

Preliminary Geotechnical Interpretive Report
for
Silo Ridge Golf Resort Community

Town of Amenia
Dutchess County
New York

February 16, 2007



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Project Number: 30631.00

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THE
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COMPANIES

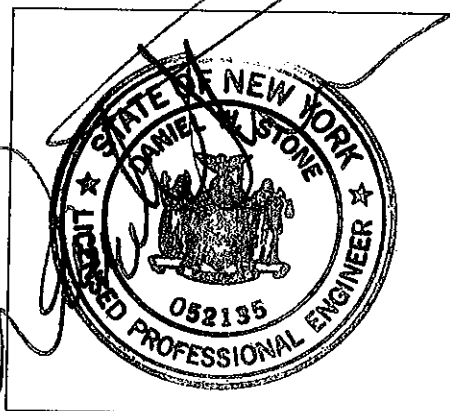


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1.0 EXECUTIVE SUMMARY

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 2-inch split spoon sampler was driven approximately 2 feet and the number of blows required to drive the sampler every 6 inches were recorded in accordance with ASTM D 1586 to 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 performed 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	I
Seismic Importance Factor, I _E	1.00
Site Class	B/C ⁽¹⁾
Seismic Design Category	B ⁽¹⁾

Notes:

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

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.

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>	<u>Allowable Bearing Capacity (ksf)</u>
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
<i>At Rest - Static, (Restrained condition at top of wall)</i>	56 pcf
<i>Active (Wall allows for deflection at top)</i>	37 pcf
Passive	300 pcf
<i>Active with Seismic (PGA, 2% PE in 50 years)</i>	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 Stone Fill & Granular Fill

Stone fill, such as a uniformly graded $\frac{3}{4}$ 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
$\frac{1}{4}$ 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 Structural Fill

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
¼ 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 be 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,

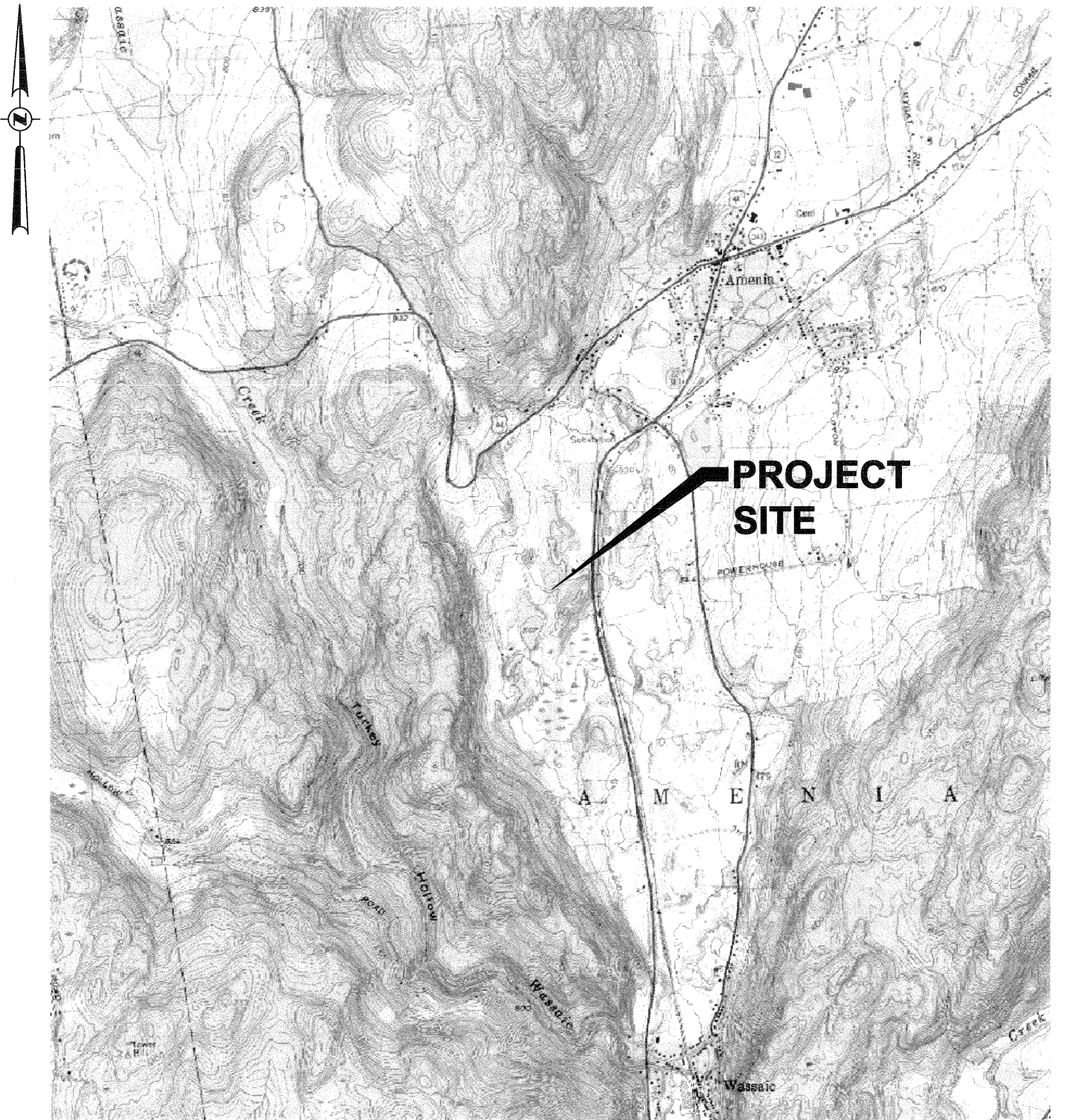
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Figures



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100 Glen Street Glens Falls, NY 12801
Phone: (518) 812-0513

SILO RIDGE GOLF RESORT COMMUNITY

SITE LOCATION MAP

TOWN OF AMENIA, DUTCHESS COUNTY, STATE OF NEW YORK

drawn PJS	checked KBO
--------------	----------------

date 1/16/07	scale NONE
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project no. 30631.00

sheet no.

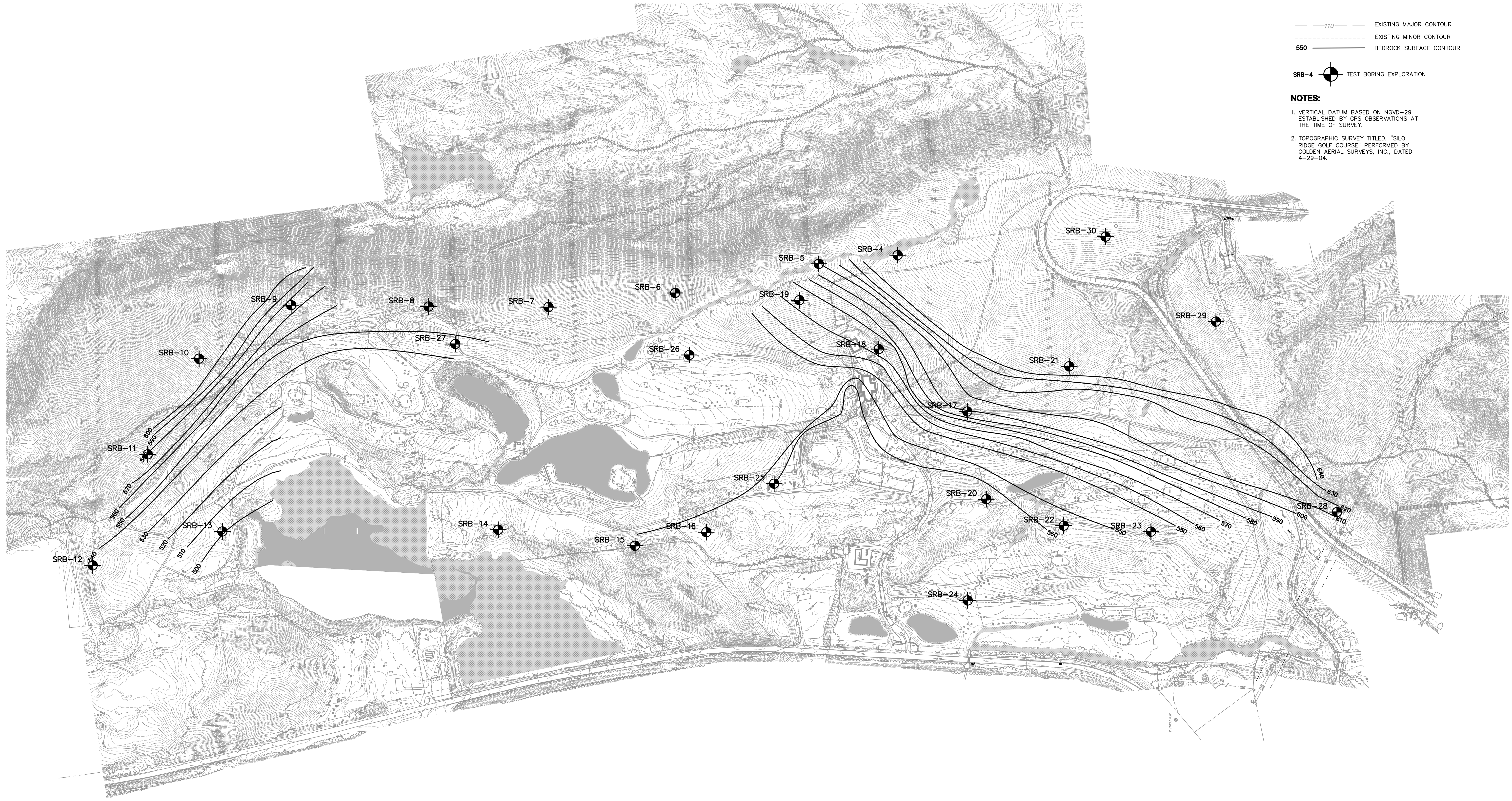
FIG 1

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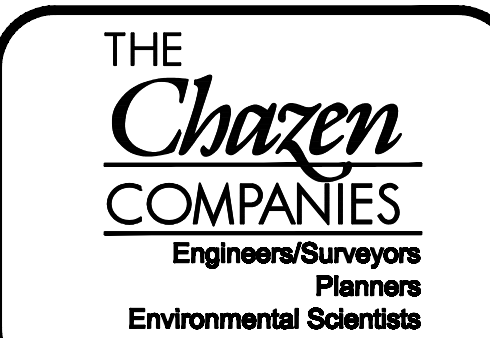
---110--- EXISTING MAJOR CONTOUR
 --- EXISTING MINOR CONTOUR
 550 --- BEDROCK SURFACE CONTOUR

SRB-4  TEST BORING EXPLORATION

- NOTES:**
1. VERTICAL DATUM BASED ON NGVD-29 ESTABLISHED BY GPS OBSERVATIONS AT THE TIME OF SURVEY.
 2. TOPOGRAPHIC SURVEY TITLED, "SILO RIDGE GOLF COURSE" PERFORMED BY GOLDEN AERIAL SURVEYS, INC., DATED 4-29-04.



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CHAZEN ENGINEERING & LAND SURVEYING CO., P.C.

Dutchess County Office: 21 Fox Street, Poughkeepsie, New York 12601, Phone: (845) 454-3980
 Capital District Office: 547 River Street, Troy, New York 12180, Phone: (518) 273-0055
 Orange County Office: 356 Meadow Avenue, Newburgh, New York 12550, Phone: (845) 567-1133
 North Country Office: 100 Glen Street, Glens Falls, New York 12801, Phone: (518) 812-0513

rev.	date	description

SILO RIDGE RESORT COMMUNITY

PRELIMINARY SITE EXPLORATION LOCATION PLAN

TOWN OF AMENIA DUTCHESS COUNTY STATE OF NEW YORK

drawn	CJB	checked	KBO
date	1/25/07	scale	1"=300'
project no.	30631.00	sheet no.	FIG.2

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

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

Additional Notes:

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

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

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

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

GENERAL

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

TEST BORING LOG

THE COMPANIES		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391			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-4		
Contractor: SJB Services Inc. Drill Rig: CMB-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 4, 2006 Finish Date: December 5, 2006 El. Datum: NGVD 29 G.S. Elevation: 686		Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --		Total Depth: 23.5 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: 20 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:		
1	685		SS-1	1	12		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist			
				1							
				2							
2	684			2							
3	683										
4	682										
5	681		SS-2	1	10		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist			
				3							
6	680			4							
				5							
7	679										
8	678										
9	677										
10	676		SS-3	5	24		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, gray, dry	Approximate Strata Change		
				14							
				15							
11	675			17							
12	674										
13	673										
14	672										
15	671		SS-4	5	6		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, gray, dry			
16	670			50/2"					Cobble at 15.5 feet.		
17	669										
18	668										
19	667										
20	666								Auger Refusal at 20 ft, began coring		
METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.								DRILLING INFORMATION Method: HSA 0 to 20 Method: RC 20 to 23.5			
ADDITIONAL NOTES:								Casing	Sample	Core	
								Type	HSA	SS	--
								Int Diam.	4.25 "	2"	--
								Weight	--	140 lb	--
								Fall	--	30"	--

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-4 <hr/> Total Depth: 23.5 ft.
-----------------------------------	--	---	--

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	665		RC-1	6 min	42		X	(20' - 23.5') Metragraywacke: hard, slightly weathered, fine grained, horizontal bedding, dark gray, irregular joints with little staining.	REC: 100% RQD: 0 % Unconfined Compression Strength = 5,390 psi
22	664			6 min					
23	663			6 min					
				3 min					
24	662							Test Boring Terminated at 23.5 feet in Bedrock.	
25	661								
26	660								
27	659								
28	658								
29	657								
30	656								
31	655								
32	654								
33	653								
34	652								
35	651								
36	650								
37	649								
38	648								
39	647								
40	646								
41	645								
42	644								
43	643								
44	642								
45	641								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-5 Total Depth: 26.3 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 4, 2006 Finish Date: December 4, 2006 El. Datum: NGVD 29 G.S. Elevation: 636	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	635		SS-1	1	12		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	Approximate Strata Change
				2					
				2					
2	634			3					
3	633								
4	632								
5	631								
			SS-2	1	14		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray/brown, moist	
6	630			2					
				3					
7	629			20					
8	628								
9	627								
10	626								
			SS-3	7	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray/brown, moist	
11	625			16					
				28					
12	624			36					
13	623								
14	622								
15	621								
			SS-4	5	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray/brown, moist	
16	620			16					
				21					
17	619			24					
18	618								
19	617								
20	616								

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 25	
STANDARD 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.			
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.			
ADDITIONAL NOTES:	Type	Casing	Sample Core
	Int Diam.	4.25 "	2" --
	Weight	--	140 lb
	Fall	--	30"

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-5 Total Depth: 26.3 ft.
-----------------------------------	--	---	--

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	615		SS-5	16 30 40	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, dry	
22	614			71					
23	613								
24	612								
25	611		SS-6	14 30	15		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, dry	
26	610			50/3"					
27	609							Terminated due to Split Spoon Refusal on Probable Bedrock at 26.3 feet.	
28	608								
29	607								
30	606								
31	605								
32	604								
33	603								
34	602								
35	601								
36	600								
37	599								
38	598								
39	597								
40	596								
41	595								
42	594								
43	593								
44	592								
45	591								

ADDITIONAL NOTES:

TEST BORING LOG


THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-6
------------------------------------	--	---	---

Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 30, 2006 Finish Date: November 30, 2006 El. Datum: NGVD 29 G.S. Elevation: 590	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 27 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
--	--	--	---

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (ft)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
			SS-1	1	3		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	Moisture Content = 20.0%
1	589			1					
				1					
2	588			4					
3	587								
4	586								
5	585		SS-2	4	4		SM	Sand with Silt and Gravel (SM): Mostly sand, little silt, little gravel, trace clay, brown, moist	
6	584			5					
				5					
7	583			5					
8	582								
9	581								
10	580		SS-3	6	4		SM	Sand with Silt and Gravel (SM): Mostly sand, little silt, little gravel, trace clay, brown, moist	Moisture Content = 20.6%
11	579			8					
				7					
12	578			9					
13	577								
14	576								
15	575		SS-4	7	16		SM	Sand with Silt and Gravel (SM): Mostly sand, little silt, little gravel, trace clay, brown, moist	
16	574			15					
				18					
17	573			20					
18	572								
19	571								
20	570								

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 25																				
STANDARD 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.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25"</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25"	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25"	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			
ADDITIONAL NOTES: 3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.																					


TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-6 Total Depth: 27 ft.
---	--	---	--

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	569		SS-5	8	10		SM	Sand with Silt and Gravel (SM): Mostly sand, little silt, little gravel, trace clay, brown, moist	
				11					
22	568			9					
				7				Sand with Silt and Gravel (SM): Mostly sand, little silt, little gravel, trace clay, brown, moist	
23	567								
24	566								
25	565		SS-6	9	8		SM		
26	564			4					
				4				Test Boring Terminated at 27 feet.	
27	563			5					
28	562								
29	561								
30	560								
31	559								
32	558								
33	557								
34	556								
35	555								
36	554								
37	553								
38	552								
39	551								
40	550								
41	549								
42	548								
43	547								
44	546								
45	545								

ADDITIONAL NOTES:

TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-7 Total Depth: 27 ft.
---	--	---	---

Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 29, 2006 Finish Date: November 29, 2006 El. Datum: NGVD 29 G.S. Elevation: 606	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Borehole Dia.: 9 in. Water Depth: 23.5 ft. Rock Depth: NA 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:
1	605		SS-1	1	12		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	
				7					
2	604			7					
3	603								
4	602								
5	601		SS-2	4	12		SM		
6	600			1					
7	599			1					
8	598			4					
9	597								
10	596		SS-3	2	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	Approximate Strata Change
11	595			3					
12	594			2					
13	593			3					
14	592								
15	591		SS-4	3	16		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
16	590			10					
17	589			10					
18	588			16					
19	587								
20	586								

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 25	
STANDARD 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.			
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.			
ADDITIONAL NOTES:		Casing	Sample
	Type	HSA	SS
	Int Diam.	4.25 "	2"
	Weight	--	140 lb
	Fall	--	30"

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-7 Total Depth: 27 ft.
-----------------------------------	--	---	--

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
			SS-5	15	18		ML	Sandy Silt (ML): Mostly silt, little sand, few gravel, trace clay, gray, dry	
21	585			16					
				18					
22	584			18					
23	583					▼			
24	582								
25	581		SS-6	16	22		ML	Sandy Silt (ML): Mostly silt, little sand, few gravel, trace clay, gray, dry	
26	580			16					
				24					
27	579			27				Test Boring Terminated at 27 feet.	
28	578								
29	577								
30	576								
31	575								
32	574								
33	573								
34	572								
35	571								
36	570								
37	569								
38	568								
39	567								
40	566								
41	565								
42	564								
43	563								
44	562								
45	561								

ADDITIONAL NOTES:

TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-8 <hr/> Total Depth: 27 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
Contractor: SJB Services Inc. Drill Rig: CMB-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: November 29, 2006 Finish Date: November 29, 2006 El. Datum: NGVD 29 G.S. Elevation: 612	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	611		SS-1	1	14		SM	Silty Sand (SM): Mostly sand, some silt, trace gravel, trace clay, brown, moist	Approximate Strata Change
				2					
				4					
2	610			5					
3	609								
4	608								
5	607		SS-2	8	12		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist	
				14					
6	606			7					
				7					
7	605								
8	604								
9	603								
10	602		SS-3	8	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
				14					
11	601			11					
				11					
12	600								
13	599								
14	598								
15	597		SS-4	9	24		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
				19					
16	596			15					
				21					
17	595								
18	594								
19	593								
20	592								

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 25	
STANDARD 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.	Casing	Sample	Core
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.	Type	HSA	SS
ADDITIONAL NOTES:	Int Diam.	4.25 "	2"
	Weight	--	140 lb
	Fall	--	30"

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-8 Total Depth: 27 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	591		SS-5	4	24		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
				10					
22	590			10					
				14					
23	589							Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
24	588								
25	587		SS-6	6	24		ML		
26	586			9					
				12					
27	585			8					
28	584							Test Boring Terminated at 27 feet.	
29	583								
30	582								
31	581								
32	580								
33	579								
34	578								
35	577								
36	576								
37	575								
38	574								
39	573								
40	572								
41	571								
42	570								
43	569								
44	568								
45	567								

ADDITIONAL NOTES:

TEST BORING LOG

		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391		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-9										
Contractor: SJB Services Inc. Drill Rig: CMB-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: November 29, 2006 Finish Date: November 29, 2006 El. Datum: NGVD 29 G.S. Elevation: 602		Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --		Total Depth: 26.2 ft. Borehole Dia.: 9 in. Water Depth: 13.5 ft. Rock Depth: NA 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:								
1	601		SS-1	1	10		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist									
2	600			1													
3	599			1													
4	598																
5	597		SS-2	2	12		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist									
6	596			4													
7	595			6													
8	594			19													
9	593																
10	592		SS-3	7	12		SM	Silty Sand with Gravel (SM): Mostly sand, little silt, little gravel, trace clay, brown, moist									
11	591			10													
12	590			6													
13	589			6													
14	588					▼											
15	587		SS-4	19	16		SM	Silty Sand (SM): Mostly sand, some silt, trace gravel, trace clay, brown, moist	Moisture Content = 19.6%								
16	586			14													
17	585			8													
18	584			6													
19	583																
20	582																
METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston STANDARD: 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted. 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.									Approximate Strata Change								
ADDITIONAL NOTES:									DRILLING INFORMATION								
									Method: HSA		0 to 25						
									Method:								
									Type	HSA	Sample	SS	Core	--			
Int Diam.	4.25 "		2"		--												
Weight	--		140 lb														
Fall	--		30"														

TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-9 Total Depth: 26.2 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:		
21	581		SS-5	10	15		GP	Poorly Graded Gravel with Sand (GP): Mostly gravel, some sand, trace silt, brown/gray, dry (Highly Weathered Rock)			
				11							
				22							
27	580			15							
23	579							Poorly Graded Gravel with Sand (GP): Mostly gravel, some sand, trace silt, brown/gray, dry (Highly Weathered Rock)			
24	578										
25	577		SS-6	7	8		GP				
26	576			39							
				50/2"							
27	575									Terminated due to Split Spoon Refusal on Probable Bedrock at 26.2 feet.	
28	574										
29	573										
30	572										
31	571										
32	570										
33	569										
34	568										
35	567										
36	566										
37	565										
38	564										
39	563										
40	562										
41	561										
42	560										
43	559										
44	558										
45	557										

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-10
Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: November 29, 2006 Finish Date: November 29, 2006 El. Datum: NGVD 29 G.S. Elevation: 630	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --
		Total Depth: 27 ft. Borehole Dia.: 9 in. Water Depth: 18 ft. Rock Depth: NA ft. Sample Hammer: Automatic	

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (%)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:		
1	629		SS-1	1	10		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist			
				1							
				0							
2	628			1							
3	627										
4	626										
5	625										
6	624		SS-2	5	12		SM			Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, gray, dry	
				9							
				11							
7	623			10							
8	622										
9	621							Approximate Strata Change			
10	620		SS-3	4	10		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, moist			
				6							
				5							
11	619			6							
12	618										
13	617										
14	616										
15	615		SS-4	19	12		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, moist			
				14							
				8							
16	614			6							
17	613										
18	612					▼					
19	611										
20	610										

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 25	
STANDARD 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.	Casing	Sample	Core
NOTES: 3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.	Type	HSA	SS
ADDITIONAL NOTES:	Int Diam.	4.25 "	2"
	Weight	--	140 lb
	Fall	--	30"

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-10 Total Depth: 27 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
			SS-5	40	18		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, moist	
21	609			47					
				20					
22	608			27					
23	607								
24	606								
25	605		SS-6	30	8		GP	Poorly Graded Gravel with Sand (GP): Mostly gravel, some sand, trace silt, brown/gray, dry (Highly Weathered Rock)	Approximate Strata Change
26	604			50					
				55					
27	603			17					
28	602						Test Boring Terminated at 27 feet.		
29	601								
30	600								
31	599								
32	598								
33	597								
34	596								
35	595								
36	594								
37	593								
38	592								
39	591								
40	590								
41	589								
42	588								
43	587								
44	586								
45	585								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-11
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 30, 2006 Finish Date: November 30, 2006 El. Datum: NGVD 29 G.S. Elevation: 608	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 25.4 ft. Borehole Dia.: 9 in. Water Depth: 18 ft. Rock Depth: NA 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:
1	607		SS-1	1	10		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, trace gravel, brown, moist	Approximate Strata Change
				0					
2	606			2					
3	605								
4	604								
5	603		SS-2	4	24		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist	
6	602			4					
7	601			5					
8	600			7					
9	599								
10	598		SS-3	3	16		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist	
11	597			6					
12	596			5					
13	595			14					
14	594								
15	593		SS-4	9	17		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist	
16	592			6					
17	591			5					
18	590			7					
19	589								
20	588								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION																												
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Method:</td> <td style="width: 20%;">HSA</td> <td style="width: 20%;">0 to</td> <td style="width: 40%;">25</td> </tr> <tr> <td>Method:</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">Casing</td> <td style="text-align: center;">Sample</td> <td style="text-align: center;">Core</td> </tr> <tr> <td style="text-align: center;">Type</td> <td style="text-align: center;">HSA</td> <td style="text-align: center;">SS</td> <td style="text-align: center;">--</td> </tr> <tr> <td style="text-align: center;">Int Diam.</td> <td style="text-align: center;">4.25 "</td> <td style="text-align: center;">2"</td> <td style="text-align: center;">--</td> </tr> <tr> <td style="text-align: center;">Weight</td> <td style="text-align: center;">--</td> <td style="text-align: center;">140 lb</td> <td style="text-align: center;">--</td> </tr> <tr> <td style="text-align: center;">Fall</td> <td style="text-align: center;">--</td> <td style="text-align: center;">30"</td> <td style="text-align: center;">--</td> </tr> </table>	Method:	HSA	0 to	25	Method:					Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb	--	Fall	--	30"	--
Method:	HSA	0 to	25																										
Method:																													
	Casing	Sample	Core																										
Type	HSA	SS	--																										
Int Diam.	4.25 "	2"	--																										
Weight	--	140 lb	--																										
Fall	--	30"	--																										

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-11 Total Depth: 25.4 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
			SS-5	3	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist	
21	587			4					
				6				Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist	
22	586			14					
23	585							Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray, moist	
24	584								
25	583		SS-6	50/5"	5		ML	Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
26	582								
27	581							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
28	580								
29	579							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
30	578								
31	577							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
32	576								
33	575							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
34	574								
35	573							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
36	572								
37	571							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
38	570								
39	569							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
40	568								
41	567							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
42	566								
43	565							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	
44	564								
45	563							Terminated due to Split Spoon Refusal on Probable Bedrock at 25.4 feet.	

ADDITIONAL NOTES:

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-12
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 30, 2006 Finish Date: November 30, 2006 El. Datum: NGVD 29 G.S. Elevation: 555	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 20.6 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	554		SS-1	2	10		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry	Moisture Content = 11.9%
				4					
				8					
2	553			8					
3	552							Grinding at 2.5 feet	
4	551								
5	550								
6	549		SS-2	11	0		SM		
				24				No Recovery (Probable Cobble)	Silty Sand (SM) based on observed cuttings
				23					
7	548			22					
8	547								
9	546							Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry	
10	545		SS-3	16	14		SM		
11	544			16					
12	543			17					
13	542			16				No Recovery (Probable Cobble)	Silty Sand (SM) based on observed cuttings
14	541								
15	540		SS-4	60	0		SM		
16	539			50/3"					
17	538							Approximate Strata Change	
18	537								
19	536								
20	535								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 20 Method:																				
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			

TEST BORING LOG

THE <i>Chazen</i> COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-12 Total Depth: 20.6 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
			SS-5	22	5		GM	Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace clay, gray, dry	
21	534			50/1"				Terminated due to Split Spoon Refusal on Probable Bedrock at 20.6 feet.	
22	533								
23	532								
24	531								
25	530								
26	529								
27	528								
28	527								
29	526								
30	525								
31	524								
32	523								
33	522								
34	521								
35	520								
36	519								
37	518								
38	517								
39	516								
40	515								
41	514								
42	513								
43	512								
44	511								
45	510								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-13
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 28, 2006 Finish Date: November 28, 2006 El. Datum: NGVD 29 G.S. Elevation: 519	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 18 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	518		SS-1	2	10		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, dry	
				5					
2	517			6					
				5					
3	516								
4	515								Approximate Strata Change
5	514		SS-2	3	9		SP	Poorly Graded Sand with Gravel (SP): Mostly sand, little gravel, trace silt, trace clay, brown, dry	
6	513			3					
				2					
7	512			2					
8	511								
9	510								
10	509		SS-3	2	13		SP	Poorly Graded Sand with Gravel (SP): Mostly sand, little gravel, trace silt, trace clay, brown, dry	
11	508			4					
				9					
12	507			13					Seam of Quartz at 12 feet.
13	506		SS-4	55	18		SP	Poorly Graded Sand with Gravel (SP): Mostly sand, some gravel, trace silt, brown, dry (Highly Weathered Rock)	
14	505			40					
				15					
				34					
15	504		SS-5	9			SP	Poorly Graded Sand with Gravel (SP): Mostly sand, some gravel, trace silt, brown, dry (Highly Weathered Rock)	
16	503			23					
				15					
17	502			48					
18	501							Auger Refusal at 18 feet on probable bedrock.	
19	500								
20	499								

METHODS: HSA- Hollow Stem Auger, RWI- 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 18	
STANDARD 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.	Casing	Sample	Core
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.	Type	HSA	SS
ADDITIONAL NOTES:	Int Diam.	4.25 "	2"
	Weight	--	140 lb
	Fall	--	30"

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-14
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 28, 2006 Finish Date: November 28, 2006 El. Datum: NGVD 29 G.S. Elevation: 505	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 27 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	504		SS-1	1	12		ML	Sandy Silt (ML): Mostly silt, some sand, trace clay, gray, moist	
				3					
2	503			2					
3	502								
4	501							Approximate Strata Change	
5	500		SS-2	4	12		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray, dry	
6	499			11					
7	498			15					
8	497			12					
9	496								
10	495		SS-3	6	16		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray, dry	
11	494			15					
12	493			20					
13	492			15					
14	491								
15	490		SS-4	6	12		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray, dry	
16	489			10					
17	488			11					
18	487			14					
19	486								
20	485								

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 25	
STANDARD 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.			
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.			
ADDITIONAL NOTES:	Type	Casing	Sample
	Int Diam.	HSA	SS
	Weight	4.25 "	2"
	Fall	--	140 lb
		--	30"

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-14 Total Depth: 27 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	484		SS-5	7	13		SM	Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray, dry	
				9					
				13					
22	483			24					
23	482							Silty Sand (SM): Mostly sand, little silt, few gravel, trace clay, brown/gray, dry	
24	481								
25	480		SS-6	13	10		SM		
26	479			20					
				22					
27	478			26					
28	477								
29	476								
30	475								
31	474								
32	473								
33	472								
34	471								
35	470								
36	469								
37	468								
38	467								
39	466								
40	465								
41	464								
42	463								
43	462								
44	461								
45	460								

ADDITIONAL NOTES:

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-15
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Contractor: SJB Services Inc. Drill Rig: CMB-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 28, 2006 Finish Date: November 28, 2006 El. Datum: NGVD 29 G.S. Elevation: 562	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 15.3 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	561		SS-1	1	12		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, dry	
2	560			3					
3	559			4					
4	558								
5	557		SS-2	4	12		SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, dry	Moisture Content = 12.6%
6	556			11					
7	555			15					
8	554			12					
9	553								
10	552		SS-3	4	16		SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, dry	
11	551			9					
12	550			50/5"					Cobble at 11.5 feet
13	549								Approximate Strata Change
14	548								
15	547		SS-4	50/4"	0		SM	No Recovery (Probable Bedrock)	
16	546							Auger and Split Spoon Refusal on probable bedrock at 15.3 feet.	
17	545								
18	544								
19	543								
20	542								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 15 Method:																				
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-16
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 27, 2006 Finish Date: November 27, 2006 El. Datum: NGVD 29 G.S. Elevation: 546	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 20.8 ft. Borehole Dia.: 9 in. Water Depth: 13.5 ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	545		SS-1	3	13		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	
2	544			4					
3	543			4					
4	542								
5	541		SS-2	6	12		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	
6	540			2					
7	539			2					
8	538			1					
9	537								
10	536		SS-3	WOH	14		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, trace organics, brown, moist	
11	535			2					
12	534			1					
13	533			6					
14	532								
15	531		SS-4	4	0		SM	No Recovery (Probable Cobble)	
16	530			2					
17	529			0					
18	528			1					
19	527								
20	526								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 20 Method:																				
ADDITIONAL 1. Augers stuck at 16 feet. Had to move rig 5 feet and restart NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			

TEST BORING LOG

THE <i>Chazen</i> COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-16 <hr/> Total Depth: 20.8 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	525		SS-5	50/3"	1		GP	Poorly Graded Gravel (GP): Mostly gravel, few sand, trace silt, trace clay, gray, wet (Highly Weathered Rock)	
22	524							Terminated due to Split Spoon Refusal at 20.8 feet.	
23	523								
24	522								
25	521								
26	520								
27	519								
28	518								
29	517								
30	516								
31	515								
32	514								
33	513								
34	512								
35	511								
36	510								
37	509								
38	508								
39	507								
40	506								
41	505								
42	504								
43	503								
44	502								
45	501								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-17
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: November 27, 2006 Finish Date: November 27, 2006 El. Datum: NGVD 29 G.S. Elevation: 626	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 20 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	625		SS-1	1	6		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	
2	624			2					
3	623			2					
4	622		SS-2	4	18		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray/brown, moist	Approximate Strata Change
5	621			5					
6	620			10					Cobble at 5 feet
7	619			5					
8	618								
9	617		SS-3	3	21		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray/brown, moist	Moisture Content = 14.6%
10	616			4					
11	615			5					
12	614								
13	613								
14	612		SS-4	5	22		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray/brown, moist	
15	611			7					
16	610			14					
17	609			21					
18	608								
19	607								
20	606		SS-5	4	4		ML	(0-2) Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, gray/brown, moist	Approximate Strata Change
				50/3"					

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 20 Method:																				
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			


TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-17 <hr/> Total Depth: 20 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
							GP	(2-4): Poorly Graded Gravel (GP): Mostly gravel, few sand, trace silt, brown, dry (Moderately Weathered Rock)	
21	605							Auger Refusal at 20 feet on probable Bedrock.	
22	604								
23	603								
24	602								
25	601								
26	600								
27	599								
28	598								
29	597								
30	596								
31	595								
32	594								
33	593								
34	592								
35	591								
36	590								
37	589								
38	588								
39	587								
40	586								
41	585								
42	584								
43	583								
44	582								
45	581								

ADDITIONAL NOTES:

TEST BORING LOG

		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391			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-18		
Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 4, 2006 Finish Date: December 4, 2006 El. Datum: NGVD 29 G.S. Elevation: 600		Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --		Total Depth: 25.8 ft. Borehole Dia.: 9 in. Water Depth: 10 ft. Rock Depth: NA 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:		
1	599		SS-1	4	3		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, dry	6" Gravel Path		
				5							
				6							
2	598			4							
3	597							Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry			
4	596										
5	595		SS-2	4	4		SM				
6	594			9							
7	593			11				Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry (Highly Weathered Rock)			
8	592			23							
9	591										
10	590		SS-3	6	15	▼	SM				
11	589			22				Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry (Highly Weathered Rock)			
12	588			34							
13	587			50/3"							
14	586										
15	585		SS-4	9	12		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry (Highly Weathered Rock)			
16	584			30							
17	583			28							
18	582			29							
19	581										
20	580										
METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.								DRILLING INFORMATION			
ADDITIONAL NOTES:								Method: HSA 0 to 25 Method:			
								Type	Casing	Sample	Core
								Int Diam.	4.25 "	2"	--
								Weight	--	140 lb	--
								Fall	--	30"	--

TEST BORING LOG

THE <i>Chazen</i> COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-18 Total Depth: 25.8 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	579		SS-5	8 44	8 50/2"		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry (Highly Weathered Rock)	
22	578								
23	577								
24	576								
25	575		SS-6	38	4		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown/gray, dry (Highly Weathered Rock)	
26	574			50/3"					
27	573							Terminated due to Split Spoon Refusal at 25.8 feet.	
28	572								
29	571								
30	570								
31	569								
32	568								
33	567								
34	566								
35	565								
36	564								
37	563								
38	562								
39	561								
40	560								
41	559								
42	558								
43	557								
44	556								
45	555								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-19 Total Depth: 27 ft.
Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 4, 2006 Finish Date: December 4, 2006 El. Datum: NGVD 29 G.S. Elevation: 622	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	621		SS-1 1	14			SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist	
2	620			2					
3	619								
4	618								
5	617		SS-2 1	18			SM	Silty Sand (SM): Mostly sand, some silt, trace clay, brown, moist	
6	616			2					
7	615			2					
8	614								
9	613								
10	612		SS-3 4	24			ML	Gravelly Silt with Sand (ML): Mostly silt, some gravel, little sand, trace clay, gray, dry	Approximate Strata Change
11	611			15					
12	610			19					
13	609			21					
14	608								
15	607		SS-4 10	20			ML	Gravelly Silt with Sand (ML): Mostly silt, some gravel, little sand, trace clay, gray, dry	
16	606			22					
17	605			29					
18	604			50/2"					
19	603								
20	602								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 25 Method:																				
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td>--</td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td>--</td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb	--	Fall	--	30"	--
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb	--																		
Fall	--	30"	--																		

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-19 <hr/> Total Depth: 27 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	601		SS-5	11	24		ML	Gravelly Silt with Sand (ML): Mostly silt, some gravel, little sand, trace clay, gray, dry	
				23					
				25					
22	600			31					
23	599							Gravelly Silt with Sand (ML): Mostly silt, some gravel, little sand, trace clay, gray, dry	
24	598								
25	597		SS-6	14	24		ML		
26	596			29					
				32					
				44					
27	595								
28	594								
29	593								
30	592								
31	591							Test Boring Terminated at 27 feet.	
32	590								
33	589								
34	588								
35	587								
36	586								
37	585								
38	584								
39	583								
40	582								
41	581								
42	580								
43	579								
44	578								
45	577								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-20
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: December 5, 2006 Finish Date: December 5, 2006 El. Datum: NGVD 29 G.S. Elevation: 560	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 27 ft. Borehole Dia.: 9 in. Water Depth: 18.5 ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery(in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	559		SS-1	1	12		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, trace organics, brown, moist	
				1					
				2					
2	558			3					
3	557							Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist	
4	556								
5	555		SS-2	4	6		SM		
6	554			2					
7	553			3				Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, dry	
8	552			2					
9	551								
10	550		SS-3	4	8		SM		
11	549			4				Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist	
12	548			4					
13	547			2					
14	546								
15	545		SS-4	2	15		SM		
16	544			5					
17	543			6					
18	542			4					
19	541					▼			
20	540								

METHODS: HSA- Hollow Stem Auger, RWI- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 25 Method: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td>--</td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td>--</td> </tr> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb	--	Fall	--	30"	--
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb	--																		
Fall	--	30"	--																		
ADDITIONAL NOTES:																					

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-20 <hr/> Total Depth: 27 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	539		SS-5	2	10		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist	
				3					
				6					
22	538			4					
23	537							Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist	
24	536								
25	535		SS-6	5	11		SM		
26	534			8					
27	533			13					
28	532							Test Boring Terminated at 27 feet.	
29	531								
30	530								
31	529								
32	528								
33	527								
34	526								
35	525								
36	524								
37	523								
38	522								
39	521								
40	520								
41	519								
42	518								
43	517								
44	516								
45	515								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-21
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: December 5, 2006 Finish Date: December 5, 2006 El. Datum: NGVD 29 G.S. Elevation: 660	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 16 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	659		SS-1 1	3	17		SM	Silty Sand (SM): Mostly sand, some silt, trace gravel, trace clay, brown, moist	Approximate Strata Change
2	658			3					
3	657			3					
4	656								
5	655		SS-2 2	2	18		ML	Sandy Silt (ML): Mostly silt, some sand, trace gravel, trace clay, brown, moist	
6	654			3					
7	653			4					
8	652								
9	651								
10	650		SS-3 2	2	16		ML	(0-8): Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, moist	
11	649			3			SP	(8-16): Poorly Graded Sand (SP): Mostly f. to m. sand, few silt, brown, moist	
12	648			3					
13	647			4					
14	646								Approximate Strata Change
15	645		SS-4 50/4"	3			GM	Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, gray, dry (Highly Weathered Rock)	
16	644							Auger Refusal on Probable Bedrock at 16 feet.	
17	643								
18	642								
19	641								
20	640								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston STANDARD 1. Samples classified in accordance with ASTM D-2488 unless otherwise noted. 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.	DRILLING INFORMATION Method: HSA 0 to 16 Method: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">Type</th> <th style="width: 15%;">Casing</th> <th style="width: 15%;">Sample</th> <th style="width: 10%;">Core</th> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td>--</td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td>--</td> </tr> </table>	Type	Casing	Sample	Core	Int Diam.	4.25 "	2"	--	Weight	--	140 lb	--	Fall	--	30"	--
Type	Casing	Sample	Core														
Int Diam.	4.25 "	2"	--														
Weight	--	140 lb	--														
Fall	--	30"	--														
ADDITIONAL NOTES:																	

TEST BORING LOG

		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391		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-22				
		Contractor: SJB Services Inc. Drill Rig: CMB-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 6, 2006 Finish Date: December 6, 2006 El. Datum: NGVD 29 G.S. Elevation: 570		Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --		Total Depth: 11.5 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: 6.5 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:		
1	569		SS-1	2	12		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, dry	Approximate Strata Change		
2	568			5							
3	567			6							
4	566			5							
5	565		SS-2	14	6		GM	Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, trace clay, gray, dry (Highly Weathered Rock)	RBC: 95% RQD: 40% RQD - 5 pieces over 4 inches totaling 24 inches		
6	564			50/3"							
7	563		RC-1	3	57		X	(6.5-11.5) Metagraywacke: hard, slightly weathered, fine grained, horizontal bedding, dark gray, joints are irregular with little staining			
8	562			min							
9	561			3							
10	560			min							
11	559			3							
12	558			min				Test Boring Terminated at 11.5 feet in Bedrock.			
13	557										
14	556										
15	555										
16	554										
17	553										
18	552										
19	551										
20	550										
METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.								DRILLING INFORMATION			
ADDITIONAL NOTES:								Method: HSA		0 to 6.5	
								Method: RC		6.5 to 11.5	
								Type	HSA	SS	NQ
								Int Diam.	4.25 "	2"	2"
								Weight	--	140 lb	--
Fall	--	30"	--								

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-23
Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 6, 2006 Finish Date: December 6, 2006 EL. Datum: NGVD 29 G.S. Elevation: 558	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --
		Total Depth: 16 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: 16 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:
1	557		SS-1	1	4		SM	Silty Sand (SM): Mostly sand, some silt, trace clay, trace organics, brown, moist	
				2					
				2					
2	556			1					
3	555								
4	554								
5	553		SS-2	2	12		SM		
6	552			2					
7	551			3					
8	550								
9	549								
10	548		SS-3	3	4		SM		
11	547			2					
12	546			2					
13	545								
14	544								
15	543		SS-4	14	8		GM		
16	542			50/3"					
17	541							Approximate Strata Change	
18	540								
19	539								
20	538								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 16 Method: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			
ADDITIONAL NOTES:																					

TEST BORING LOG

THE Chazen COMPANIES 547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-24
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Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: December 5, 2006 Finish Date: December 5, 2006 El. Datum: NGVD 29 G.S. Elevation: 513	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 27 ft. Borehole Dia.: 9 in. Water Depth: 14 ft. Rock Depth: NA ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	512		SS-1	2	14		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, dry	Approximate Strata Change
				8					
				3					
2	511			27					
3	510								
4	509								
5	508		SS-2	3	5		SM	Silty Sand (SM): Mostly sand, some silt, trace gravel, trace clay, brown, dry	
6	507			3					
7	506			1					
				2					
8	505								
9	504								
10	503		SS-3	3	12		SP	Poorly Graded Sand (SP): Mostly f. sand, few silt, brown, wet	
11	502			4					
12	501			5					
				4					
13	500								
14	499					▼			
15	498		SS-4	3	19		ML	Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, wet	
16	497			4					
17	496			3					
				3					
18	495								
19	494								
20	493								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 25 Method:																				
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%;">Casing</th> <th style="width: 20%;">Sample</th> <th style="width: 50%;">Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-24 Total Depth: 27 ft.
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	492		SS-5	2	20		ML	Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, wet	
				2					
22	491			2					
				3					
23	490							Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, wet	
24	489								
25	488		SS-6	2	21		ML		
26	487			2					
27	486			2				Test Boring Terminated at 27 feet.	
28	485								
29	484								
30	483								
31	482								
32	481								
33	480								
34	479								
35	478								
36	477								
37	476								
38	475								
39	474								
40	473								
41	472								
42	471								
43	470								
44	469								
45	468								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-25
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Contractor: SJB Services Inc. Drill Rig: CMB-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: December 6, 2006 Finish Date: December 6, 2006 El. Datum: NGVD 29 G.S. Elevation: 560	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 13 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: 13 ft. Sample Hammer: Automatic
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Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
1	559		SS-1	3	16		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	
				3					
2	558			3					
				3					
3	557								
4	556							Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist	
5	555		SS-2	2	8		SM		
6	554			3					
				2					
7	553			2					
8	552							Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, moist (Highly Weathered Rock)	
9	551								
10	550		SS-3	6	9		SM		
11	549			8					
12	548			22					
13	547			62				Auger Refusal at 13 feet on Probable Bedrock.	
14	546								
15	545								
16	544								
17	543								
18	542								
19	541								
20	540								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 13 Method:																				
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			

TEST BORING LOG

		547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391		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-26			
		Contractor: SJB Services Inc. Drill Rig: CMB-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 6, 2006 Finish Date: December 6, 2006 El. Datum: NGVD 29 G.S. Elevation: 534		Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --		Total Depth: 27 ft. Borehole Dia.: 9 in. Water Depth: 14 ft. Rock Depth: NA 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:	
1	533		SS-1	2	18		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist		
2	532			4						
3	531			5						
4	530			5						
5	529		SS-2	4	10		SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	Moisture Content = 10.4%	
6	528			2						
7	527			3						
8	526			2						
9	525									
10	524		SS-3	8	3		SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist		
11	523			6						
12	522			8						
13	521			5						
14	520					▼				
15	519		SS-4	7	0		SM	No Recovery (Probable Cobble)	Silty Sand with Gravel (SM) based on observed cuttings	
16	518			3						
17	517			3						
18	516									
19	515									
20	514									
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 25			
STANDARD: 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.							Casing Sample Core			
3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.							Type	HSA	SS	--
ADDITIONAL NOTES:							Int Diam.	4.25 "	2"	--
							Weight	--	140 lb	
							Fall	--	30"	

TEST BORING LOG

	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-26
			Total Depth: 27 ft.

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	513		SS-5	3	9		SM	Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	
				2					
				4					
22	512			7					
23	511								
24	510							Silty Sand with Gravel (SM): Mostly sand, some gravel, little silt, trace clay, brown, moist	
25	509		SS-6	7	13		SM		
				5					
26	508			3					
				7					
27	507							Test Boring Terminated at 27 feet.	
28	506								
29	505								
30	504								
31	503								
32	502								
33	501								
34	500								
35	499								
36	498								
37	497								
38	496								
39	495								
40	494								
41	493								
42	492								
43	491								
44	490								
45	489								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-27
------------------------------------	--	---	---------------------------------------

Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: December 6, 2006 Finish Date: December 6, 2006 El. Datum: NGVD 29 G.S. Elevation: 572	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 26.2 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA 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:
1	571		SS-1	3	16		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	Approximate Strata Change
2	570			5					
3	569			5					
4	568			5					
5	567							Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	
6	566		SS-2	3	1		SM		
7	565			4					
8	564			4					
9	563			3				Sandy Silt (ML): Mostly silt, some sand, trace clay, brown, moist	
10	562								
11	561		SS-3	4	20		ML		
12	560			4					
13	559			7				Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
14	558			9					
15	557								
16	556		SS-4	7	24		ML		
17	555			20					
18	554			23					
19	553			26					
20	552								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 25 Method:																				
ADDITIONAL NOTES:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Casing</th> <th>Sample</th> <th>Core</th> </tr> </thead> <tbody> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </tbody> </table>		Casing	Sample	Core	Type	HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
	Casing	Sample	Core																		
Type	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-27 <hr/> Total Depth: 26.2 ft.
-----------------------------------	--	---	---

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	551		SS-5	14 37 50 78	14		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
22	550								
23	549								
24	548								
25	547		SS-6	21 40 50/2"	10		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
26	546								
27	545							Terminated due to Split Spoon Refusal at 26.2 feet.	
28	544								
29	543								
30	542								
31	541								
32	540								
33	539								
34	538								
35	537								
36	536								
37	535								
38	534								
39	533								
40	532								
41	531								
42	530								
43	529								
44	528								
45	527								

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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
------------------------------------	--	---	---------------------------------------

Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland	Start Date: December 7, 2006 Finish Date: December 7, 2006 El. Datum: NGVD 29 G.S. Elevation: 626	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --	Total Depth: 14 ft. 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:
1	625		SS-1 1	10			SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	Split Spoon Refusal at 9 feet on Bedrock - Began Coring REC: 85% RQD: 13.3% RQD - 2 pieces over 4 inches totaling 8 inches
			2						
2	624		1						
			2						
3	623							Silty Gravel with Sand (GM): Mostly gravel, some silt, little sand, gray, dry, (Highly Weathered Rock)	
4	622								
5	621		SS-2 10	16		GM			
6	620		20						
7	619		26						
8	618		31					(9' - 14') Metagraywacke: hard, slightly weathered, fine grained, horizontal bedding, dark gray, joints are irregular with little staining	
9	617		RC-1 3 min	51					
10	616		3 min						
11	615		3 min						
12	614		3 min						
13	613		3 min						
14	612		3 min					Test Boring Terminated at 14 feet in Bedrock.	
15	611								
16	610								
17	609								
18	608								
19	607								
20	606								

METHODS: HSA- Hollow Stem Auger, RWJ- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 9 Method: RC 9 to 14 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">Type</th> <th style="width: 10%;">Casing</th> <th style="width: 10%;">Sample</th> <th style="width: 10%;">Core</th> </tr> <tr> <td>Int Diam.</td> <td>HSA 4.25 "</td> <td>SS 2"</td> <td>NQ 2"</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </table>	Type	Casing	Sample	Core	Int Diam.	HSA 4.25 "	SS 2"	NQ 2"	Weight	--	140 lb		Fall	--	30"	
Type	Casing	Sample	Core														
Int Diam.	HSA 4.25 "	SS 2"	NQ 2"														
Weight	--	140 lb															
Fall	--	30"															
ADDITIONAL NOTES:																	

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-29
Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 7, 2006 Finish Date: December 7, 2006 El. Datum: NGVD 29 G.S. Elevation: 760	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --
		Total Depth: 24 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA 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:
1	759		SS-1	1	9		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	Approximate Strata Change
2	758			2					
3	757			3					
4	756								
5	755								
6	754		SS-2	4	8		SM	Silty Sand with Gravel (SM): Mostly sand, some silt, little gravel, trace clay, brown, dry	
7	753			12					
8	752			7					
9	751			7					
10	750								
11	749		SS-3	3	19		ML	Sandy Silt (ML): Mostly silt, some sand, few gravel, trace clay, brown, moist	
12	748			5					
13	747			6					
14	746			8					
15	745								
16	744		SS-4	11	4		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, dry	
17	743			22					
18	742			29					
19	741			32					
20	740								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer	DRILLING INFORMATION																				
SAMPLE TYPES: AS-Augur, 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:																				
NOTES: 2. Test Boring Log Page 1: 0 - 20 feet. Each subsequent page: Additional 25 feet.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 15%;">Type</th> <th style="width: 25%;">Casing</th> <th style="width: 25%;">Sample</th> <th style="width: 35%;">Core</th> </tr> <tr> <td></td> <td>HSA</td> <td>SS</td> <td>--</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> <td>--</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> <td></td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> <td></td> </tr> </table>	Type	Casing	Sample	Core		HSA	SS	--	Int Diam.	4.25 "	2"	--	Weight	--	140 lb		Fall	--	30"	
Type	Casing	Sample	Core																		
	HSA	SS	--																		
Int Diam.	4.25 "	2"	--																		
Weight	--	140 lb																			
Fall	--	30"																			
ADDITIONAL NOTES: 3. Refer to the "Interpretation of Subsurface Logs" for additional symbology and abbreviation definitions.																					

TEST BORING LOG

THE Chazen COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-29 <hr/> Total Depth: 24 ft.
-----------------------------------	--	---	---

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
21	739		SS-5	18	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, dry	Spoons taken consecutively due to time constraints
				17					
				22					
22	738			24					
			SS-6	22	24		ML	Sandy Silt with Gravel (ML): Mostly silt, some sand, little gravel, trace clay, gray, dry	
				29					
				31					
				38					
23	737								
24	736								
25	735								
26	734								
27	733								
28	732								
29	731								
30	730								
31	729								
32	728								
33	727								
34	726								
35	725								
36	724								
37	723								
38	722								
39	721								
40	720								
41	719								
42	718								
43	717								
44	716								
45	715								

Test Boring Terminated at 24 feet.

ADDITIONAL NOTES:

TEST BORING LOG

THE COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-30
Contractor: SJB Services Inc. Drill Rig: CME-550X ATV Driller: John Leonhardt Inspector: Pete Steenland		Start Date: December 8, 2006 Finish Date: December 8, 2006 El. Datum: NGVD 29 G.S. Elevation: 796	Northing: See Figure 2 Easting: See Figure 2 Longitude: -- Latitude: --
		Total Depth: 24 ft. Borehole Dia.: 9 in. Water Depth: NA ft. Rock Depth: NA 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	18		SM	Silty Sand (SM): Mostly sand, some silt, few gravel, trace clay, brown, moist	
1	795			1					
				2					
2	794			4					
3	793							Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist	
4	792								
5	791		SS-2	2	24		SM		
6	790			3					
7	789			3				Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist	
8	788			4					
9	787								
10	786		SS-3	8	24		SM		
11	785			14				Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist	
12	784			20					
13	783			23					
14	782								
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			30					
17	779			27					
18	778			28					
19	777								
20	776								

METHODS: HSA- Hollow Stem Auger, RWH- Rotary Wash, SSA- Solid Stem Auger, CPT- Cone Penetrometer SAMPLE TYPES: AS-Auger, WS-Wash, SS-Split Spoon, RC-Rock Core, GS-Grab, ST-Shelby Tube, PS-Piston 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.	DRILLING INFORMATION Method: HSA 0 to 20 Method: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">Casing</th> <th style="width: 10%;">Sample</th> <th style="width: 10%;">Core</th> </tr> <tr> <td>Type</td> <td>HSA</td> <td>SS</td> </tr> <tr> <td>Int Diam.</td> <td>4.25 "</td> <td>2"</td> </tr> <tr> <td>Weight</td> <td>--</td> <td>140 lb</td> </tr> <tr> <td>Fall</td> <td>--</td> <td>30"</td> </tr> </table>	Casing	Sample	Core	Type	HSA	SS	Int Diam.	4.25 "	2"	Weight	--	140 lb	Fall	--	30"
Casing	Sample	Core														
Type	HSA	SS														
Int Diam.	4.25 "	2"														
Weight	--	140 lb														
Fall	--	30"														
ADDITIONAL NOTES:																

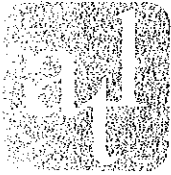
TEST BORING LOG

THE <i>Chazen</i> COMPANIES	547 River Street Troy, New York 12180 Phn: (518) 273-0055 Fax: (518) 273-8391	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-30
--	--	---	---------------------------------------

Depth (Ft)	Elevation (Ft)	Casing Blows	Sample No.	SPT Blows	Recovery (in)	Groundwater	Group Symbol	Stratum and Field Descriptions:	Field Notes, Comments:
			SS-5	12	24		SM	Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist	Spoons were taken consecutively due to time constraints
21	775			18					
				22					
22	774			27					
			SS-6	27	24		SM	Sand with Gravel (SM): Mostly sand, little gravel, little silt, little clay, gray, moist	
23	773			35					
				26					
24	772			27				Test Boring Terminated at 24 feet.	
25	771								
26	770								
27	769								
28	768								
29	767								
30	766								
31	765								
32	764								
33	763								
34	762								
35	761								
36	760								
37	759								
38	758								
39	757								
40	756								
41	755								
42	754								
43	753								
44	752								
45	751								

ADDITIONAL NOTES:

Appendix B
Laboratory Results



ATLANTIC TESTING LABORATORIES

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. ²)	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 Identification	Sample Description	Break 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,
ATLANTIC TESTING LABORATORIES, Limited

Robert E. Field
Laboratory Manager
bfield@atlantictesting.com

REF/nd



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:

Moisture Content
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
AT354S365	SRB-26, SS-2	10.4
AT354S366	SRB-30, SS-4	21.8

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

Particle Size Distribution Report

Project: Laboratory Analysis

Report No.: AT354SL-360-1-07

Client: The Chazen Companies

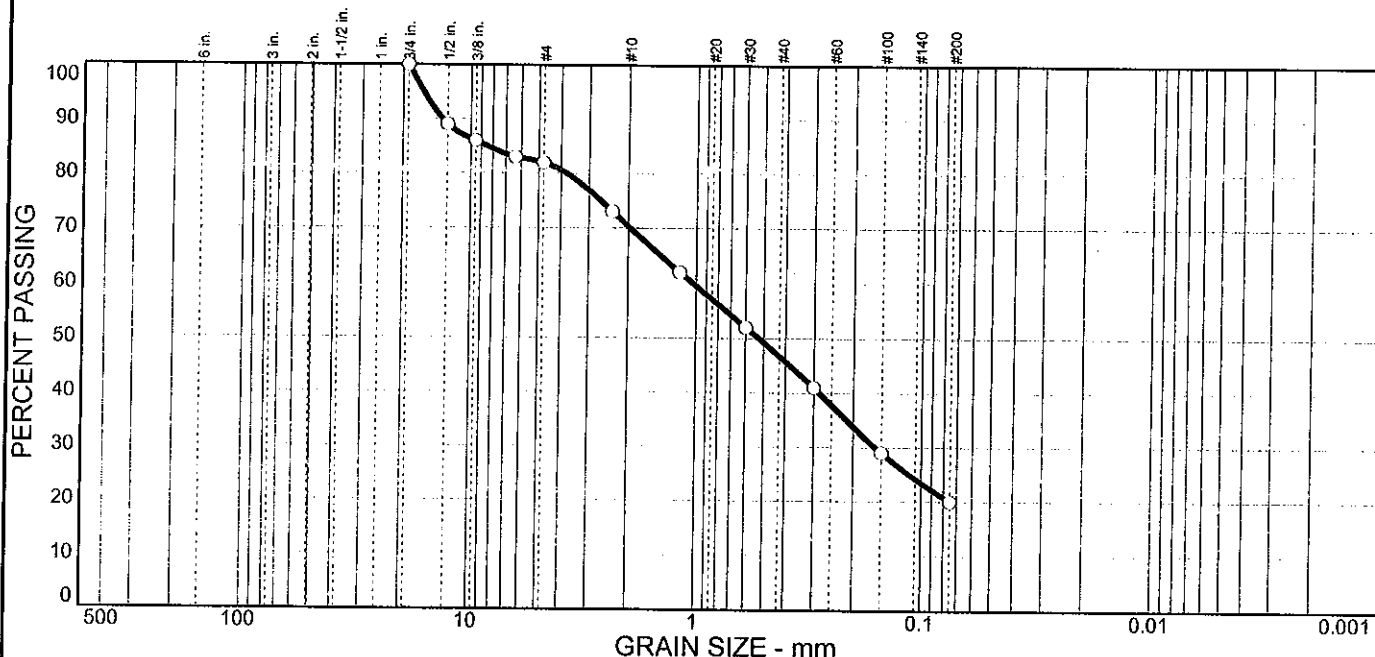
Date: 1/12/07

Sample No: AT354S360

Source of Sample: Silo Ridge 30631.00

Location: SRB-6, SS-3

Elev./Depth: 10-12 ft.



% COBBLES	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0	0	18	12	24	26	20	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
0.75 in.	100		
0.5 in.	89		
0.375 in.	86		
0.25 in.	83		
#4	82		
#8	73		
#16	62		
#30	52		
#50	41		
#100	29		
#200	20		

Soil Description

Brown cmf SAND, little+ SILT/CLAY, little+ f GRAVEL

Atterberg Limits

PL= -- LL= -- PI= --

Coefficients

D₈₅= 8.44 D₆₀= 1.03 D₅₀= 0.525
D₃₀= 0.160 D₁₅= D₁₀=
C_u= C_c=

Classification

USCS= SM AASHTO= A-1-b

Remarks

Sample delivered by the client on 1/2/07.
ASTM D 422 without hydrometer.

* (no specification provided)

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by: _____

Date: _____

1/12/07

Particle Size Distribution Report

Project: Laboratory Analysis

Report No.: AT354SL-361-1-07

Client: The Chazen Companies

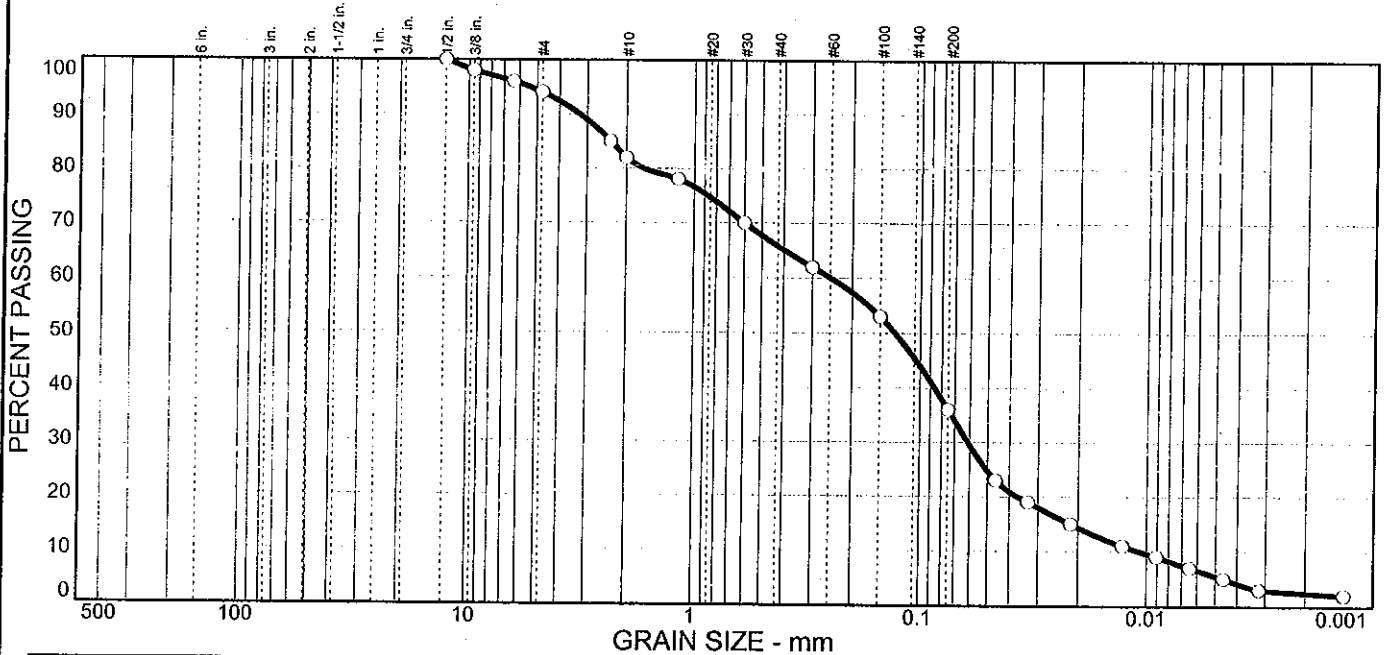
Date: 1/12/07

Sample No: AT354S361

Source of Sample: Silo Ridge 30631.00

Location: SRB-9, SS-4

Elev./Depth: 15-17 ft.



% COBBLES	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0	0	6	12	16	30	31	5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
0.5 in.	100		
0.375 in.	98		
0.25 in.	96		
#4	94		
#8	85		
#10	82		
#16	78		
#30	70		
#50	62		
#100	53		
#200	36		

Soil Description

Red-Brown cmf+ SAND, some+ SILT, trace f GRAVEL, trace CLAY

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D ₈₅ = 2.36	D ₆₀ = 0.249	D ₅₀ = 0.129
D ₃₀ = 0.0613	D ₁₅ = 0.0216	D ₁₀ = 0.0108
C _u = 22.99	C _c = 1.39	

Classification

USCS= SM AASHTO= A-4(0)

Remarks

Sample delivered by the client on 1/2/07.
ASTM D 422 without hydrometer.

* (no specification provided)

Reviewed by: _____

Date: 1/12/07

Particle Size Distribution Report

Project: Laboratory Analysis

Report No.: AT354SL-363-1-07

Client: The Chazen Companies

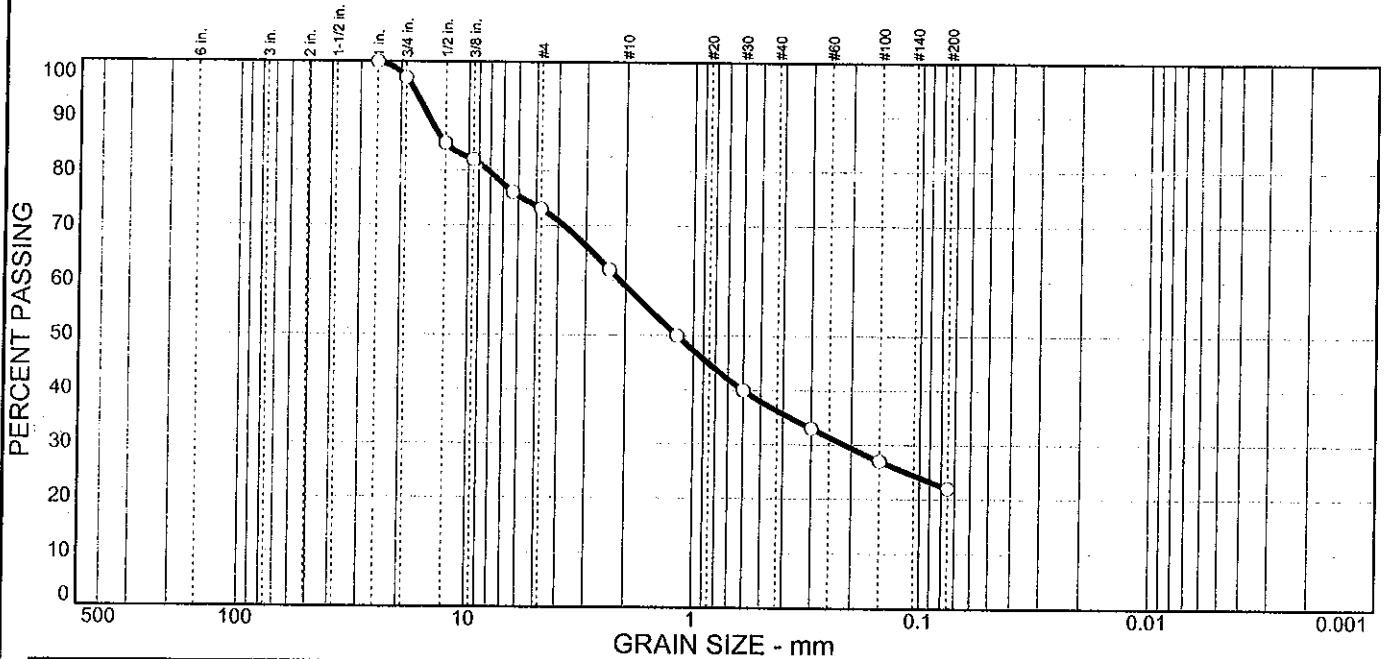
Date: 1/12/07

Sample No: AT354S363

Source of Sample: Silo Ridge 30631.00

Location: SRB-15, SS-2

Elev./Depth: 5-7 ft.



% COBBLES	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0	3	24	14	23	14	22	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
1 in.	100		
0.75 in.	97		
0.5 in.	85		
0.375 in.	82		
0.25 in.	76		
#4	73		
#8	62		
#16	50		
#30	40		
#50	33		
#100	27		
#200	22		

Soil Description

Brown cmf SAND, some cf+ GRAVEL, some- SILT/CLAY

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D₈₅= 12.7 D₆₀= 2.11 D₅₀= 1.18
 D₃₀= 0.214 D₁₅= D₁₀=
 C_u= C_c=

Classification

USCS= SM AASHTO= A-1-b

Remarks

Sample delivered by the client on 1/2/07.
 ASTM D 422 without hydrometer.

* (no specification provided)

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by:

Date:

1/12/07

Particle Size Distribution Report

Project: Laboratory Analysis

Report No.: AT354SL-365-1-07

Client: The Chazen Companies

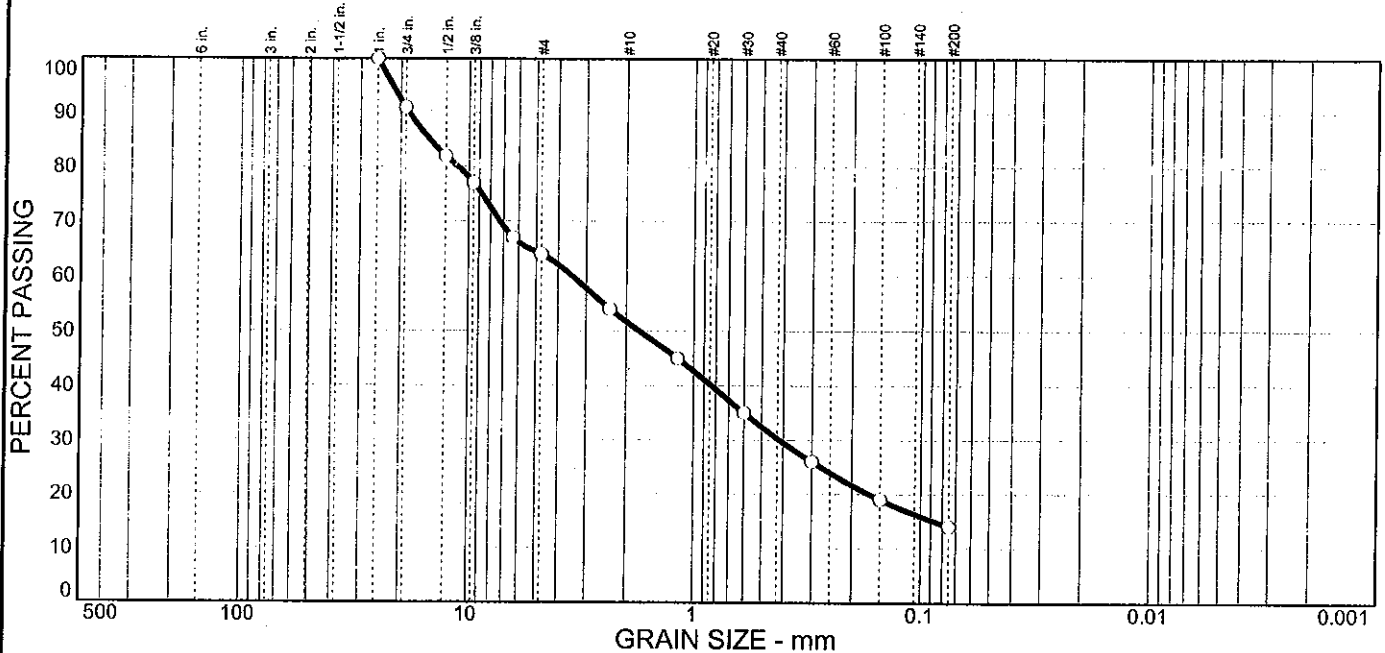
Date: 1/12/07

Sample No: AT354S365

Source of Sample: Silo Ridge 30631.00

Location: SRB-26, SS-2

Elev./Depth: 5-7 ft.



% COBBLES	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0	9	27	12	21	17	14	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
1 in.	100		
0.75 in.	91		
0.5 in.	82		
0.375 in.	77		
0.25 in.	67		
#4	64		
#8	54		
#16	45		
#30	35		
#50	26		
#100	19		
#200	14		

Soil Description

Brown cmf SAND, and- cf+ GRAVEL, little SILT/CLAY

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D₈₅= 14.9 D₆₀= 3.46 D₅₀= 1.75
D₃₀= 0.416 D₁₅= 0.0872 D₁₀=
C_u= C_c=

Classification

USCS= SM AASHTO= A-1-b

Remarks

Sample delivered by the client on 1/2/07.
ASTM D 422 without hydrometer.

* (no specification provided)

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by: _____

Date: 1/12/07

Particle Size Distribution Report

Project: Laboratory Analysis

Report No.: AT354SL-366-1-07

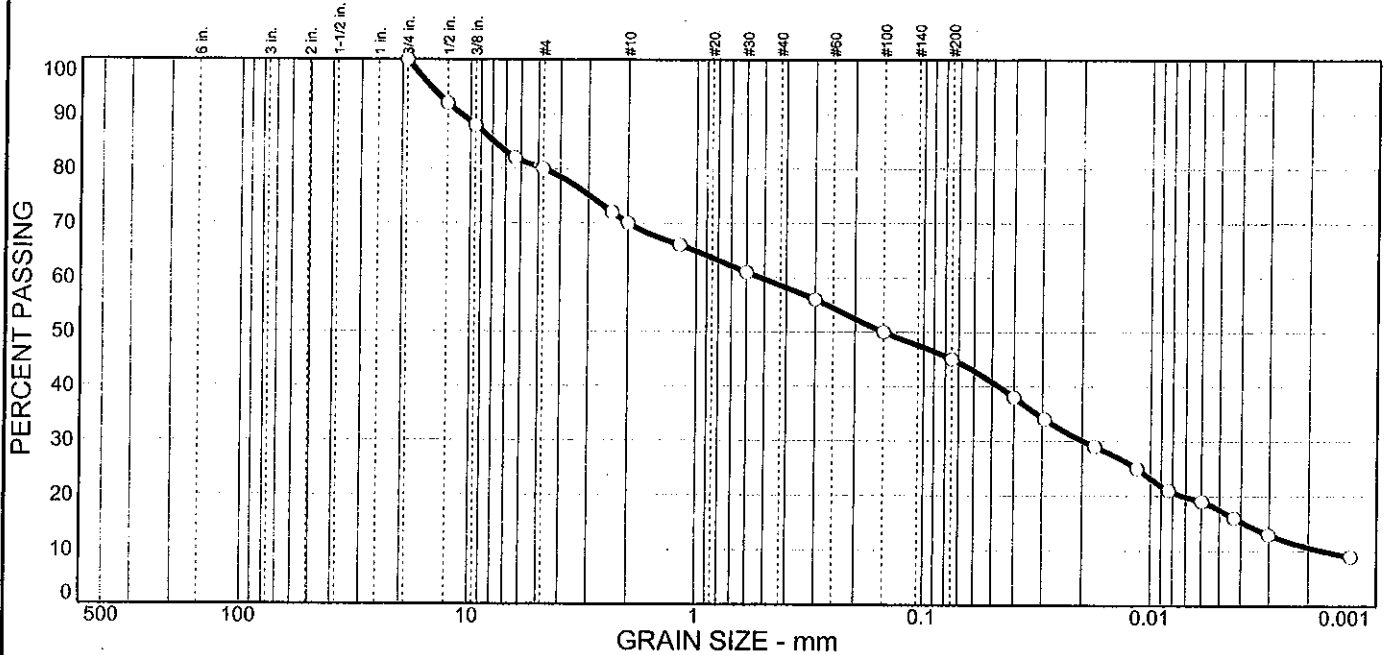
Client: The Chazen Companies

Date: 1/12/07

Sample No: AT354S366
Location: SRB-30, SS-4

Source of Sample: Silo Ridge 30631.00

Elev./Depth: 15-17 ft.



% COBBLES	% GRAVEL		% SAND			% FINES	
	CRS.	FINE	CRS.	MEDIUM	FINE	SILT	CLAY
0	0	20	10	11	14	27	18

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	OUT OF SPEC. (X)
0.75 in.	100		
0.5 in.	92		
0.375 in.	88		
0.25 in.	82		
#4	80		
#8	72		
#10	70		
#16	66		
#30	61		
#50	56		
#100	50		
#200	45		

Soil Description

Gray cmf SAND, some SILT, little f GRAVEL, little+ CLAY

Atterberg Limits

PL= --- LL= --- PI= ---

Coefficients

D₈₅= 7.89 D₆₀= 0.521 D₅₀= 0.150
 D₃₀= 0.0198 D₁₅= 0.0039 D₁₀= 0.0017
 C_u= 305.21 C_c= 0.44

Classification

USCS= SM AASHTO= A-4(0)

Remarks

Sample delivered by the client on 1/2/07.
ASTM D 422 with hydrometer.

* (no specification provided)

ATLANTIC TESTING LABORATORIES, LIMITED

Reviewed by: _____

Date: _____

1/12/07

Appendix C
Global Stability

**THE CHAZEN ENGINEERING
& LAND SURVEYING CO., P.C.**

547 River Street
TROY, NEW YORK 12180
(518) 273-0055 Fax (518) 273-8391

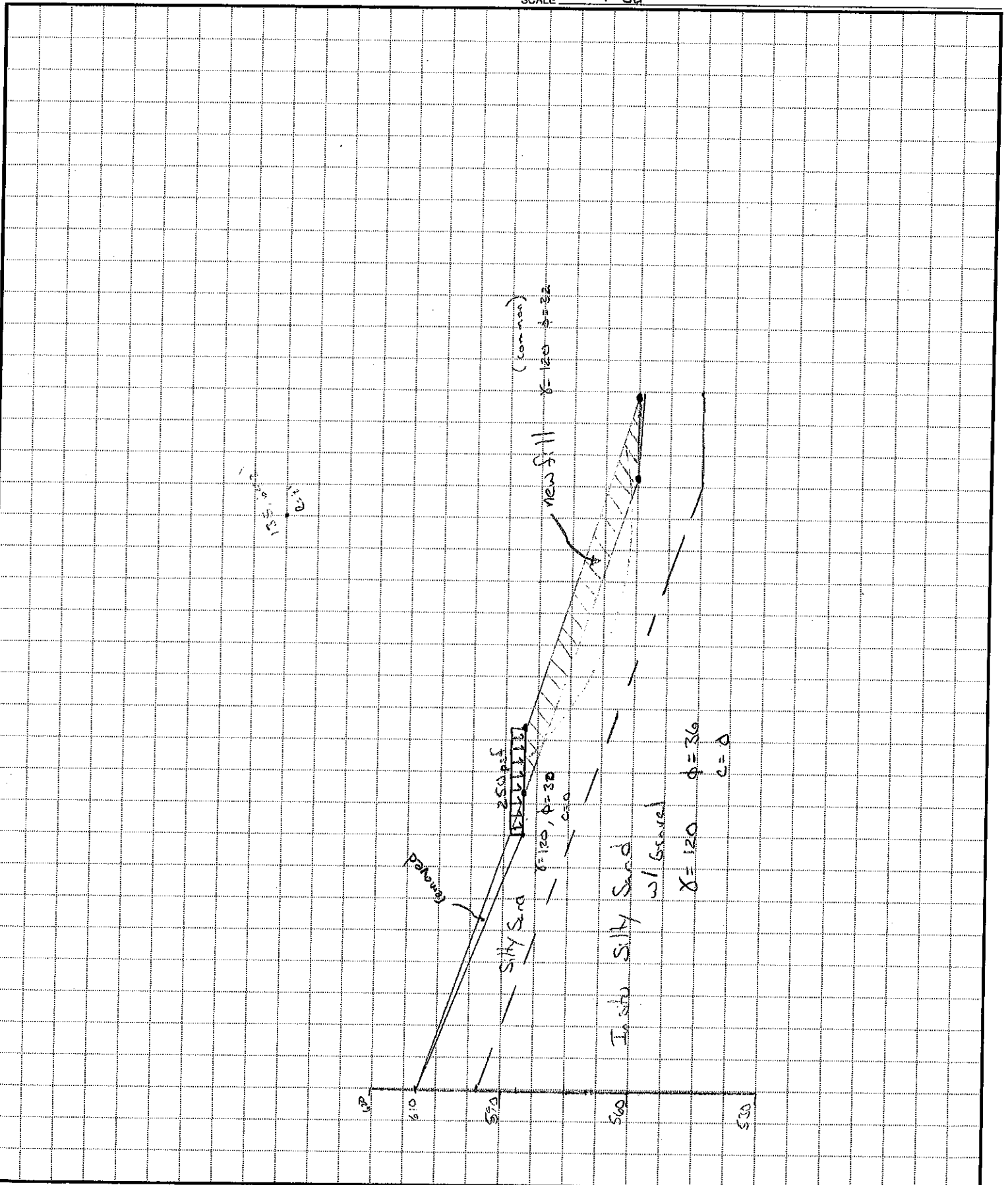
JOB 30631.00 TSCA 1

SHEET NO. 1 OF 5

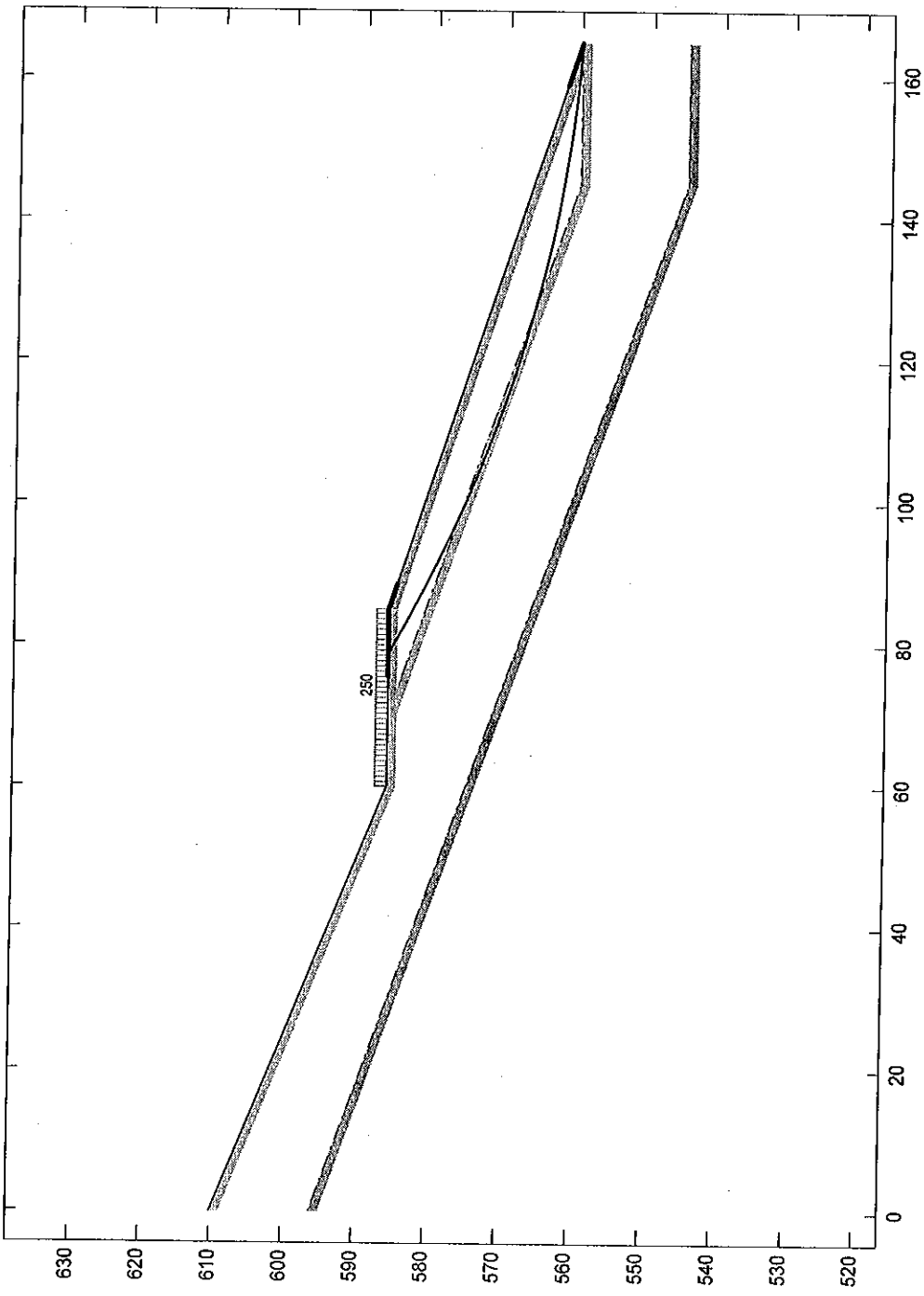
CALCULATED BY MAK DATE 1/4/07

CHECKED BY PJS DATE 1/19/07

SCALE 1:30'



GALENA Version 4.02



Analysis: 1
Multiple Stability Analysis
 Method: Spencer-Wright
 Surface: Circular

Results
 Critical (minimum)
 Factor of Safety: 1.92
 Final Angle of
 Interslice Forces: 17.3°

Edited: 4 Jan 2007 Processed: 16 Jan 2007

Project: New Roadway slope
 Near SRB-6

File: S:\3\30600-30699\30631_00\ENG\GEO\TECHNICAL\Roadway Slope.gmf

The Chazen Companies

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)

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

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 70.00 586.00 145.00 560.00 165.00 560.00

Profile: 2 (3 points) Material beneath: 2 - Silty Sand with Gravel
 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

Slope Surface (4 points)

0.00 610.00 60.00 586.00 85.00 586.00 165.00 560.00

Distributed Loads (1 load)

Load	X-Left	Pressure	X-Right	Pressure
1	60.00	250.0	85.00	250.0

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	583.67	87.16	581.44	91.44	579.32	95.78	577.30
100.16	575.38	104.58	573.57	109.05	571.86	113.56	570.26	118.10	568.77
122.68	567.39	127.29	566.12	131.93	564.96	136.60	563.91	141.29	562.98
146.00	562.16	150.73	561.45	155.47	560.85	160.23	560.37	165.00	560.00

Variable Restraints

Parameter 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

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	PoS
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
13	173.57	759.73	75.50	586.00	163.50	560.49	199.50	1.930
14	178.53	763.93	78.75	586.00	163.50	560.49	204.00	1.931
15	174.21	761.95	75.50	586.00	163.50	560.49	201.75	1.931
16	174.85	764.17	75.50	586.00	163.50	560.49	204.00	1.932
17	175.50	766.39	75.50	586.00	163.50	560.49	206.25	1.933
18	176.14	768.60	75.50	586.00	163.50	560.49	208.50	1.934
19	179.19	766.14	78.75	586.00	163.50	560.49	206.25	1.934
20	172.76	760.18	75.50	586.00	162.00	560.97	199.50	1.935
21	176.43	759.95	78.75	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	1.936
23	174.05	764.62	75.50	586.00	162.00	560.97	204.00	1.937
24	174.69	766.83	75.50	586.00	162.00	560.97	206.25	1.938
25	179.86	768.34	78.75	586.00	163.50	560.49	208.50	1.938
26	175.33	769.05	75.50	586.00	162.00	560.97	208.50	1.939
27	171.09	762.16	78.75	586.00	162.00	560.97	201.75	1.939
28	171.95	760.63	75.50	586.00	160.50	561.46	199.50	1.940
29	172.59	762.85	75.50	586.00	160.50	561.46	201.75	1.941
30	173.23	765.06	75.50	586.00	160.50	561.46	204.00	1.942
31	173.87	767.28	75.50	586.00	160.50	561.46	206.25	1.944
32	177.75	764.37	78.75	586.00	162.00	560.97	204.00	1.944
33	174.51	769.49	75.50	586.00	160.50	561.46	208.50	1.945
34	171.14	761.08	75.50	586.00	159.00	561.95	199.50	1.946
35	171.78	763.29	75.50	586.00	159.00	561.95	201.75	1.947
36	178.42	766.57	78.75	586.00	162.00	560.97	206.25	1.948
37	181.49	769.23	82.00	586.00	159.00	561.95	208.50	1.948
38	172.42	765.51	75.50	586.00	159.00	561.95	204.00	1.949
39	180.80	767.04	82.00	586.00	159.00	561.95	206.25	1.949
40	180.12	764.85	82.00	586.00	159.00	561.95	204.00	1.949
41	182.23	768.83	82.00	586.00	160.50	561.46	208.50	1.950
42	175.65	760.39	78.75	586.00	160.50	561.46	199.50	1.950
43	179.43	762.66	82.00	586.00	159.00	561.95	201.75	1.950
44	187.17	768.54	88.50	584.86	159.00	561.95	208.50	1.950
45	181.55	766.64	82.00	586.00	160.50	561.46	206.25	1.950
46	173.05	767.72	75.50	586.00	159.00	561.95	206.25	1.951
47	186.46	766.36	88.50	584.86	159.00	561.95	206.25	1.951
48	178.75	760.47	82.00	586.00	159.00	561.95	199.50	1.951
49	180.86	764.44	82.00	586.00	160.50	561.46	204.00	1.951
50	187.87	768.16	88.50	584.86	160.50	561.46	208.50	1.951
51	185.75	764.19	88.50	584.86	159.00	561.95	204.00	1.951
52	180.18	762.25	82.00	586.00	160.50	561.46	201.75	1.952
53	173.69	769.93	75.50	586.00	159.00	561.95	208.50	1.952
54	187.17	765.98	88.50	584.86	160.50	561.46	206.25	1.952
55	185.05	762.01	88.50	584.86	159.00	561.95	201.75	1.952
56	179.49	760.06	82.00	586.00	160.50	561.46	199.50	1.952
57	181.60	764.03	82.00	586.00	162.00	560.97	204.00	1.952
58	183.72	768.00	82.00	586.00	163.50	560.49	208.50	1.952
59	188.58	767.77	88.50	584.86	162.00	560.97	208.50	1.953
60	186.46	763.80	88.50	584.86	160.50	561.46	204.00	1.953
61	184.34	759.83	88.50	584.86	159.00	561.95	199.50	1.953
62	185.45	768.77	85.25	585.92	159.00	561.95	208.50	1.953
63	180.92	761.84	82.00	586.00	162.00	560.97	201.75	1.953
64	183.03	765.81	82.00	586.00	163.50	560.49	206.25	1.953
65	187.87	765.60	88.50	584.86	162.00	560.97	206.25	1.953
66	185.75	761.63	88.50	584.86	160.50	561.46	201.75	1.953
67	184.74	766.59	85.25	585.92	159.00	561.95	206.25	1.953
68	189.28	767.39	88.50	584.86	163.50	560.49	208.50	1.954
69	187.16	763.42	88.50	584.86	162.00	560.97	204.00	1.954
70	180.23	759.64	82.00	586.00	162.00	560.97	199.50	1.954
71	182.34	763.62	82.00	586.00	163.50	560.49	204.00	1.954
72	184.46	767.59	82.00	586.00	165.00	560.00	208.50	1.954
73	185.04	759.45	88.50	584.86	160.50	561.46	199.50	1.954
74	186.15	768.38	85.25	585.92	160.50	561.46	208.50	1.954
75	184.03	764.41	85.25	585.92	159.00	561.95	204.00	1.954
76	188.57	765.21	88.50	584.86	163.50	560.49	206.25	1.954
77	186.45	761.24	88.50	584.86	162.00	560.97	201.75	1.955
78	185.44	766.20	85.25	585.92	160.50	561.46	206.25	1.955
79	181.66	761.42	82.00	586.00	163.50	560.49	201.75	1.955
80	183.77	765.39	82.00	586.00	165.00	560.00	206.25	1.955
81	183.32	762.23	85.25	585.92	159.00	561.95	201.75	1.955
82	189.98	767.00	88.50	584.86	165.00	560.00	208.50	1.955
83	187.86	763.03	88.50	584.86	163.50	560.49	204.00	1.955
84	186.85	767.99	85.25	585.92	162.00	560.97	208.50	1.955
85	185.74	759.06	88.50	584.86	162.00	560.97	199.50	1.955
86	184.73	764.02	85.25	585.92	160.50	561.46	204.00	1.955
87	179.08	768.77	78.75	586.00	162.00	560.97	208.50	1.956
88	183.08	763.20	82.00	586.00	165.00	560.00	204.00	1.956
89	180.97	759.22	82.00	586.00	163.50	560.49	199.50	1.956
90	182.61	760.05	85.25	585.92	159.00	561.95	199.50	1.956
91	189.28	764.82	88.50	584.86	165.00	560.00	206.25	1.956
92	187.16	760.85	88.50	584.86	163.50	560.49	201.75	1.956
93	186.14	765.81	85.25	585.92	162.00	560.97	206.25	1.956
94	184.02	761.84	85.25	585.92	160.50	561.46	201.75	1.956
95	182.39	761.00	82.00	586.00	165.00	560.00	201.75	1.956
96	188.57	762.63	88.50	584.86	165.00	560.00	204.00	1.957
97	187.55	767.60	85.25	585.92	163.50	560.49	208.50	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

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	583.67	87.16	581.44	91.44	579.32	95.78	577.30
100.16	575.38	104.58	573.57	109.05	571.86	113.56	570.26	118.10	568.77
122.68	567.39	127.29	566.12	131.93	564.96	136.60	563.91	141.29	562.98
146.00	562.16	150.73	561.45	155.47	560.85	160.23	560.37	165.00	560.00

Slice Geometry and Properties (38 slices)

Slice	X-Left	Width	Y-Top	Y-Base	Base Angle	Base Matl	Base Cohesion	Total Weight	PoreWater Force	Side Force (LHS)	l/h (LHS)	l'/h (LHS)
1	78.75	2.09	586.00	585.42	29.1	3	0.00	145.91	0.00	0.00	0.00	0.00
2	80.84	2.09	586.00	584.25	29.1	3	0.00	437.73	0.00	129.25	0.22	-0.22
3	82.93	2.07	586.00	583.13	27.8	3	0.00	714.87	0.00	314.96	0.20	-0.20
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
6	89.30	2.14	584.25	579.85	26.4	3	0.00	1132.15	0.00	837.70	0.26	-0.26
7	91.44	2.17	583.55	578.81	25.0	3	0.00	1232.87	0.00	1003.96	0.28	-0.28
8	93.61	2.17	582.85	577.80	25.0	3	0.00	1312.67	0.00	1155.99	0.29	-0.29
9	95.78	2.54	582.08	576.74	23.6	3	0.00	1630.65	0.00	1317.86	0.30	-0.30
10	98.32	1.84	581.37	575.78	23.6	1	0.00	1233.80	0.00	1480.22	0.31	-0.31
11	100.16	2.21	580.71	574.92	22.3	1	0.00	1537.31	0.00	1630.63	0.31	-0.31
12	102.37	2.21	579.99	574.02	22.3	1	0.00	1587.01	0.00	1781.53	0.31	-0.31
13	104.58	2.23	579.27	573.14	20.9	1	0.00	1644.05	0.00	1937.31	0.31	-0.31
14	106.82	2.23	578.55	572.29	20.9	1	0.00	1678.07	0.00	2059.20	0.31	-0.31
15	109.05	2.25	577.82	571.46	19.5	1	0.00	1719.19	0.00	2183.61	0.31	-0.31
16	111.30	2.25	577.08	570.66	19.5	1	0.00	1737.24	0.00	2269.33	0.31	-0.31
17	113.56	2.27	576.35	569.89	18.1	1	0.00	1761.36	0.00	2355.99	0.31	-0.31
18	115.83	2.27	575.61	569.14	18.1	1	0.00	1763.16	0.00	2400.51	0.31	-0.31
19	118.10	2.29	574.87	568.43	16.8	1	0.00	1770.02	0.00	2445.08	0.31	-0.31
20	120.39	2.29	574.13	567.74	16.8	1	0.00	1755.06	0.00	2445.69	0.31	-0.31
21	122.68	2.31	573.38	567.07	15.4	1	0.00	1744.10	0.00	2446.30	0.31	-0.31
22	124.99	2.31	572.63	566.44	15.4	1	0.00	1712.52	0.00	2402.79	0.31	-0.31
23	127.29	2.32	571.88	565.83	14.0	3	0.00	1683.15	0.00	2360.08	0.30	-0.30
24	129.61	2.32	571.12	565.25	14.0	3	0.00	1634.64	0.00	2233.42	0.31	-0.31
25	131.93	2.33	570.37	564.70	12.7	3	0.00	1586.76	0.00	2110.36	0.31	-0.31
26	134.27	2.33	569.61	564.18	12.7	3	0.00	1521.14	0.00	1948.68	0.31	-0.31
27	136.60	2.34	568.85	563.68	11.3	3	0.00	1454.34	0.00	1793.69	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	566.56	562.36	9.9	3	0.00	1186.09	0.00	1227.26	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	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									1.23	0.00	0.00