</td>		וע	ul Rig:	CME-	550X /	ATV			Finish Date: December 8, 2006 Easting: See Figure 2	Water Depth: NA ft.	
Builton         Distance         Distance         Distance         Distance         Distance           1		Ĭns	nector:	Pete S	eonna. teenlar	nd			EL Datum: NGVD 29 Longitude:	Rock Depth: NA ft.	
Visition         Section         Section         Section         Product Social Section         Product Social Section         Product Social Section         Product Social Section         Product Social Section         Product Social Section         Product Social Section         Product Social Section         Product Social Section         Product Social Section         Product Section         Prod				T			1		Gist Elevation. 790 Latitude:	Sample Hammer: Automatic	
Prior         Prior <th< td=""><td>9</td><td>n (Ft)</td><td>lows</td><td></td><td>SM</td><td>(ui))</td><td>vater</td><td>ymbol</td><td></td><td></td></th<>	9	n (Ft)	lows		SM	(ui))	vater	ymbol			
B         A         B         B         C         B         C         B         C         B         C         D         Dist Descriptions:         Field Notes, Comment:           1		atio	B B	ple	Blo		- bu	S di	Stratum and		
Image: state in the second state in the sec	ept	Eler	asi	an	PT	l s	Ĩ.	Į Ž	Field Descriptions:	Field Notes Commentee	
1       1       1       1       1         2       1       1       1       1         4       10       1       1       10         5       10       3       2       24       SM         7       10       3       3       10       3       3         7       10       3       3       10		1		SS-1	1	18	1	SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, mois	t	
1       1       1       2       1         2       1       1       1       1       1         3       1       1       1       1       1       1         4       1       1       1       1       1       1       1         5       1	,		1		1	-	1				
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-       -	3	793				ļ	ļ	ļ			
4       70				<b>-</b>	<b> </b>						
i       iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	4	792					<u> </u>				
3       71       SS-2       24       SM         4       78       3       1       moist         7       78       4       1       1         4       78       4       1       1         7       78       4       1       1         8       78       1       1       1         9       78       1       1       1         10       78       1       1       1         10       78       1       1       1         11       78       1       1       1         12       74       20       1       1         13       854       13       16       SM         14       70       1       1       1         15       74       23       1       1         16       78       3       16       SM         17       12       1       1       1         18       78       13       16       SM         19       77       28       1       16         19       77       28       1       10											
a       10       3       10       1	5	791		SS-2	2	24		SM	Sand with Gravel (SM): Mostly sand little gravel, little silt, little alove grave		
a       10       3       10         7       77       4       10         9       77       14       10         9       77       14       10         10       78       20       11         11       78       20       11         12       78       20       11         13       78       20       11         14       12       14       11         15       71       23       11         16       78       20       11         17       78       20       11         18       71       23       11         19       71       23       11         19       71       28       11         19       77       28       11         19       77       28       11         19       77       28       11         19       77       28       11         19       77       28       11         19       77       28       11         19       77       28       11         19       7	1			002	3	+	-	- Dini	moist		
7       107       4       10         9       10       10       10       10         10       10       10       10       10         11       12       14       10       11         10       12       14       10       11         11       13       20       11       11         12       14       12       14       10         13       53.3       8       24       5M         14       13       14       10       11         14       12       14       10       11         14       12       14       10       10         15       10       5M       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little olay, gray, moist         16       70       20       10       10         17       12       28       10       10         18       70       10       10       10         18       70       10       10       10         19       77       12       10       10         19       77       12       10       10         19 </td <td>6</td> <td>790</td> <td>-</td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td>	6	790	-		3						
1       10	<b>,</b>	780			4	-					
s       nu											
9       - 17       - 16       SS-3       8       24       SM         10       - 78       - 14       - 16       SS-3       8       24       SM         11       - 78       - 23       - 14       - 16       - 16       SS-3       8       24       SM         11       - 78       - 23       - 14       - 16       - 16       - 16       - 16       - 16       - 17       - 16       - 17 <td>8</td> <td>- 788</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td>	8	- 788				-					
9       10											
10       746       SS-3       8       24       SM       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray,         11       713       20       14       moist         12       746       23       14       moist         13       746       23       14       15         14       14       16       17       16       17         14       17       18       16       SM       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray,         14       782       13       16       SM       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray,         15       711       SS4       13       16       SM         16       740       28       16       77       17         14       772       28       16       17       17         15       777       28       17       16       17         16       776       28       16       17       16       17         16       777       28       17       16       17       17       17         16       777       28       16       16	9	787									
10       - 776       - 785       8       24       - SM         11       - 785       - 14	I					ļ					
11	10	- 786		66.2		24			Sand with Gravel (OM). Marthe and Rith and I Rith the Unit		
11       - 789       20          12       - 784       23          13       - 783           14       - 782           15       - 781           16       - 782           17       - 782           18       - 781           19       - 772           18       - 772           19       - 772           19       - 777           19       - 777           19       - 777           19       - 777           19       - 777            19       - 777            19       - 777            19       - 777            10       - 778            S				33-3	0 14	24			moist		
17       744       23       1         18       783       1       1       1         19       781       1       1       1         19       781       1       1       1         19       781       1       1       1         10       782       1       1       1         10       783       1       16       SM         10       783       1       16       SM         10       784       1       16       SM         10       78       28       1       1         17       778       28       1       1         18       778       28       1       1         19       777       28       1       1         19       777       28       1       1         19       777       1       1       1       1         20       78       1       1       1       1         21       1       1       1       1       1         22       78       1       1       1       1       0       0       20 <t< td=""><td>п</td><td> 785</td><td></td><td>· · · ·</td><td>20</td><td></td><td></td><td></td><td></td><td></td></t<>	п	785		· · · ·	20						
17       78       13       78       14       78       15       78       16       SM       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist       Moisture Content = 21.8%         16       78       30       16       SM       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist       Moisture Content = 21.8%         16       78       228       16       16       17       17       17       18       17       18       18       17       19       17       10 <td></td> <td></td> <td></td> <td></td> <td>23</td> <td></td> <td></td> <td></td> <td></td> <td></td>					23						
13       - 743 <th -<="" td=""><td>12</td><td>784</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th>	<td>12</td> <td>784</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	12	784								
14       782       13       16       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist       Moisture Content = 21.8%         15       78       30       10       10       10       10         16       780       27       10       10       10       10         16       780       27       10       10       10       10         17       779       28       10       10       10       10       10         18       778       10       10       10       10       10       10       10         19       777       10 <td>13</td> <td>- 783</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	13	- 783									
16       72       1       10											
15       781       SS.4       13       16       SM       Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist       Moisture Content = 21.8%         16       780       27       moist       moist       moist         17       779       28       moist       moist         18       772       28       moist       moist         19       777       28       moist       moist         19       777       10       10       10       10         20       776       10       10       10       10         20       776       10       10       10       10         20       776       10       10       10       10         20       776       10       10       10       10         20       776       10       10       10       10         20       776       10       10       10       10         21       15 Amples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       HSA       0 to 20         STANDARD       1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       779       10       0       <	14	- 782			-						
15       781       SS-4       13       16       SM         16       30       30       moist         16       27       moist       Moisture Content = 21.8%         17       779       28       moist         18       778       10       10       10         19       777       28       10       10         19       777       10       10       10         19       776       10       10       10         19       776       10       10       10         20       776       10       10       10         20       776       10       10       10         20       776       10       10       10         20       776       10       10       10         20       776       10       10       10         20       776       10       10       10         21       78       13       16       SSAPLE X-Solid Stem Auger, CPT- Cone Penetrometer       DRILLING INFORMATION         SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method:       10         NOTES		<b>.</b>									
10       33-4       13       10       3w1       Stand with Grave (SM): Mostly sand, little gravel, little slit, fiftle clay, gray,       Moisture Content = 21.8%         10       20       27       10       1	15	- 781		N 99	12	16			Sand with Gravel (OM). Marthe and that among that the that		
16       780       27       17         17       779       28       1         17       779       28       1         18       778       1       1         19       777       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1         20       776       1       1       1         20       776       1       1       1         20       776       1       1       1         21       1.5 Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:         NOTES:<			l		30	10		3141	moist	Moisture Content = 21.8%	
17       18       28       10         18       778       10       10         19       777       10       10         20       776       10       10         20       776       10       10         19       777       10       10         20       776       10       10         20       776       10       10         METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer         DRILLING INFORMATION         Method: HSA         SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston         Method:       HISA       0 to 20         STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.         NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          ADDITIONAL       Int Diam.       4.25 "       2"        Weight        140 lb       Fall        30"	16	780	F F		27						
18       778       10 <t< td=""><td> I</td><td></td><td></td><td></td><td>28</td><td></td><td></td><td></td><td></td><td></td></t<>	I				28						
18       778       778       9       778       9       9       777       9       9       9       777       9       9       9       9       777       9	" [	· //9									
19       777       10 <t< td=""><td>18</td><td>_ 778</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	18	_ 778									
19       777       Image: Constraint of the state of the sta											
20       776       DRILLING INFORMATION         METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer       DRILLING INFORMATION         SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method: HSA       0 to 20         STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       Wethod:          NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          ADDITIONAL       Int Diam.       4.25 "       2"          Weight        140 lb       Fall	19	- 777				.					
METHODS:       HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer       DRILLING INFORMATION         SAMPLE TYPES:       AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method:       HSA       0 to 20         STANDARD       1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       Method:          NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Method:          3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          NOTES:        Int Diam.       4.25 "       2"          Weight        140 lb       Fall        30"	,										
SAMPLE TYPES:       AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston       Method:       HSA       0 to       20         STANDARD       1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       HSA       0 to       20         NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Method:       Type       HSA       SS          ADDITIONAL       NOTES:       Weight        140 lb       Fall        30"	-~~ [ MFT		HSA	Hollow	Stem		1230	I. Poter	www.ssa. Solid Stom Augus CBT Come De		
STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted.       Method:       HSA       0 to 20         NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Sample       Casing       Sample       Core         ADDITIONAL       Int Diam.       4.25 "       2"          Weight        140 lb       Fall        30"	SAM	PLET	PES:	AS-Ano	er. W	S-Wa	, 18 17 sh. 88-	Split Sn	oon, RC-Rock Core, GS-Grab, ST-Shalby Tube, DS Distan	DRILLING INFORMATION	
NOTES:       2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.       Casing       Sample       Core         3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          ADDITIONAL       Int Diam.       4.25 "       2"          Weight        140 lb       Fall	STAN	IDARD	1. San	nples cla	ssifier	i in ac	cordar	ice with	ASTM D-2488 unless otherwise noted	Method:	
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.       Type       HSA       SS          ADDITIONAL       Int Diam.       4.25 "       2"          Weight        140 lb       Fall        30"	NOTI	ES:	2. Tes	t Boring	Log I	Page 1	:0-20	) feet. E	ach subsequent page: Additional 25 feet.	Casing Sample Core	
ADDITIONAL NOTES:			3. Ref	er to the	"Inter	pretat	ion of	Subsurf	ace Logs" for additional symbology and abbreviation definitions.	Type HSA SS	
Weight          140 lb           Fall          30"	ADDI	TIONA	L							Int Diam. 4.25 " 2"	
Fall 30"	NOTI	ES:							· · ·	Weight 140 lb	
			·							Fall 30"	
## **TEST BORING LOG**

1	THE 547 River Street					liver	Stre	et	PROJECT: Silo Ridge Country Club	1			
	Chazen Troy, New York 12180					New	v Yor	k 12180	LOCATION: Town of Amenia, Dutchess County, New York	Test Boring No.: SRB-30			
(		<b>IPAN</b>	IES		Phn: (518) 273-0055			3-0055	CLIENT: Higher Ground Country Club Management				
<b></b>	Fax: (518) 273-8391				(518	5) 27:	3-8391	PROJECT NO.: 30631.00	Total Depth: 24 ft.				
Depth (Fi)	Florindia- /Fu	Lievauuu (rt) Casing Rhowe	Sample No.		SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:			
			SS	S-5	12	24	The second second second second second second second second second second second second second second second se	SM	Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, grav,	A ford i totelly commentar			
21					18				moist				
	L				22								
22	- 77	4			27					Spoons were taken consecutively			
			SS	5-6	27	24		SM	Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray,	due to time constraints			
23	- 77	3			35				moist				
	┝				20								
24	- 77	2		-	~1				Test Boring Terminated at 24 feet				
		-		+					Test Doring Terminated at 24 leet.				
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43	- 753												
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DDI	rion/	AL NO	TES:	•••••									

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Appendix B Laboratory Results



Albany 22 Corporate Drive Clifton Park, NY 12065 518/383-9144 (T) 518/383-9166 (F)

January 12, 2007

The Chazen Companies 547 River Street Troy, New York 12180

Attn.: Mr. Kevin O'Malley, PE

Re: Rock Core Compression Test Silo Ridge Chazen Project No. 30631.00 ATL Report No.AT354N-04-01-07

Ladies/Gentlemen:

On January 2, 2007, a representative of the Chazen Companies delivered a rock core sample to our Clifton Park, New York facility for testing. The sample was tested for compressive strength in general accordance with ASTM D 2938. The results are as follows:

### Compression Results

ASTM D 2938										
Core Identification	Core Length (in.)	Core Diameter (in.)	Core Area (in. <sup>2</sup> )	Total Load (lbs.)	Compressive Strength (psi)	L/D (inches)	L/D Correction Factor	Corrected Compressive Strength (psi)		
AT354S367	2.99	1.97	3.05	17,120	5,613	1.52	0.96	5,390		

#### **Break Descriptions**

Core	Sample Description	Break
Identification		Description
AT354S367	Rock Core SRB-25	Through Bedding Planes

Please contact our office should you have any questions on this report, or if we may be of further service.

Respectfully,

e'Robert E. Field

Laboratory Manager bfield@atlantictesting.com

REF/nd

ATLANTIC TESTING LABORATORIES, Limited

Albany 22 Corporate Drive Clifton Park, NY 12065 518/383-9144 (T) 518/383-9166 (F)

November 27, 2006

The Chazen Companies 547 River Street Troy, New York 12180

Attn: Mr. Kevin O'Malley, PE

Re: Laboratory Test Results Silo Ridge Project # 30631.00 ATL Report Nos. AT354SL-359-367-1-07

Ladies/Gentlemen:

On January 2, 2007 your representative delivered nine samples to our Clifton Park, New York facility for testing. Moisture Contents in accordance with ASTM D 2216, Particle Size Analysis in accordance with ASTM D 422, (with and without hydrometer) and Unconfined Rock Compression Test in accordance with ASTM D 2938 were performed on various samples. The results of these tests follow:

ASTM D 2216									
ATL Sample Number	Location	Moisture Content (%)							
AT354S359	SRB-6, SS-1	20.0							
AT354S360	SRB-6, SS-3	20.6							
AT354S361	SRB-9, SS-4	19.6							
AT354S362	SRB-12, SS-1	11.9							
AT354S363	SRB-15, SS-2	12.6							
AT354S364	SRB-17, SS-3	14.6							
AT3548365	SRB-26, SS-2	10.4							
AT354S366	SRB-30, SS-4	21.8							

# Moisture Content

The grain size analysis curves are enclosed.

Please contact our office should you have any questions or if we may be of further service.

Sincerely, Atlantic Testing Laboratories, Limited

Robert Field

Laboratory Manager

RF/sm Enclosure











Appendix C Global Stability



#### PRODUCT 204-1 (Single Sheets) 205-1 (Padded)



-15

Galena 4.02 Analysis Results

Licensee: The Chazen Companies

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Project: New Roadway slope File: S:\3\30600-30699\30631_00\ENG\GEOTECHNICAL\Roadway Slope.gmf	Processed: 14:41	:48 16 Jan 2007
DATA: Analysis 1 - Near SRB-6	•	
Material and Water Properties (3 materials)		
<pre>Material: 1 (Mohr-Coulomb Isotropic) - Silty Sand Cohesion Phi UnitWeight Ru 0.00 30.0 120.00 0.00 Material: 2 (Mohr-Coulomb Isotropic) - Silty Sand with Gravel Cohesion Phi UnitWeight Ru 0.00 36.0 120.00 0.00 Material: 3 (Mohr-Coulomb Isotropic) - Fill Cohesion Phi UnitWeight Ru 0.00 32.0 120.00 0.00</pre>		·
Unit weight of water: -0.010 Unit weight of water/medium above ground: 0.000		
Material Profiles (3 profiles)	-	
Profile:   1   5 points)   Material beneath:   1 - Silty Sand     0.00   610.00   60.00   586.00   70.00   586.00   145.00     Profile:   2   3 points)   Material beneath:   2 - Silty Sand with Gravel   145.00     0.00   596.00   145.00   545.00   165.00   545.00     Profile:   3   3 points}   Material beneath:   3 - Fill     70.00   586.00   85.00   586.00   165.00   560.00	560.00 1	65.00 560.00
Slope Surface (4 points)		
0.00 610.00 60.00 586.00 85.00 586.00 165.00	560.00	
Distributed Loads (1 load)		
LoadX-LeftPressureX-RightPressure160.00250.085.00250.0	-	
Failure Surface		
Initial circular surface for critical search defined by: XL, XR, R     Circle centre: XC:   177.97   YC:   759.08   Circle radius: R:   199.50     Intersections: XL:   78.75   YL:   586.00   XR:   165.00   YR:   560.00     Generated failure surface (20 points)   78.75   586.00   82.93   593.67   87.16   581.44   91.44     100.16   575.38   104.58   573.57   109.05   571.86   113.56     122.68   567.39   127.29   566.12   131.93   564.96   136.60     146.00   562.16   150.72   51.45   151.45   165.00   165.60	579.32 5 570.26 11 563.91 14	35.78 577.30 18.10 568.77 11.29 562.98
Variable Restraints	500.37 16	5.00 560.00
ratameter descriptor: XL XR R Range of variation: 13.00 6.00 9.00 Trial positions within range: 5 5 5		

RESULTS: Analysis 1 - Near SRB-6

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Spencer-Wright Method of Analysis - Circular Failure Surface

Critical Failure Circle Search using Multiple Circle Generation Techniques

Factor of Safety for initial failure circle approximation: 1.95 There were: 123 successful analyses from a total of 125 trial circles 2 analyses aborted due to unacceptable geometry

Critical (minimum) Factor of Safety: 1.92

Final Angle of Interslice Forces: 17.3 degrees

Effective stress line of thrust for one or more slices is not within middle third of slice Examine slice data and consult the Galena Users' Guide

Circle and Results Summary (Lowest 99 Factor of Safety circles)

Circle	X-Centre	Y-Centre	X-Left	Y-Left	X⊶Right	Y-Right	Radius	FoS
1	177.97	759.08	78.75	586.00	165.00	560.00	199.50	1 918
2	178.63	761.29	78.75	586.00	165.00	560.00	201.75	1 919
3	179.30	763.50	78.75	586.00	165.00	560.00	204.00	1.922
4	179.97	765.71	78.75	586.00	165.00	560.00	206.25	1.924
5	177.20	759.52	78.75	586.00	163.50	560.49	199.50	1,925
6	180.63	767.91	78,75	586.00	165.00	560.00	208.50	1.926
7	174.36	759.28	75.50	586.00	165.00	560.00	199.50	1.926
8	175.01	761.50	75.50	586.00	165.00	560.00	201.75	1 927
9	177.86	761.73	78.75	586.00	163.50	560.49	201 75	1 927
10	175.66	763.72	75.50	586.00	165.00	560.00	204 00	1 928
11	176.30	765.94	75.50	586.00	165.00	560.00	206.25	1.928

12	176.94	768.16	75.50	586.00	165.00	560.00	208.50	1.929
14	178.53	763.93	78.75	586.00	163.50	560.49	204.00	1.930
15	174.21	761.95	75.50	586.00	163.50	560.49	201.75	1.931
10	174.85	766.39	75.50	586.00	163.50	560.49	204.00	1.932
18	176.14	768.60	75.50	586.00	163.50	560.49	206.25	1.933
19	179.19	766.14	78.75	586.00	163.50	560.49	206.25	1,934
20	176 43	760.18	75,50	586.00	162.00	560.97	199.50	1.935
22	173.40	762.40	75.50	586.00	162.00	560.97	201.75	1,935
23	174.05	764.62	75.50	586.00	162.00	560.97	204.00	1.937
24	179.86	768.34	75.50	586.00	162.00	560.97	206.25	1.938
26	175.33	769.05	75.50	586.00	162.00	560.97	208.50	1.939
27	177.09	762.16	78.75	586.00	162.00	560.97	201.75	1.939
29	172.59	762.85	75.50	586.00	160.50	561.46 561.46 ·	199.50	1.940 1.941
30	173.23	765.06	75.50	586.00	160.50	561.46	204.00	1.942
32	177.75	764.37	78.75	586.00	160.50	561.46 560 97	206.25	1.944
33	174.51	769.49	75.50	586.00	160.50	561.46	208.50	1.945
34 35	171.14	761.08	75.50	586.00	159.00	561.95	199.50	1.946
36	178.42	766.57	78.75	586.00	162.00	560.97	201.75	1.947
37	181.49	769.23	82.00	586,00	159.00	561.95	208.50	1.948
39	180.80	765.51	82.00	586.00	159.00	561,95 561 95	204.00	1.949
40	180.12	764.85	82.00	586.00	159.00	561.95	204.00	1.949
41 42	182.23	768.83	82.00 78 75	586.00	160.50	561.46	208.50	1.950
43	179.43	762.66	82.00	586.00	159.00	561.95	201.75	1,950
44 45	187.17	768.54	88.50	584.86	159.00	561.95	208,50	1.950
45 46	101.55	765.64	82.00 75.50	586.00 586.00	160.50	561.46 561.95	206.25	1.950
47	186.46	766.36	88.50	584.86	159.00	561.95	206.25	1.951
48 49	178,75	760.47 764 44	82.00	586.00	159.00	561.95	199.50	1.951
50	187.87	768.16	88.50	584.86	160.50	561.46	204.00	1.951
51	185.75	764.19	88.50	584.86	159.00	561.95	204.00	1.951
53	173.69	769.93	75.50	586.00	159.00	561.40 561.95	201,75	1.952
54	187.17	765.98	88.50	584.86	160.50	561.46	206.25	1.952
55 56	185.05	762.01	88.50	584.86	159.00	561.95	201.75	1.952
57	181.60	764.03	82.00	586.00	162.00	560.97	204.00	1.952
58 59	183.72	768.00	82.00	586.00	163.50	560.49	208.50	1.952
60	186.46	763.80	88.50	584.86	162.00	560.97	208.50	1.953
61	184.34	759.83	88.50	584.86	159.00	561.95	199.50	1.953
63	185.45	761.84	85.25 82 00	585.92 586 00	159.00	561.95	208.50	1.953
64	183.03	765.81	82.00	586.00	163.50	560.49	206.25	1.953
65 66	187.87 185.75	765.60	88.50	584.86	162.00	560.97	206.25	1.953
67	184.74	766.59	85.25	585.92	159.00	561.95	201.75	1.953
68 40	189.28	767.39	88.50	584.86	163.50	560.49	208.50	1.954
70	180.23	759.64	82.00	586.00	162.00	560.97	204.00	1.954
71	182.34	763.62	82.00	586.00	163.50	560.49	204.00	1.954
73	184.46	767.59 759.45	82.00 88 50	586.00 584.86	165.00	560.00	208.50	1.954
74	186.15	768.38	85.25	585,92	160.50	561.46	208.50	1.954
75 76	184.03	764.41	85.25	585.92	159.00	561.95	204.00	1.954
77	186.45	761.24	88.50	584.86	162.00	560.49	206.25	1.954
78	185.44	766.20	85.25	585.92	160.50	561.46	206.25	1.955
80	183.77	761.42	82.00	586.00 586.00	163.50	560.49 560.00	201.75	1.955
81	183.32	762.23	85.25	585.92	159.00	561.95	201.75	1.955
82 83	189.98	767.00 763.03	88.50 -88.50	584.86	165.00	560.00	208.50	1.955
84	186.85	767.99	85.25	585.92	162.00	560.97	204.00	1.955
85	185.74	759.06	88.50	584.86	162.00	560.97	199.50	1.955
87	179.08	768.77	05.25 78.75	586.00	160.50	561.46 560.97	204.00 208.50	1.955
88	183.08	763.20	82.00	586.00	165.00	560.00	204.00	1.956
89 90	180.97	759.22	82.00 85.25	586.00 585 az	163.50 150 nn	560,49 561 05	199.50	1.956
91	189.28	764.82	88.50	584.86	165.00	560.00	206.25	1.956
92 93	187.16	760.85	88.50	584.86	163.50	560.49	201.75	1.956
94	184.02	761.84	85.25	565.92 585.92	162.00	561.46	206.25	1,956 1,956
95 04	182.39	761.00	82.00	586.00	165.00	560.00	201.75	1.956
90 97	100.57	762.63 767.60	88.50 85.25	584.86 585.92	165.00	560.00 560.49	204.00	1.957
98	186.45	758.66	88.50	584.86	163.50	560.49	199.50	1.957
99	185.43	763.62	85.25	585.92	162.00	560.97	204.00	1.957

Critical Failure Circle

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$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Circle	centre: 2	KC:	177,97 YC	C; 759.08	Cir	cle rad	lius: R:	199 50				
Generated failure surface: [20 points]   Filter for the failure surface: [20 points]     78. 75   586.00   82.93   581.67   100.05   571.30   111.56   570.26   118.10   568.77     122.68   567.30   127.29   566.12   131.93   564.95   135.60   560.31   141.29   562.91     146.00   562.16   150.73   561.45   155.47   560.85   160.23   560.37   145.00   560.00     Slice Coometry and Properties   (188 slices)     Control   145.91   PoreWater   Slice Force   1/h   1'h     1   3   0.00   145.91   PoreWater   Slice Force   1/h   1'h     1   78.75   2.09   586.00   584.22   29.1   3   0.00   1437   0.00   129.25   0.22   -0.22     3   82.93   2.07   586.00   584.25   29.13   0.00   137.80   0.00   134.96   0.20   -0.28	Interse	ections: )	KL:	78.75 YI	L: 586.00	XR	165	00 YR	560.00				
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Generat	ed failure:	e surfac	e: ( 20 poi	ints				500.00				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	- 78	3.75 586	5.00	82.9	93 583.67		87 16	581 44	01	AA 600 3	22	05 20	E77 10
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	100	).16 575	5.38	104.9	58 573.57		109 05	571 86	112	56 570 C	2	99.70	5//.30
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	122	2.68 561	1.39	127.2	566 12		121 02	564 06	113	.00 570.2	0	118.10	568.77
Since Genetry and Properties (30 slices)Since Genetry and Properties (30 slices)Since X-Left Width Y-Top Y-Base Base Angle Matl Cohesion Meight Force (LKS) (LKS) (LKS)178.752.09586.00584.2229.130.00145.910.000.000.000.000.00280.842.09586.00584.2529.130.00714.870.00314.960.20-0.22382.932.07586.00583.1327.830.00714.870.00524.250.22-0.22485.002.16585.55582.0127.830.00744.870.00544.660.19-0.19587.162.14564.95580.912.6.430.001132.150.00865.270.23-0.23689.302.14564.95577.8025.030.001132.1670.101155.990.29-0.29995.782.54582.08576.7423.630.001537.310.001540.220.31-0.3111100.162.21590.71574.9222.310.001587.010.001587.31-0.3112102.372.21590.79577.82571.4619.510.001587.010.001587.30-0.3113104.582.23579.27573.1420.910.001648.07 <td< td=""><td>146</td><td>.00 562</td><td>2.16</td><td>150 2</td><td>73 561 45</td><td></td><td>151.53</td><td>504.90</td><td>130</td><td>.60 .563.9</td><td>91</td><td>141.29</td><td>562.98</td></td<>	146	.00 562	2.16	150 2	73 561 45		151.53	504.90	130	.60 .563.9	91	141.29	562.98
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				100.7	5 501.45		100,47	300.85	160.	.23 560.5	17	165.00	560.00
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Slice (	Seometry an	ld Prope	rties (38 s	slices)								
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Slice	X~Left	Width	Ү-Тор	9 Y-Base	Base	Base	Base	Total	PoreWater	Side Force	1/h	1'/h
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1	70 75	2 44	F07 00		Angle	Matl	Cohesion	Weight	Force	(LHS)	(LHS)	(LHS)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2	10.15	2.09	586.00	585.42	29.1	3	0.00	145.91	0.00	0.00	0.00	0.00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2	00.04	2.09	586.00	584.25	29.1	3	0.00	437.73	0.00	129.25	0.22	-0.22
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	3	82.93	2.07	586.00	583.13	27.8	3	0.00	714.87	0.00	314.96	0.20	-0.20
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4	85.00	2.16	585.65	582.01	27.8	3	0.00	942.30	0.00	524.86	0.19	-0.19
	5	87.16	2.14	584.95	580.91	26.4	3	0.00	1037.86	0.00	685.27	0.23	-0.23
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6	89.30	2.14	584,25	579.85	26.4	3	0.00	1132.15	0.00	837.70	0.26	-0.26
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1	91.44	2.17	583.55	578.81	25.0	3	0.00	1232.87	0.00	1003.96	0.28	-0.28
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	8	93.61	2.17	582.85	577.80	25.0	3	0.00	1312.67	0.00	1155 99	ñ 20	-0.20
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	9	95.78	2.54	582.08	576.74	23.6	3	0.00	1630.65	0.00	1317 86	กั รัก	-0.30
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	10	98.32	1.84	581.37	575.78	23.6	1	0.00	1233.80	0.00	1480 22	0.30	_0.30
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11	100.16	2.21	580.71	574.92	22.3	1	0.00	1537.31	0.00	1630 63	0.31	-0.31
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	12	102.37	2.21	579.99	574.02	22.3	1	0.00	1587.01	0.00	1781 53	0 31	-0.31
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	13	104.58	2.23	579.27	573.14	20.9	1	0.00	1644.05	0.00	1937 31	0 21	-0.31
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	14	106.82	2.23	578.55	572,29	20.9	1	0.00	1678.07	0.00	2059 20	0.31	-0.31
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	15	109.05	2.25	577.82	571.46	19.5	1	0.00	1719.19	0.00	2183.61	0 31	-0.31
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16	111.30	2.25	577.08	570.66	19.5	1	0.00	1737.24	0.00	2269.33	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1/	113.56	2.27	576.35	569.89	18.1	1	0.00	1761.36	0.00	2355,99	0.31	~0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	18	115.83	2.27	575.61	569.14	18.1	1	0.00	1763.16	0.00	2400.51	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19	118.10	2,29	574.87	568.43	16.8	1	0.00	1770.02	0.00	2445 08	ດ ຈຳ	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	120.39	2.29	574.13	567.74	16.8	1	0.00	1755.06	0.00	2445.69	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	21	122.68	2.31	573.38	567.07	15.4	1	0.00	1744.10	0.00	2446.30	0 31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22	124,99	2.31	572.63	566.44	15.4	1	0.00	1712.52	0.00	2402.79	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	23	127.29	2.32	571.88	565.83	14.0	3	0.00	1683.15	0.00	2360.08	0.30	-0.30
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24	129.61	2.32	571.12	565.25	14.0	3	0.00	1634.64	0.00	2233.42	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	25	131.93	2.33	570.37	564.70	12.7	3	0.00	1586.76	0.00	2110.36	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20	134.27	2.33	569.61	564.18	12.7	3	0.00	1521.14	0.00	1948.68	0.31	-0.31
28 138.94 2.34 568.09 563.21 11.3 3 0.00 1371.56 0.00 1605.98 0.31 -0.31   29 141.29 2.36 567.32 562.77 9.9 3 0.00 1286.19 0.00 1428.96 0.31 -0.31   30 143.64 2.36 565.79 562.26 9.9 3 0.00 1186.09 0.00 1428.96 0.31 -0.31   31 146.00 2.36 565.79 561.98 8.5 3 0.00 1081.75 0.00 1041.25 0.31 -0.31   32 148.36 2.36 565.02 561.62 8.5 3 0.00 964.27 0.00 840.89 0.32 -0.32   33 150.73 2.37 564.25 561.30 7.2 3 0.00 841.38 0.00 662.29 0.32 -0.32   34 133.10 2.37 564.25 561.30 7.2 3 0.00 706.69 0.00 481.97 0.32 -0.32   35	21	136.60	2.34	568.85	563.68	11.3	3	0.00	1454.34	0.00	1793.69	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	28	138.94	2.34	568.09	563.21	11.3	3	0.00	1371.56	0.00	1605.98	0.31	-0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	29	141.29	2.36	567.32	562.77	9.9	3	0.00	1286.19	0.00	1428.96	0.31	-0.31
31 146.00 2.36 565.79 561.98 8.5 3 0.00 1081.75 0.00 1041.25 0.31 -0.31   32 148.36 2.36 565.02 561.62 8.5 3 0.00 1081.75 0.00 1041.25 0.31 -0.31   33 150.73 2.37 564.25 561.30 7.2 3 0.00 841.38 0.00 662.29 0.32 -0.32   34 153.10 2.37 563.48 561.00 7.2 3 0.00 706.69 0.00 481.97 0.32 -0.32   35 155.47 2.38 562.71 560.73 5.8 3 0.00 565.06 0.00 330.50 0.32 -0.32   36 157.85 2.38 561.94 560.49 5.8 3 0.00 413.22 0.00 192.53 0.33 -0.32   37 160.23 2.38 561.16 560.28 4.4 3 0.00 253.45 0.00 91.63 0.35 -0.35   38 162.62	30	143.64	2.36	566.56	562.36	9.9	3	0.00	1186.09	0.00	1227.26	0.31	~0.31
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	31	146.00	2.36	565.79	561.98	8.5	3	0.00	1081.75	0.00	1041.25	0.31	-0.31
33 150.73 2.37 564.25 561.30 7.2 3 0.00 841.38 0.00 662.29 0.32 -0.32   34 153.10 2.37 563.48 561.00 7.2 3 0.00 706.69 0.00 481.97 0.32 -0.32   35 155.47 2.38 562.71 560.73 5.8 3 0.00 565.06 0.00 330.50 0.32 -0.32   36 157.85 2.38 561.94 560.49 5.8 3 0.00 413.22 0.00 192.53 0.33 -0.33   37 160.23 2.38 561.16 560.28 4.4 3 0.00 253.45 0.00 91.63 0.35 -0.35   38 162.62 2.38 560.39 560.09 4.4 3 0.00 84.40 0.00 21.97 0.47 -0.47   RHS 165.00 165.00 1.43 0.00 84.40 0.00 21.97 0.47 -0.47	32	148.36	2.36	565.02	561.62	8.5	3	0.00	964.27	0.00	840.89	0 32	-0.32
34 153.10 2.37 563.48 561.00 7.2 3 0.00 706.69 0.00 481.97 0.32 -0.32   35 155.47 2.38 562.71 560.73 5.8 3 0.00 565.06 0.00 330.50 0.32 -0.32   36 157.85 2.38 561.94 560.49 5.8 3 0.00 413.22 0.00 192.53 0.33 -0.33   37 160.23 2.38 561.16 560.28 4.4 3 0.00 253.45 0.00 91.63 0.35 -0.35   38 162.62 2.38 560.39 560.09 4.4 3 0.00 84.40 0.00 21.97 0.47 -0.47   RHS 165.00 165.00 1.23 0.00 0.00 1.23 0.00 0.00	33	150.73	2.37	564.25	561.30	7.2	3	0.00	841.38	0.00	662 29	0 32	-0.32
35   155.47   2.38   562.71   560.73   5.8   3   0.00   565.06   0.00   330.50   0.32   -0.32     36   157.85   2.38   561.94   560.49   5.8   3   0.00   413.22   0.00   192.53   0.33   -0.33     37   160.23   2.38   561.16   560.28   4.4   3   0.00   253.45   0.00   91.63   0.35   -0.35     38   162.62   2.38   560.39   560.09   4.4   3   0.00   84.40   0.00   21.97   0.47   -0.47     RHS   165.00   1.23   0.00   0.00   1.23   0.00   0.00	34	153.10	2.37	563.48	561.00	7.2	3	0.00	706.69	0.00	481 97	0.32	-0.32
36 157.85 2.38 561.94 560.49 5.8 3 0.00 413.22 0.00 192.53 0.33 -0.33   37 160.23 2.38 561.16 560.28 4.4 3 0.00 253.45 0.00 91.63 0.35 -0.35   38 162.62 2.38 560.39 560.09 4.4 3 0.00 84.40 0.00 21.97 0.47 -0.47   RHS 165.00 1.23 0.00 0.00 84.40 0.00 21.97 0.47 -0.47	35	155.47	2.38	562.71	560.73	5.8	3	0.00	565.06	0.00	330.50	0 32	-0.32
37   160.23   2.38   561.16   560.28   4.4   3   0.00   253.45   0.00   91.63   0.35   -0.35     38   162.62   2.38   560.39   560.09   4.4   3   0.00   84.40   0.00   21.97   0.47   -0.47     RHS   165.00   1.23   0.00   0.00   21.97   0.47   -0.47	36	157.85	2.38	561.94	560.49	5.8	3	0.00	413.22	0.00	192.53	0.33	-0.33
38 162.62 2.38 560.39 560.09 4.4 3 0.00 84.40 0.00 21.97 0.47 -0.47 RHS 165.00 1.23 0.00 0.00	31	160.23	2.38	561.16	560.28	4.4	3	0.00	253.45	0.00	91.63	0.35	-0.35
RHS 165.00 1.23 0.00 0.00	38	162.62	2.38	560.39	560.09	4.4	3	0.00	84.40	0.00	21.97	0.47	-0.47
	KH2	165.00									1.23	0.00	0.00

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