



Geotechnical  
Foundations  
Land Planning  
Geo-Structural  
Environmental  
Water Resources

October 29, 2020 via email: [btierney@amsacquisitions.com](mailto:btierney@amsacquisitions.com)

Principals:

Brian Tierney  
AMS Yonkers LLC  
595 Madison Ave. Suite 1101  
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Anthony Castillo, PE  
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John M. Nederfield, PE  
Justin M. Protasiewicz, PE  
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RE:

**Geotechnical Review Letter  
Chicken Island – Proposed Residential Development  
32 John Street  
Yonkers, NY 10701  
SESI Project No. 11550**

Dear Mr. Tierney:

In accordance with our Professional Services Agreement dated October 5, 2020, we have completed our geotechnical review for the above referenced project. This letter contains a summary of our findings and presents recommendations for the proposed construction.

In preparation of this letter, SESI has completed our review of the following:

- *Phase 1 Coordination* concept plans, prepared by S9 Architecture, dated September 10, 2020;
- *Phase 2 Coordination* concept plans, prepared by S9 Architecture, dated September 10, 2020;
- *Phase 3 Coordination* concept plans, prepared by S9 Architecture, dated September 10, 2020;
- *Phase 4 Coordination* concept plans, prepared by S9 Architecture, dated September 10, 2020;
- *Phase 5 Coordination* concept plans, prepared by S9 Architecture, dated September 10, 2020;
- *Preliminary Geotechnical Report*, prepared by McLaren Engineering Group, dated January 30, 2007; and
- Historic SESI investigations performed in 2007 and 2017

Please feel free to contact me if you have any questions regarding the above.

Sincerely,

**SESI CONSULTING ENGINEERS**

Michael St. Pierre, P.E.  
President

Michael A. Felicetta  
Assistant Project Engineer II

## PROPOSED CONSTRUCTION & EXISTING SITE CONDITIONS

SESI understands that the existing project site consists of approximately 13 acres of contiguous parcels known as Chicken Island, located in the City of Yonkers, New York. The majority of the existing site is bound by Palisades Avenue to the north, James Street and Henry Herz Street to the west, Nepperhan Avenue to the South, and New School Street to the east. The remaining portion of the proposed development is located to the southeast of the intersection of John Street and New School Street. The site currently consists of paved parking lots, roadways, and landscaped areas and also contains multiple retaining walls. The Saw Mill River enters the project site in an open channel to the east of the John Street Extension, flows westward in a culvert under New School Street, the municipal parking lot and Henry Hertz Street, then turns northward in an open channel, then continues northward in a culvert under Ann Street and the lots to the west.. The existing site is generally gently sloping upward from west to east and south to north with grades ranging from approximately Elevation +51 to Elevation +66. Based on our review of the concept plans, the proposed construction may consist of a 5-phase residential development at the proposed project site. Phase 1 will consist of a 100 to 400-foot-tall residential high-rise with a 20 to 40-foot-high podium, also containing 3 stories of below grade parking; Phase 1A will consist of a 25 foot tall retail pavilion; Phase 2 will consist of a 165 to 250-foot-tall residential high-rise with a 65-foot-high podium, also containing 2 stories of below grade parking; Phase 3, which will be connected to the Phase 2 development, will consist of a 400-foot-tall residential high-rise with a 65-foot-high podium, also containing 2 stories of below grade parking; Phase 4 will consist of a 250-foot-tall residential high-rise with a 25-foot-high podium, also containing 1 story of below grade parking; and Phase 5 will consist of a 250-foot-tall residential high-rise with a 65-foot-high podium.

Based on our review of the concept plans, SESI understands the proposed construction will have basement floor elevations ranging between Elevation + 26.0 and Elevation +40 for Phase 1 through Phase 4, excluding Phase 1A as no elevations were provided. Phase 5 will have a finished floor elevation of +65 and not contain a basement level. Based on the proposed elevations, cuts to achieve the basement floor elevation will range between 25 and 40 feet for the Phase 1 development area, between 17 and 21 feet for the Phase 2 and 3 development areas, and between 1 and 6 feet for the Phase 4 development area. Deeper cuts should be anticipated for foundations, sub-slab utilities, and excavations for portions of the buildings such as elevator and sump pits. Fills of up to 3 feet will be required for the Phase 5 development area. It is assumed that Phase 1A construction does not have a basement and that only minor cuts and fill will be required to achieve the proposed finished floor elevation.

In preparation of this letter, SESI has not received any civil or structural design drawings or any of the proposed column and wall loads. Once completed, these plans should be made available to SESI for review, in order to confirm the preliminary recommendations presented herein remain valid.

## HISTORIC FIELD INVESTIGATIONS

Our engineering evaluation is based on a review of existing soils and geologic data, a review of the investigation and *Preliminary Geotechnical Report*, prepared by McLaren Engineering Group, and previous investigations performed by SESI. The *Preliminary Geotechnical Report*, by McLaren Engineering Group included 22 boring logs and 4 test pit logs from a 2007 investigation. McLaren's explorations were performed at widely spaced locations across the site and on parcels adjacent to the proposed development. SESI's previous investigation performed in 2007 and 2017 as part of an environmental investigation consisted of the drilling of approximately 60 borings which included the installation of 46 monitoring wells and 5 soil vapor points. SESI's explorations were performed at widely spaced locations across the site and on adjacent parcels to the proposed development. An exploration location plan and the subsurface investigation logs by McLaren Engineering Group and SESI are included in **Appendix A**.

## **SUBSURFACE CONDITIONS**

Generally, the site subsurface conditions consist of uncontrolled fill, underlain by glacial till, underlain by bedrock. Based on a review of the investigations performed by McLaren Engineering Group and SESI's historic investigations, the following subsurface conditions were encountered in order of increasing depth:

Surface Materials: The surface materials encountered in the borings generally consisted of up to 6 inches of asphalt pavement within the parking lot areas and between 6 to 12 inches of topsoil within investigations performed in landscaped areas. Curbs, sidewalks, and slabs are also present at the site.

Uncontrolled Fill: An uncontrolled fill was encountered below the surface materials in all borings and generally consisted of a predominately granular soil intermixed with construction debris, containing concrete, brick, wood, metal and other miscellaneous debris. The uncontrolled fill also contained variable amounts of cobbles and boulders. The uncontrolled fill, within the limits of the proposed development, was noted to extend to depths ranging between 1 and 15 feet below existing grades; however, it was noted that, as much as 25 feet of uncontrolled fill was observed in locations on adjacent parcels. This stratum was generally observed to be in a loose to very dense state, which is typical of an uncontrolled fill.

Glacial Till: Underlying the uncontrolled fill, the native glacial till soils were encountered. The glacial soils typically consist of a heterogenous mixture of sand, silt, and gravel, laden with cobbles and boulders. It should be noted that two distinct types of glacial till are commonly encountered in this area, a gray-brown and a red-brown glacial till which is the result of two separate glacial events which occurred in this region. The glacial till extended to depths of 25 to 75 feet below existing grades within the proposed development area and was occasionally deeper or shallower at the adjacent parcels. The glacial till was generally observed to be in a dense to very dense condition and generally became more dense with increasing depth. It should be noted that the advancement of borings in this layer was often very difficult due to the frequency and size of the cobbles and boulders and the density of the layer.

Bedrock: Underlying the glacial till, the gneissic parent bedrock (Fordham Gneiss formation) was encountered at elevations varying from -16 to +35. Based on the rock cores performed by McLaren Engineering Group, the Rock Quality Designations (RQDs) in the upper 10 feet ranged between 8% and 87%. The RQDs average approximately 48.3% in the upper 5 feet, 43.0% between 5 and 10 feet below the top of the rock surface, and the overall average RQD is approximately 47.6%. It should be noted that the eastern extent of the proposed development lies within the Inwood Marble formation and several blocks west of the proposed site is also mapped within the Inwood Marble formation. It is conceivable that this formation may be encountered during construction. It should be noted that bedrock was not encountered in all borings.

Within the proposed Phase 1 development, the top of bedrock was observed between elevation -16 and +23. Within the proposed Phase 2 & 3 developments, the top of rock was observed between elevations +15 and +17. Within the proposed Phase 4 development, the top of rock was observed between elevation +34 and +35, and finally, within the proposed Phase 5 development, the top of rock was observed between elevation +3 and +22, where encountered. It should be noted that the bedrock elevation varies across the site and generally is encountered at a higher elevation proceeding southward and eastward.

**RELATIONSHIP OF RQD AND ROCK QUALITY**

<b><u>ROCK QUALITY DESIGNATION (RQD)<sup>(1)</sup></u></b>	<b><u>DESCRIPTION OF ROCK QUALITY</u></b>
0 – 25 .....	VERY POOR
25 – 50 .....	POOR
50 – 75 .....	FAIR
75 – 90 .....	GOOD
90 – 100 .....	EXCELLENT

<sup>(1)</sup> “**Rock Quality Designation**” is defined as the cumulative amount of pieces of the core that are at least 4 inches long divided by the total length of the rock core run. Obvious fractures caused by drilling are ignored in this system.

Groundwater: Across the development area, groundwater ranges between elevation +40.5 to elevation +60. The groundwater typically flows from east to west and becomes deeper in elevation proceeding west. It should be noted that localized zones of perched water may be encountered within the fill, in zones with high percentages of fine-grained soils, and at the soil-rock interface.

Within the proposed Phase 1 development, the groundwater table was observed between elevation +40.5 and +53. Within the proposed Phase 2 & 3 developments, the groundwater table was observed between elevations +41.5 and +51. Within the proposed Phase 4 development, the groundwater table was observed between elevation +50.5 and +53, and finally, within the proposed Phase 5 development, the groundwater table was observed between elevation +52 and +60.

A table summarizing approximate ground surface elevations, groundwater elevations, and top of rock elevations based on each development area is provided in Table 1 below:

<b>Development Area (Lowest Floor El.)</b>	<b>Ground Surface Elevations</b>	<b>Groundwater Elevations</b>	<b>Top of Rock Elevations</b>
Phase 1 Dev. Area (B.F.E. +26)	+51 to +66 (Increasing W to E)	+40.5 to +53	-16 to +23
Phase 1A Dev. Area (F.F.E Unknown)	+54 to +56 (Increasing W to E)	+45	-15
Phase 2 & 3 Dev. Area (B.F.E. +40)	+57 to +61 (Increasing W to E)	+41.5 to +51	+15 to +17
Phase 4 Dev. Area (B.F.E. +57)	+58 to +63 (Increasing W to E)	+50.5 to +53	+34 to +35
Phase 5 Dev. Area (F.F.E. +65)	+61 to +63 (Increasing W to E)	+52 to +60	+3 to +22

## EVALUATION AND RECOMMENDATIONS

The recommended site preparation and building support considerations discussed in this report are based primarily on geotechnical engineering considerations. Our geotechnical design considerations may require modifications to address environmental and/or legal considerations. This may include reuse of on-site materials, handling and disposal of soils, pumping/treating of groundwater, etc. It should be noted that much of the Site is in the Brownfield Cleanup Program. As such, a Site Management Plan was developed by SESI that governs all future development and intrusive activities.

From a soils and foundation support standpoint, this Site can be considered good with respect to providing satisfactory support of the planned construction. The primary negative aspects of the site are the depth of uncontrolled fill in some areas, the depth to groundwater, which in some cases is at a higher elevation than the proposed finished floor elevations, and the depth to bedrock. Although areas of thick uncontrolled fills were encountered, it is anticipated that these materials will be removed in the Phase 1, Phase 2, and Phase 3 development areas in order to construct the proposed structures.

Based on a review of the proposed development concept plans, the subsurface conditions, and the anticipated heavy loads from the structures, the proposed buildings could be supported on either a mat foundation or on a deep foundation consisting of drilled shafts. We do not believe that driven piles would be appropriate due to the frequency of boulders in the glacial soils. The selection of the appropriate foundation support option will also depend on the lateral and uplift loads of the structure. The use of tie-downs may be required with the mat foundation alternate if the dead load of the structure is not sufficient to resist the uplift or hydrostatic loads.

### **Mat Foundation Option**

The proposed buildings may be supported on a mat foundation deriving its support from the natural glacial soils or controlled compacted fills and be designed using a maximum net allowable soil bearing pressure of 3.0 tsf (6,000 psf) to 5.0 tsf (10,000 psf), depending on the depth of the mat below the ground surface. The mat foundation should be designed using a subgrade modulus of 175 pci, assuming that a 12-inch thick layer of  $\frac{3}{4}$ -inch clean crushed stone is placed beneath the mat. Prior to the placement of stone, the subgrade should be inspected by SESI to confirm the required bearing capacity.

If an uncontrolled fill is present beneath the proposed mat foundation subgrade elevation (Phase 1A, 4 and 5 buildings), it will be necessary to remove the uncontrolled fill and replace it in a controlled manner. This could require excavations extending to depths of up to 15± feet below existing grade to reach the natural soils. In order to achieve these depths, it will likely be necessary to install a support of excavation (SOE) system and dewatering system which is discussed later in this report.

Due to the high groundwater and the proposed foundation depths in the Phase 1, 2 and 3 buildings, the mat foundation will need to be designed as a watertight "bathtub" and will need to be designed to account for hydrostatic pressure which may require the use of tie-down anchors to overcome the uplift forces. The foundation walls would also need to be designed to withstand these forces. The watertight system would likely include the use of a membrane such as the Preprufe/Bituthene waterproofing system by W. R. Grace and Co. and the use of water-stops at joints where the foundation wall sections, and slab come together.

If tie-down anchors are required to compensate for the hydrostatic pressure or uplift forces on the building, they may consist of a 24-strand cable installed within a 12-inch diameter cased drill hole. The bonded zone for the anchor would fall within the glacial till or bedrock. A 24-strand anchor has a material capacity of approximately 840 kips. The length/depth of the anchor will be dependent on the required uplift loads and the number of anchors. The tie-down anchors will impart a load on the mat foundation

which may exceed the bearing capacity of the soil. The need for the anchors should be determined by the structural engineer during the design process.

Settlement of the mat foundation would be determined during the design of the foundation system.

### **Drilled Shaft Option**

The proposed buildings may be supported on drilled shafts deriving their support from the dense glacial soils or bedrock. Drilled shafts drilled into the natural glacial soils or bedrock will provide relatively high capacity foundation elements. The drilled shafts would bypass any uncontrolled fills which would eliminate the need to remove and replace the fill and will eliminate the need for an SOE in the Phase 1A, 4 and 5 buildings. The drilled shaft or caisson foundation system would consist of a concrete filled casing, extending into the dense glacial soils or bedrock, depending on the loads required (dead load and uplift load) and depth to bedrock. Drilled shafts extending into the bedrock will include an uncased rock socket, and rebar cage or center bar. The diameter of the rock socket shall be approximately equal to the inside diameter of the pile. The depth of the rock socket shall not be less than the outside diameter of the casing and should be sufficient to develop the full load capacity of the drilled shaft with a minimum factor of safety of two.

The rock socket and casing should be thoroughly cleaned of foreign materials and water should be removed prior filling with concrete. The drilled shaft shall have a full depth structural rebar cage or equivalent steel full depth core installed into the rock socket. The diameter of the elements and amount of steel area required will be designed once loads are provided. The steel cage or core shall not exceed 25 percent of the gross area of the drilled shaft and shall have a minimum clearance of 2 inches between the inner steel and the casing. If water is present within the casing and/or rock socket and cannot be removed prior to placing the concrete, the concrete shall be placed by tremie methods or an approved method. The means and methods of the drilled shaft installation should be left to the discretion of the contractor.

Based on the size of the diameter and embedment into the bearing stratum of the drilled shaft, allowable capacities may range between 75 to 300 tons per element. Higher capacities may be obtained by increasing the rock socket depth or increasing the diameter of the drilled shaft or caisson.

Upon final design, a load testing program shall be implemented and performed in accordance with the 2020 Building Code of New York State.

Utilizing a drilled shaft system will also require a structural slab which will also need to be designed for hydrostatic forces if the lowest floor extends below the groundwater elevation.

Settlement of the foundation system using drilled shafts will be minimal.

### **Support of Excavation System**

A support of excavation system will be required in order to achieve the proposed subgrade or over-excavation depths for all of the buildings. The SOE could consist of either drilled soldier beam and lagging system or interlocking sheet piles, although there may be some difficulty installing the sheet piles due to the frequency of cobbles and boulders. Based on the excavation depths, multiple levels of tie-backs will be required. The tie-backs will likely extend beyond the property lines requiring temporary easements from the adjoining property owners or City.

Another option would be to install an interlocking secant pile wall which could be used as both an SOE and the permanent foundation wall for the lower levels. A secant wall is constructed by drilling alternating primary and secondary concrete piles, where the secondary piles cut into the primary piles in order to create a continuous impervious wall. Often, steel beams are inserted into the primary piles to add

additional support. The result is a barrier to stop the flow of water and hold out the soils. Depending on the depth of the excavation, bracing or tie-backs may be required. The secant wall can also be used as the permanent wall of the structure, carrying the wall loads from above. As an alternate to using tie-backs or internal bracing, the building construction could be done using top down construction methods, whereby the secant wall is installed followed by the interior columns installed from the ground surface. Then, the ground floor slab is constructed to brace the top of the secant wall, except for a hole left in the slab to allow for excavation to the lower level beneath the ground floor slab. Once the next floor level is reached, the next level slab is constructed and the process is repeated until the lowest floor elevation is reached.

In all instances where the depth of the excavation extends below the groundwater elevation, the support of excavation system will need to be designed to resist hydrostatic pressures and will need to be designed as a watertight system. In order to construct the soldier beam and lagging system below the water table, the lagging could consist of steel plates welded together and welded to the H-piles. A temporary dewatering system will also be required to keep groundwater levels at least 2 feet below the bottom of the excavation during construction.

Due to the nature of the subsurface soils and the high volume of boulders within the soil matrix, line drilling will likely be required for the soldier beam and lagging or sheet pile wall options along the length of the proposed excavation support system in order to facilitate installation of the lagging without disturbing the soil behind the wall which would result in voids and settlement outside the SOE.

### **Control of Groundwater**

Groundwater was encountered at elevations ranging from +40.5 to +60 which is below the proposed finished floor elevation in several of the buildings. It will also likely be encountered during any deeper utility installations.

In order to construct the proposed building foundations, a more comprehensive dewatering system may be required. It may be prudent to perform several pump tests on the existing wells in order to determine flow rates and to design a dewatering system.

If stormwater/groundwater seepage is encountered during construction (outside of the areas where known deep excavations and dewatering systems will be required), gravel filled sumps with pumps should be installed below the subgrade elevation to allow for dewatering of the excavation. If any significant groundwater inflow is encountered or if any excavations extend greater than two feet below the observed groundwater levels, a more comprehensive dewatering system may be required. Design of this system will be based on the depth and size of the excavation and the groundwater levels encountered. Permits for construction dewatering may also be required. All pumped water should be handled in accordance with all applicable requirements and regulations and the SMP and be approved by the environmental engineer.

Foundation drains are required for any retaining walls below grade and should be tied to the storm sewer system or to a sump with pump.

We recommend that the site be graded, when necessary, during construction to promote positive surface drainage and avoid ponding of water during construction.

### **Reuse of On-Site Soils**

Inorganic cut soils may be reused as structural fill; however, some of the existing fill materials contain miscellaneous construction debris and some of the soils may possess a high silt/clay content and contain significant amounts of cobbles and boulders. The soils with a high silt/clay content will be moisture sensitive and cannot be worked or compacted when significantly over optimum water content and once

wet, will require a period of time to dry. Also, the soils excavated from below the groundwater elevation will be too wet for immediate reuse and will require treatment or drying time prior to use. Cobbles, boulders, and durable construction debris may be crushed and used as structural fill.

The ease with which soil fills can be constructed on this site will, to a degree, depend on the time of year in which construction takes place and the construction procedures utilized by the earthwork contractor. Wetting or drying of the fill soils may be required prior to their reuse. The moisture sensitive soils can also be treated with lime/cement in order to achieve the required moisture contents and densities.

The handling and reuse of soils should be performed and follow the guidance of the current Site Management Plan and the recommendations presented for reuse of on-site soils does not take into account any environmental constraints.

**Seismic Design**

The site soils for the proposed **Phase 1, 2 & 3** buildings have been classified as Site Class C for seismic design purposes in accordance with 2020 Building Code of New York State. Based on a structural occupancy/risk category of I/II/III and information provided by the USGS: U.S. Seismic Design Maps, the following seismic design criteria should be used for this project:

Mapped Spectral Response Acceleration for Short Periods	SS = 0.297g
Mapped Spectral Response Acceleration for 1-Second Period	S1 = 0.061g
Site Coefficient	Fa = 1.3
Site Coefficient	Fv = 1.5
Spectral Response for short periods	SMS = 0.386g
Spectral Response for 1 second period	SM1 = 0.092g
Design Spectral Response Acceleration for Short Periods	SDS = 0.257g
Design Spectral Response Accelerations for 1-Second Period	SD1 = 0.061g

The site soils for the proposed **Phase 1A, 4 & 5** buildings have been classified as Site Class D for seismic design purposes in accordance with 2020 Building Code of New York State. Based on a structural occupancy/risk category of I/II/III and information provided by the USGS: U.S. Seismic Design Maps, the following seismic design criteria should be used for this project:

Mapped Spectral Response Acceleration for Short Periods	SS = 0.297g
Mapped Spectral Response Acceleration for 1-Second Period	S1 = 0.061g
Site Coefficient	Fa = 1.562
Site Coefficient	Fv = 2.4
Spectral Response for short periods	SMS = 0.464g
Spectral Response for 1 second period	SM1 = 0.147g
Design Spectral Response Acceleration for Short Periods	SDS = 0.309g
Design Spectral Response Accelerations for 1-Second Period	SD1 = 0.098g

**ADDITIONAL CONSIDERATIONS**

The existing Saw Mill River flows through a culvert that is located beneath the Phase 4 building. The culvert will either need to be relocated or the proposed foundation be constructed to not impart a load onto the culvert. This will need to be coordinated with the appropriate regulatory agencies.



## **ADDITIONAL INVESTIGATIONS AND STUDIES**

We recommend that an additional subsurface exploration program, including soil borings be performed to further explore the nature and consistency of the underlying subsurface conditions. If desired an MASW survey may also be performed within the proposed Phase 1A, 4 & 5 building areas to determine if a higher seismic site class may be utilized.

## **LIMITATIONS**

SESI's recommendations are solely based on a review of the published geologic data and review of the referenced documents provided. The subsurface investigation performed by others, identifies the subsurface conditions only at the locations of the explorations and at the depths where the samples were taken. SESI Consulting Engineers reviews the published geologic data and provided field data and uses their professional judgment and experience to render an opinion on the subsurface conditions throughout the site. The recommendations presented here-in are preliminary and not for final design and should be verified with additional investigations or analyses. Because the actual subsurface conditions may differ, we recommend that SESI be retained to provide construction inspection in order to minimize the risks associated with unanticipated conditions.

This report should not be used:

1. When the nature of the proposed buildings is changed;
2. When the size or configuration of the proposed buildings are altered;
3. When the location or orientation of the proposed buildings are modified;
4. When there is a change in ownership; or
5. For application to an adjacent or any other site.

SESI shall not accept any responsibility for problems, which may occur if SESI is not consulted when there are changes to the factors considered in this report's development. The soil logs should not be separated from the Engineering Report in order to minimize the possibility of soil log misinterpretation.

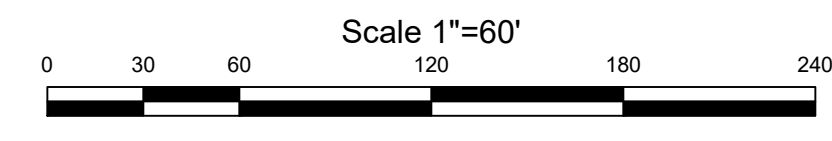
## **DISCLAIMER**

This Report was prepared by SESI for the sole and exclusive use of AMS Yonkers, LLC. Nothing under the Professional Services Agreement between SESI and its client, AMS Yonkers LLC, shall be construed to give any rights or benefits to anyone other than Client and SESI, and all duties and responsibilities undertaken pursuant to the Agreement will be for the sole and exclusive benefit of Client and SESI and not for the benefit of any other party. This Report has been prepared and issued subject to the express condition that same is not to be disseminated to anyone other than Client, without the advance written consent of SESI (which SESI, in its sole discretion, is free to grant or withhold). Use of the Report by any other person is unauthorized and such use is at the sole risk of the user.

# **APPENDIX A**



- LEGEND**
- MW-38 DEEP MONITORING WELL, SESI 2007
  - MW-30 SHALLOW MONITORING, SESI 2007
  - SED/SW5 WATER SAMPLE, SESI 2007
  - SB-6 SOIL BORING, SESI 2007
  - SV-1 SOIL VAPOR SAMPLING, SESI 2007
  - MW-104D DEEP MONITORING WELL, SESI 2017
  - MW-102S SHALLOW MONITORING WELL, SESI 2017
  - B-1 BORING LOCATION, MCLAREN 2007
  - TP-1 TEST PIT LOCATION, MCLAREN 2007
  - 0+00 SOIL PROFILE STATION LINE, MCLAREN 2007



N:\PROJECTS\11550\11550 - EXPLORATION LOCATION PLAN.DWG 10/28/20 04:13:37PM .cmt LAYOUT:FIG-1

NYS Education Law  
 Unauthorized alterations or additions to this plan are a violation of section 1209 (2) of the New York State Education Law. Copies of this map not having the seal of the engineer shall not be valid.  
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<p><b>SESI</b>          CONSULTING ENGINEERS          12A MAPLE AVE. PINE BROOK, N.J. 07068 PH: 973-868-9030</p>		<p>SOILS / FOUNDATIONS          SITE DESIGN          ENVIRONMENTAL</p>	<p>dwg by: aab          chk by: FL          scale: AS NOTED          date: 10/28/2020</p>
<p><b>DRAFT</b></p>		<p>MICHAEL W. ST. PIERRE, P.E.          PROFESSIONAL ENGINEER          N.Y. LIC. NO. 80271</p>	
<p>CHICKEN ISLAND          YONKERS, WESTCHESTER COUNTY, NY</p>		<p>EXPLORATION LOCATION PLAN</p>	
<p>job no. 11550          drawing no.</p>		<p><b>FIG-1</b></p>	
<p>1 of 1</p>		<p>10/28/2020</p>	

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-1</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>51.55</b>		<b>DATE 8/17/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Asphalt Vacuum excavated to 5' FILL: Brown coarse to fine SAND, little Gravel, little Silt with Brick						
5					FILL: Brown medium to fine SAND, little Gravel, little Silt with Concrete and Boulders						
10	■	20/6"			Gray medium to fine SAND, some Silt, little Gravel with Cobbles and Boulders						
15	■	55/1"			Boring Complete @ 20 Feet						
20		75/3"			Monitoring Well Installed, see monitoring well detail sheet for general schematic						
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL</b> <b>140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 11'		<b>DATE:</b> 8/27/2007				
					<b>REMARKS:</b> AT COMPLETION OF BORING						

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-2</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>54.21</u>		<b>DATE</b> <u>8/17/2007</u>
D E P T H  F T .	S A M P L E S	* S E S I M P L I N G C E	P I D  R E A D .	D E S C R I P T I O N
0				6" Asphalt Vacuum excavated to 5' FILL: Brown coarse to fine SAND, little Gravel, little Silt with Brick
5				
10	█	10	0 Hg 0.00 0 Hg 0.00	Brown medium to fine SAND, some Silt, little Gravel with Cobbles and Boulders
15				
20				Boring Complete @ 20 Feet Monitoring Well Installed, see monitoring well detail sheet for general schematic
25				
30				
35				
40				
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			DEPTH TO WATER: <u>12'</u> DATE: <u>8/17/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>	

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-3</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>58.69</b>		<b>DATE 8/20/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Topsoil, organics Vacuum excavated to 5'						
5	■	75/5"		1.5 Hg 0.022	FILL: Brown coarse to fine SAND, little Gravel, little Silt with Brick and Metal						
10	■	45		1.2 Hg 0.020	FILL: Brown medium to fine SAND, some Gravel, little Silt with Brick and Boulders						
15					FILL: Concrete pieces						
20					Brown medium to fine SAND, little Gravel, little Silt with Cobbles						
25					Boring Complete @ 18'						
30					Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL</b> <b>140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 12'		<b>DATE:</b> 8/20/2007		<b>REMARKS:</b> AT COMPLETION OF BORING		

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-4</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>62.95</b>		<b>DATE 8/27/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Topsoil, Organics Vacuum excavated to 5' FILL: Brown coarse to fine SAND, little Gravel, little Silt with Brick						
5											
	■	20/6"		1.3	FILL: Brown medium to fine SAND, little Gravel, little Silt with Concrete and Boulders						
10	■	55/1"		Hg 0.021							
		75/3"			Gray medium to fine SAND, some Silt, little gravel with Cobbles						
15											
					Boring Complete @ 17.5 Feet						
20					Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL</b> <b>140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 11'		<b>DATE:</b> 8/27/2007				
					<b>REMARKS:</b> AT COMPLETION OF BORING						

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-5</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>68.74</b>		<b>DATE 8/27/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Topsoil, Organics Vacuum excavated to 5' FILL: Brown medium to fine SAND, little Gravel, little Silt with Brick						
5					FILL: Brown medium to fine SAND, some Silt, little Gravel with Brick and Boulders						
10		43		2.2 Hg 0.00	FILL: Gray medium to fine SAND, little gravel, little Silt with Brick						
		30		2.1 Hg 0.00	Gray-Brown medium to fine SAND, little gravel, little Silt with Cobbles						
15					Boring Complete At 29 Feet Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
20											
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 19' <b>DATE:</b> 8/27/2007 <b>REMARKS:</b> AT COMPLETION OF BORING						

Fig.



<b>PROJECT NO.</b>	N-7190	<b>INSPECTED BY:</b>	GP	<b>BORING NO.</b>	MW-6
<b>LOCATION</b>	See Figure 1	<b>APPROX. ELEV.</b>	72.68	<b>DATE</b>	8/13/2007

D E P T H  F T .	S A M P L E S	* S A M P L I N G	R E S I S T A N C E	P I D  R E A D .	DESCRIPTION
0 _____ _____ _____ _____ 5 _____ _____ _____ _____ 10 _____ _____ _____ _____ 15 _____ _____ _____ _____ 20 _____ _____ _____ _____ 25 _____ _____ _____ _____ 30 _____ _____ _____ _____ 35 _____ _____ _____ _____ 40					4" Asphalt and 6" Base Vacuum excavated to 5' FILL: Brown medium to fine SAND, little Gravel, little Silt  ----- Brown medium to fine SAND, little Gravel, little Silt with Cobbles  ...frequent Cobbles and Boulders         Monitoring Well installed, see Monitoring Well Detail sheet for schematic     ----- Possible Bedrock At 35 Feet Boring Complete At 35 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.					DEPTH TO WATER: 21'      DATE: 8/13/2007 REMARKS: AT COMPLETION OF BORING

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-8</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>74.69</b>		<b>DATE 8/13/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					4" Asphalt and 4" Base Vacuum excavated to 5' FILL: Gray-Brown coarse to fine SAND, little Gravel, little Silt						
5											
10					----- Cobble or Boulder -----						
15				0 Hg 0.0 0 Hg 0.0	FILL: Gray-Brown medium to fine SAND, little Gravel, little Silt w/ Brick						
20											
25					----- Boring Complete At 25 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 21' <b>DATE:</b> 8/13/2007 <b>REMARKS:</b> AT COMPLETION OF BORING						

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-9</u>	
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>64.36</u>		<b>DATE</b> <u>8/29/2007</u>	
DEPTH FEET	S A M P L E S	* S E S I M P L I N G	R E S T A N C E	P I D  R E A D .	DESCRIPTION
0				1.2 Hg 0.0	Vacuum excavated to 5' FILL: Dark/Gray-Brown medium to fine SAND and Silt, trace Gravel w/ Brick
5				1.0 Hg 0.0	Same with white Clay and fine Sand
10					Boring Complete At 10 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
15					
20					
25					
30					
35					
40					
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			DEPTH TO WATER: <u>3'</u> DATE: <u>8/13/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>		

Fig.


<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-10</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>64.97</u>		<b>DATE</b> <u>8/29/2007</u>
DEPTH FEET	SAMPLES	* RESISTANCE SAMPLING	P I D READ	DESCRIPTION
0  5  10  15  20  25  30  35  40			1.8/1.4 Hg 0.0	6" Concrete Vacuum excavated to 5' FILL: Dark/Gray-Brown medium to fine SAND and Silt, trace Gravel w/ Brick  Boring Complete At 10 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			DEPTH TO WATER: <u>8'</u> DATE: <u>8/29/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>	

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-11</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>64.79</u>		<b>DATE</b> <u>8/29/2007</u>
DEPTH FEET	S A M P L E S	* R E S I D U E S A M P L I N G	P I D  R E A D .	DESCRIPTION
0			0.8 Hg 0.0	Vacuum excavated to 5' FILL: Dark/Gray-Brown medium to fine SAND and Silt, trace Gravel w/ Brick
5			0.7 Hg 0.0	Dark/Gray-Greenish clayey SILT and fine Sand, trace Gravel
10				Boring Complete At 10 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
15				
20				
25				
30				
35				
40				
<b>SAMPLER:</b> 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			<b>DEPTH TO WATER:</b> <u>1'</u> <b>DATE:</b> <u>8/29/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>	

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-12</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>100.58</b>		<b>DATE 8/28/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					Vacuum excavated to 5'						
					FILL: Brown medium to fine SAND and Silt, trace Gravel w/ Brick						
5					-----						
		50/5"		2.0	Obstruction 8.5 to 10 Feet: Concrete, Brick						
10				Hg 0.0	-----						
		42		1.8	FILL: Gray-Brown medium to fine SAND, little Silt, little Gravel w/ Brick and Concrete						
				Hg 0.0	-----						
					Brown medium to fine SAND, some Silt, little Gravel with Cobbles						
15					-----						
20					Boring Complete At 20 Feet						
					Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
25					-----						
30					-----						
35					-----						
40					-----						
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL</b> <b>140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 13.5'		<b>DATE:</b> 8/28/2007		<b>REMARKS:</b> AT COMPLETION OF BORING		

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-14</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>111.85</u>		<b>DATE</b> <u>9/5/2007</u>
D E P T H  F T .	S A M P L E S	* S E S I M P L I N G C E	P I D  R E A D .	D E S C R I P T I O N
0				4" Brick Pavers Vacuum excavated to 5' FILL: Brown coarse to fine SAND, little Gravel, trace Silt with Brick
5				
10				
15				
20	37 50/3"		0.0 Hg 0.007 0.0 Hg 0.014	Brown coarse to fine SAND, little Gravel, little Silt
25				
30				Boring Complete At 28 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
35				
40				
<b>SAMPLER:</b> 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			<b>DEPTH TO WATER:</b> <u>20'</u> <b>DATE:</b> <u>9/5/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>	

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-15</b>		
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>73.74</b>		<b>DATE</b>		<b>9/4/2007</b>		
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>							
0				2.3	4" Concrete and 4" Stone Base							
				Hg 0.004	Vacuum excavated to 5'							
				2.3	FILL: Dark-Brown coarse to fine SAND, little Gravel, little Silt with Brick and Concrete							
				Hg 0.007								
5												
10												
15												
20			12	0.2	FILL: Dark-Gray medium to fine SAND, little Gravel, little Silt with Concrete							
				Hg 0.003	FILL: Concrete, Sand, Silt, Gravel							
25												
30					Light/Gray-Brown medium to fine SAND, little Gravel, trace Silt							
35												
					Rock at 38 feet							
					Boring Complete At 40 Feet Monitoring Well installed, see Monitoring Well Detail sheet							
40	<b>SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>				<b>DEPTH TO WATER:</b> 18'				<b>DATE:</b> 9/4/2007			
					<b>REMARKS:</b> AT COMPLETION OF BORING							

Fig.



<b>PROJECT NO.</b>		<u>N-7190</u>		<b>INSPECTED BY:</b>		<u>GP</u>		<b>BORING NO.</b>		<u>MW-16</u>	
<b>LOCATION</b>		<u>See Figure 1</u>		<b>APPROX. ELEV.</b>		<u>61.92</u>		<b>DATE</b> <u>8/15/2007</u>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Asphalt Vacuum excavated to 5' FILL: Gray-Brown medium to fine SAND, little Gravel, little Silt w/ Cobbles and Brick						
5											
10		18		0 Hg 0.007	Gray-brown medium to fine SAND, little Gravel, little Silt with Cobbles						
		19		0 Hg 0.008							
15					Boring Complete At 15 Feet Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
20											
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> <u>7.5</u> <b>DATE:</b> <u>8/15/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>						

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-17</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>64.28</b>		<b>DATE 8/29/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0	█	18		0.7	3" Asphalt						
					Vacuum excavated to 5'						
					FILL: Dark/Gray-Brown medium to fine SAND, little Gravel, little Silt w/ Brick						
5				0.7	Fill: Same with gray clayey Silt						
					Refusal at 8 Feet						
10					Boring Complete At 8 Feet						
					Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
15											
20											
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL</b> <b>140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> <u>1'</u>		<b>DATE:</b> <u>8/29/2007</u>		<b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>		

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-18</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>61.91</u>		<b>DATE</b> <u>8/15/2007</u>
DEPTH FT.	S A M P L E S	* R E S I S T I N G C E	P I D  R E A D .	DESCRIPTION
0 5 10 15 20 25 30 35 40		18	0 Hg 0.009	6" Asphalt Vacuum excavated to 5' FILL: Gray fine Sand and Silt, trace Gravel with Cobbles and Boulders  ----- Dark/Gray-Brown fine SAND and Silt, trace Gravel, little Silt w/ frequent Cobbles and Boulders  ----- Boring Complete At 15 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
<b>SAMPLER:</b> 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			<b>DEPTH TO WATER:</b> <u>7.5'</u> <b>DATE:</b> <u>8/15/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>	

Fig.


<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-19</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>62.85</u>		<b>DATE</b> <u>8/15/2007</u>
DEPTH FEET	SAMPLES	* RESAMPLING	P I D READ	DESCRIPTION
0 5 10 15 20 25 30 35 40		12  38	0 Hg 0.0  0 Hg 0.0	6" Asphalt Vacuum excavated to 5' FILL: Dark/Gray-Brown fine SAND, little Gravel, little Silt w/ Brick  ----- Dark/Gray fine SAND and Silt, trace Gravel, trace Organic ----- Dark/Gray fine SAND, some Silt, trace Gravel Same with Cobbles and Boulders ----- Boring Complete At 14 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
<b>SAMPLER:</b> 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.		<b>DEPTH TO WATER:</b> <u>7.5'</u>		<b>DATE:</b> <u>8/15/2007</u>
<b>REMARKS:</b> AT COMPLETION OF BORING				

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-20</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>61.24</u>		<b>DATE</b> <u>8/14/2007</u>
DEPTH FEET	S A M P L E S	* R E S I D U E S I N G C E	P I D  R E A D .	DESCRIPTION
0 5 10 15 20 25 30 35 40				4" Asphalt Vacuum excavated to 5' FILL: Brown SILT, some coarse to fine Sand with Cobbles  ...with Boulders  ----- Black SILT, some coarse to fine SAND (Odor) (Sample Collected)  ----- Boring Complete At 15 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.		DEPTH TO WATER: <u>10'</u> DATE: <u>8/14/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>		

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-21</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>61.5</u>		<b>DATE</b> <u>8/14/2007</u>
DEPTH FEET	S A M P L E S	* R E S I S T A N C E S A M P L I N G	P I D  R E A D .	DESCRIPTION
0 5 10 15 20 25 30 35 40				4" Asphalt Vacuum excavated to 5' FILL: Brown Sand, Silt, Gravel with Cobbles  ----- Tan/brown SAND and Gravel, trace Silt with Boulders and Cobbles  ----- Refusal on Boulder/Rock at 14.5 Feet Boring Complete At 14.5 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
<b>SAMPLER:</b> 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			<b>DEPTH TO WATER:</b> <u>10'</u> <b>DATE:</b> <u>8/14/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>	

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-22</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>60.00</b>		<b>DATE 8/16/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Asphalt Vacuum excavated to 5' FILL: Brown Sand, Gravel, Silt with Cobbles, Brick and Concrete						
5											
10	█	29		0 Hg 0.012	FILL: Brown medium to fine SAND, little Gravel, little Silt with Brick and Concrete						
					Brown medium to fine SAND, little Gravel, little Silt with frequent Cobbles and Boulders						
15											
					Brown medium to fine SAND, little Gravel, little Silt						
20					Boring Complete At 19 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 10' <b>DATE:</b> 8/16/2007 <b>REMARKS:</b> AT COMPLETION OF BORING						

Fig.


<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-23</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>62.95</u>		<b>DATE</b> <u>8/14/2007</u>
DEPTH FEET	SAMPLES	* RESISTANCE	PID READ	DESCRIPTION
0 5 10 15 20 25 30 35 40				4" Asphalt and 4" Base Vacuum excavated to 5' FILL: Brown Silt, Sand, Gravel with Cobbles  ----- Brown coarse to fine SAND, little Gravel, little Silt with Cobbles  ----- Dark brown medium to fine SAND, little Silt, little Gravel  ----- Boring Complete At 20 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.		DEPTH TO WATER: <u>7'</u> DATE: <u>8/14/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>		

Fig.



<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-24</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>58.22</u>		<b>DATE</b> <u>8/16/2007</u>
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G C E</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>
<b>DESCRIPTION</b>				
0				6" Asphalt Vacuum excavated to 5' FILL: Brown fine SAND, little Gravel, little Silt w/ Brick
5				
10	█	29	0 Hg 0.004	Brown coarse to fine SAND, little Gravel, little Silt w/ Cobbles and Boulders
15				Boulders
20				Brown coarse to fine SAND, little Gravel, little Silt w/ frequent Cobbles and Boulders
25				
30				
35				
40				Boring Complete At 20 Feet  Monitoring Well installed, see Monitoring Well Detail sheet for schematic
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL</b> <b>140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>			<b>DEPTH TO WATER:</b> <u>13'</u> <b>DATE:</b> <u>8/16/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>	

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>MW-25</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>56.14</u>		<b>DATE</b> <u>8/14/2007</u>
DEPTH FEET	S A M P L E S	* R E S I S T A N C E S A M P L I N G	P I D  R E A D .	DESCRIPTION
0 — — — — 5 — — — — 10 — — — — 15 — — — — 20 — — — — 25 — — — — 30 — — — — 35 — — — — 40				<p>4" Asphalt Vacuum excavated to 5' FILL: Sand/Gravel/Silt with Brick and Cobbles</p> <hr style="border-top: 1px dashed black;"/> <p>Brown Sandy SILT with frequent Cobbles and Boulders</p> <hr style="border-top: 1px dashed black;"/> <p>Boring Complete At 15 Feet Monitoring Well installed, see Monitoring Well Detail sheet for schematic</p>
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			DEPTH TO WATER: <u>7'</u> DATE: <u>8/14/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>	

Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-28</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>58.57</b>		<b>DATE 8/22/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Asphalt Vacuum excavated to 5' FILL: Gray fine SAND, little Gravel, little Silt w/ Brick						
5	■	50/5"		1.4 Hg 0.003	FILL: Dark/Gray-Brown medium to fine SAND and Silt, little Gravel w/ Cobbles, Boulders and Coal						
10	■	29		1.4 Hg 0.003	Brown coarse to fine SAND and Silt, little Gravel w/ frequent Cobbles and Boulders						
15					Boulders						
					Brown coarse to fine SAND, little Gravel, little Silt w/ Cobbles and Boulders						
					Boring Complete At 17 Feet						
20					Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 8'		<b>DATE:</b> 8/22/2007				
					<b>REMARKS:</b> AT COMPLETION OF BORING						


Fig.

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>MW-29</b>	
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>56.72</b>		<b>DATE 8/22/2007</b>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					6" Asphalt Vacuum excavated to 5' FILL: Brown medium to fine SAND, some Silt, little Gravel, w/ Brick						
5	█			1.3 Hg 0.00	FILL: Brown medium to fine SAND and Silt, little Gravel w/ Brick						
10		16		1.8 Hg 0.00	Brown medium to fine SAND and Silt, little Gravel w/ Cobbles and Boulders						
15					Boring Complete At 18 Feet Monitoring Well installed, see Monitoring Well Detail sheet for schematic						
20											
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> 8'		<b>DATE:</b> 8/22/2007				
					<b>REMARKS:</b> AT COMPLETION OF BORING						

Fig.

PROJECT NO.		N-7190		INSPECTED BY:	GP	BORING NO.	MW-30
LOCATION		See Figure 1		APPROX. ELEV.	56.09	DATE	8/22/2007
DEPTH FT.	SAMPLES	* RESAMPLING	READ	DESCRIPTION			
0				6" Asphalt			
				Vacuum excavated to 5'			
				FILL: Brown medium to fine SAND, some Silt, little Gravel, w/ Brick			
5				-----			
		20	0 Hg 0.012	FILL: Brown medium to fine SAND and Silt, little Gravel w/ Brick			
		16	0 Hg 0.016	Dark gray-brown medium to fine SAND, little Gravel, little Organic clayey Silt with Cobbles			
10				...frequent cobbles and boulders			
15				-----			
20				Boring Complete At 16 Feet			
				Monitoring Well installed, see Monitoring Well Detail sheet for schematic			
25							
30							
35							
40							
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.				DEPTH TO WATER: 12'      DATE: 8/22/2007 REMARKS: AT COMPLETION OF BORING			

Fig.


				PROJECT NAME: River Park Center				BORING NO. MW-32							
				LOCATION: Yonkers, NY				JOB NO. 7190							
								GROUND ELEVATION: 52.0+/-							
BORING BY: Summit				DATE STARTED		11/16/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: GP				DATE COMPLETED		11/16/2007		0 Hr.	10'	Date	11/16/07	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5		1	1	3	2	4	2	6	6	5" Asphalt	0.0/0.0				
										Fill: Brown fine Sand and Silt, trace Gravel with Cobbles, Boulders, Asphalt					
10										Fill: Brown fine Sand and Silt, trace Gravel with frequent Cobbles, Boulders					
										Difficult Drilling					
										... Boulders					
15															
20										Brown medium to fine Sand, trace Silt					
25		2	20	22	4	2	4	3	24	... Cobbles and Boulders	0.0/0.0				
										... Boulders					
30										Brown fine Sand and Silt, trace Gravel with frequent Boulders, Cobbles					
35															
40										Same					

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

FIGURE #

				PROJECT NAME: River Park Center				BORING NO. MW-32						
				LOCATION: Yonkers, NY				JOB NO. 7190						
								GROUND ELEVATION: 52.0+/-						
BORING BY: Summit			DATE STARTED		11/16/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: GP			DATE COMPLETED		11/16/2007		0 Hr.	10'	Date	11/16/07	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	PID			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
40														
45										Brown fine Sand and Silt, trace Gravel with frequent Boulders and Cobbles				
50										WEATHERED ROCK  Rock Gneiss				
55										BORING COMPLETE AT 51 FEET Monitoring Well Installed See Detail Sheet for Monitoring Well Schematic				
60														
65														
70														
75														
80														


Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

				PROJECT NAME: River Park Center				BORING NO. MW-33						
				LOCATION: Yonkers, NY				JOB NO. 7190						
								GROUND ELEVATION: 60.5+/-						
BORING BY: ADT			DATE STARTED		11/14/2007		GROUNDWATER TABLE DEPTH 10FEET							
INSPECTOR: JZ			DATE COMPLETED		11/20/2007		0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
0														
5		S-1	1	3	21	21	14	23	10	5" Asphalt, 4" Stone				
										Fill: Brown fine Sand and Silt, trace Gravel with Cobbles,	0.0/0.0			
10		S-2	5	7	9	7	2	2	10	Brown medium to fine SAND, little Silt, trace Gravel	0.0/0.0			
15		S-3	10	12	20	18	16	17	0	No Recovery	0.0/0.0			
										...Cobbles and Boulders				
20		S-4	15	17	19	21	50/0"	-	0	No Recovery	0.0/0.0			
25		S-5	20	22	50/2"	-	-	-	0	No Recovery	0.0/0.0			
										...Cobbles and Boulders				
30														
35		S-6	30	32	50/1"	-	-	-	0	No Recovery	0.0/0.0			
										...Cobbles and Boulders				
40														


Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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




			PROJECT NAME: River Park Center						BORING NO. MW-33			
			LOCATION: Yonkers, NY						JOB NO. 7190			
									GROUND ELEVATION: 60.5+/-			
BORING BY: ADT			DATE STARTED			11/14/2007			GROUNDWATER TABLE DEPTH			
INSPECTOR: JZ			DATE COMPLETED			11/20/2007			0 Hr. N/A	Date N/A	24 Hr. N/A	Date N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg	
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24				
40		S-7	40	42	30/2"					Brown fine Sand and Silt, trace Gravel with Cobbles	0.0/0.0	
45										Refusal on Rock at 45 Feet BORING COMPLETE AT 45 FEET Monitoring Well Installed See Detail Sheet for Monitoring Well Schematic		
50												
55												
60												
65												
70												
75												
80												

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_


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

			PROJECT NAME: River Park Center				BORING NO. MW-34				
			LOCATION: Yonkers, NY				JOB NO. 7190				
							GROUND ELEVATION: 61.0+/-				
BORING BY: ADT			DATE STARTED		11/8/2007		GROUNDWATER TABLE DEPTH 10FEET				
INSPECTOR: JZ			DATE COMPLETED		11/18/2007		0 Hr. N/A	Date N/A	24 Hr. N/A	Date N/A	
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24			
0											
		S-1	0	2	31	17	8	14	0	5" Asphalt, 4" Stone	
		S-2	2	4	13	10	7	6	18	Fill: Brown medium to fine Sand, trace Gravel, trace Silt	0.0/0.0
											0.0/0.0
5		S-3	4	6	3	3	3	5	12	Brown medium to fine Sand, trace Gravel, trace Silt	
										with Cobbles, Boulders	0.0/0.0
		S-4	6	8	6	8	42	50/2"	12		
10										...Cobbles and Boulders	
											0.0/0.0
15											0.0/0.0
										No Recovery	
		S-5	15	17	50/2"				0	...Cobbles and Boulders	
20											0.0/0.0
										No Recovery	
		S-6	20	22	50/1"				0	...Cobbles and Boulders	
25											
30											
		S-7	30	32	50/0"				0	No Recovery	0.0/0.0
										...Cobbles and Boulders	
35											
40											

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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


			PROJECT NAME: River Park Center						BORING NO. MW-34			
			LOCATION: Yonkers, NY						JOB NO. 7190			
									GROUND ELEVATION: 61.0+/-			
BORING BY: ADT			DATE STARTED			11/8/2007			GROUNDWATER TABLE DEPTH			
INSPECTOR: JZ			DATE COMPLETED			11/18/2007			0 Hr. N/A	Date N/A	24 Hr. N/A	Date N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg	
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24				
40		S-8	40	42	50/1"	-	-	-	0	No Recovery	0.0/0.0	
										...Cobbles and Boulders		
45		S-9	43	45	50/0"	-	-	-	0		0.0/0.0	
										Refusal on Rock at 45 Feet		
										BORING COMPLETE AT 45 FEET		
										Monitoring Well Installed		
										See Detail Sheet for Monitoring Well Schematic		
50												
55												
60												
65												
70												
75												
80												

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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


FIGURE # 35

				PROJECT NAME: River Park Center				BORING NO. MW-35					
				LOCATION: Yonkers, NY				JOB NO. 7190					
								GROUND ELEVATION: 62.0+/-					
BORING BY: ADT		DATE STARTED		11/26/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ		DATE COMPLETED		11/26/2007		0 Hr.	10'	Date	11/26/07	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg		
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24					
0													
5		1	1	3	23	13	14	10	12	Asphalt and Base			
										Fill: Black-brown coarse to fine Sand and coarse to fine Gravel, some Silt		0.0/0.0	
10		2	5	7	6	5	2	5	10	Same		0.0/0.0	
										...Cobbles and Boulders			
15													
20													
25													
										...Cobbles and Boulders			
30													
35													
40													

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_


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

			PROJECT NAME: River Park Center				BORING NO. MW-35							
			LOCATION: Yonkers, NY				JOB NO. 7190							
							GROUND ELEVATION: 62.0+/-							
BORING BY: ADT			DATE STARTED		11/26/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ			DATE COMPLETED		11/26/2007		0 Hr.	10'	Date	11/26/07	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
40														
45														
50														
55														
60														
65														
70														
75														
80														

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted. Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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


				PROJECT NAME: River Park Center				BORING NO. MW-36							
				LOCATION: Yonkers, NY				JOB NO. 7190							
								GROUND ELEVATION: 64.5+/-							
BORING BY: Summit Drilling/ADT				DATE STARTED		11/19/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: GP/JZ/RF				DATE COMPLETED		11/29/2007		0 Hr. N/A		Date N/A		24 Hr. N/A		Date N/A	
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0			0	2	12	50/1"			12	3" Topsoil FILL: Dark gray medium to fine Sand and Silt, trace Gravel with Organics	0/0.008				
5															
10										...Boulders and Cobbles					
15															
20										Air Hammered to 18 Feet and Set Permanent Steel Casing Method Used due to Obstructions					
25										Set Temporary Casing to 22 Feet					
30										...Boulders and Cobbles					
35										Rollerbit to 35 Feet					
40			35	37	50/0"				0	Refusal on Rock at 35 Feet BORING COMPLETE AT 35 FEET Monitoring Well Installed See Detail Sheet for Monitoring Well Schematic					

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

FIGURE #

				PROJECT NAME: River Park Center				BORING NO. MW-37							
				LOCATION: Yonkers, NY				JOB NO. 7190							
								GROUND ELEVATION: 98.4+/-							
BORING BY: Boart Longyear				DATE STARTED		12/4/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ				DATE COMPLETED		12/9/2007		0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5		S-1	1	3						Organics and Gravel FILL: Black coarse to fine Gravel and coarse to fine Sand, little silt, with Boulders and Cobbles	0.0/0.0				
10										Brown medium to fine SAND, little medium to fine Gravel, little Silt with ...Boulders and Cobbles	0.0/0.0				
15															
20										Brown medium to fine SAND, some Silt, little medium to fine Gravel with ...Boulders and Cobbles	0.0/0.0				
25		S-2	20	22							0.0/0.0				
30															
35										Same ...Boulders and Cobbles					
40															


Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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


				PROJECT NAME: River Park Center				BORING NO. MW-37						
				LOCATION: Yonkers, NY				JOB NO. 7190						
								GROUND ELEVATION: 98.4+/-						
BORING BY: Boart Longyear			DATE STARTED		12/4/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ			DATE COMPLETED		12/9/2007		0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
40														
45														
		S-3	47	49										
50														
55														
60														
65														
70														
75														
80														

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted. Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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



				PROJECT NAME: River Park Center				BORING NO. MW-38							
				LOCATION: Yonkers, NY				JOB NO. 7190							
								GROUND ELEVATION: 57.5+/-							
BORING BY: ADT/Boat Longyear				DATE STARTED		11/27/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ/RF/VN				DATE COMPLETED		11/28/2007		0 Hr. N/A		Date N/A		24 Hr. N/A		Date N/A	
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5		S-1	1	3					36	Fill: Light brown medium to fine SAND, little coarse to medium Gravel, trace Silt with Cobbles	0.0/0.0				
		S-2	4	6											
10									60	Fill: Black/Light brown medium to fine SAND, some coarse to fine Gravel, little Silt with Cobbles	0.4/0.0				
		S-3	8	10						Black/Brown coarse to fine SAND with Cobbles	1.7/0.0				
15									24		10.7/0.0				
										Light brown Clayey Silt and medium to fine Sand, little coarse to fine Gravel with Cobbles	0.7/0.0				
20									48		0.0/0.0				
										Light brown coarse to fine SAND, little Silt, little Gravel					
25									48	Light brown coarse to fine SAND, little Gravel, trace Silt with Cobbles and Boulders	0.0/0.0				
										...Boulder					
30									24		0.0/0.0				
									36						
35		S-4	30	32					42	Gray coarse to fine Gravel and coarse to fine Sand, little Silt with Cobbles	0.0/0.0				
									54						
40										Refusal on Rock at 38 Feet					
										BORING COMPLETE AT 38 FEET					


Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_


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

			PROJECT NAME: River Park Center						BORING NO. MW-38					
			LOCATION: Yonkers, NY						JOB NO. 7190					
									GROUND ELEVATION: 57.5+/-					
BORING BY: ADT/Boart Longyear			DATE STARTED		11/27/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ/RF/VN			DATE COMPLETED		11/28/2007		0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
40														
45														
50														
55														
60														
65														
70														
75														
80														

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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


				PROJECT NAME: River Park Center				BORING NO. <b>SB-1</b>					
				LOCATION: Yonkers, NY				JOB NO: 7190					
								GROUND ELEVATION: 63.5+/-					
BORING BY: ADT		DATE STARTED		11/29/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: GP		DATE COMPLETED		11/30/2007		0 Hr. 3'		Date 11/30/07		24 Hr. N/A		Date N/A	
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg		
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24					
0													
5										4" Asphalt ...Brick and Boulders			
10		S-1	5	7	6	2	2	1	0	No Recovery ...Boulders			
15		S-2	10	12	11	50/1"			3	Gray coarse to fine SAND, little Gravel, trace Silt with Boulders (Odor)	0.0/0.0		
20		S-3	15	17	5	22	13	6	6	Gray/Tan coarse to fine SAND, little Gravel, trace Silt with Boulders	0.0/.005		
25		S-4	20	22	6	19	19	20	10	Same	0.0/.005		
30													
35													
40													

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

FIGURE #

				PROJECT NAME: River Park Center				BORING NO. <b>SB-2</b>						
				LOCATION: Yonkers, NY				JOB NO: 7190						
								GROUND ELEVATION: 64.5+/-						
BORING BY: Boart Longyear			DATE STARTED		11/28/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: RF			DATE COMPLETED		11/29/2007		0 Hr. 10'		Date 11/29/07		24 Hr. N/A		Date N/A	
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
0														
5		S-1	0	2						Fill: Black coarse to fine Sand with Cinders, Brick, Cobbles	0.0/0.0			
10										Gray-brown coarse to fine SAND, some coarse to fine Gravel, trace Silt with Cobbles	0.0/0.0			
15		S-2	10	12						Orange-brown coarse to fine SAND, some coarse to fine Gravel, trace Silt with Cobbles ... Cobbles	0.0/0.0			
20		S-3	15	17						Light-brown coarse to fine SAND and coarse to fine Gravel, trace Silt	0.0/0.13			
											0.0/0.05			
25		S-4	20	22						Light-brown medium to fine SAND and coarse to fine Gravel, trace Silt with Cobbles, Boulders	0.0/0.019			
30										BORING COMPLETE AT 24 FEET				
35														
40														


Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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



				PROJECT NAME: River Park Center				BORING NO. <b>SB-4</b>						
				LOCATION: Yonkers, NY				JOB NO: 7190						
								GROUND ELEVATION: 64.5+/-						
BORING BY: Boart Longyear			DATE STARTED		11/29/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ/RF			DATE COMPLETED		11/29/2007		0 Hr.	10'	Date	11/29/07	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
0														
5		S-1	0	2					48	Fill: Black coarse to fine Sand and Gravel, trace Silt with Cinders	0.0/.007			
										Fill: Brown coarse to fine Sand and Gravel, trace Silt with Cinders and Cobbles	0.0/.011			
10									24					
15									60	Brown medium to fine SAND, some Silt, little Gravel with Cobbles	0.0/.005			
		S-2	14	16						Gray-brown medium to fine SAND, some coarse to fine Gravel, little Silt	0.0/.007			
20									42					
		S-3	19	21						Brown medium to fine SAND, little Silt, trace Gravel	0.0/.004			
25									48					
		S-4	24	26						Same	0.0/.006			
30										BORING COMPLETE AT 26 FEET				
35														
40														


Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

				PROJECT NAME: River Park Center				BORING NO. <b>SB-5</b>						
				LOCATION: Yonkers, NY				JOB NO: 7190						
								GROUND ELEVATION: 63+/-						
BORING BY: ADT			DATE STARTED		11/29/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: JZ			DATE COMPLETED		11/30/2007		0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
0														
5		S-1	1	3						Brown medium to fine SAND, some medium to fine Gravel, little Silt	0.0/0.0			
10										...Boulders and Cobbles				
15														
20		S-2	18	20						Brown coarse to fine SAND, little medium to fine Gravel, little Silt	0.0/.007			
25		S-3	23	25						Same	0.0/.008			
										...Boulders and Cobbles				
30										Refusal on Rock at 28 Feet BORING COMPLETE AT 28 FEET				
35														
40														


Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

				PROJECT NAME: River Park Center				BORING NO. <b>SB-6</b>					
				LOCATION: Yonkers, NY				JOB NO: 7190					
								GROUND ELEVATION: 61.5+/-					
BORING BY: ADT		DATE STARTED		11/27/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: RF		DATE COMPLETED		11/28/2007		0 Hr.	N/A	Date	N/A	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg		
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24					
0													
5		S-1	1	3	12	10	12	2	5	Asphalt FILL: Brown coarse to fine SAND, little medium to fine Gravel, trace Silt	0.0/0.0		
10										... Cobbles and Boulders			
15													
20		S-2	18	20	11	10	7	6	18	Brown medium to fine SAND, little Silt, trace Gravel	0.0/0.0		
25		S-3	23	25	7	11	6	4	6	... Cobbles and Boulders	0.0/0.0		
30		S-4	28	30	10	50/3"			8	Gray medium to fine SAND, little Silt, trace Gravel BORING COMPLETE AT 30 FEET	0.0/0.0		
35													
40													


Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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



				PROJECT NAME: River Park Center				BORING NO. <b>SB-7</b>			
				LOCATION: Yonkers, NY				JOB NO: 7190			
								GROUND ELEVATION: 59.0+/-			
BORING BY: Boart Longyear				DATE STARTED		12/3/2007		GROUNDWATER TABLE DEPTH			
INSPECTOR: JZ				DATE COMPLETED		12/3/2007		0 Hr. N/A	Date N/A	24 Hr. N/A	Date N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24			
0											
5		S-1	1	3						Fill: Black/brown coarse to fine Gravel and coarse to fine Sand, trace Silt (Petroleum Odor)	61.1/0.0
10		S-2	5	7						Brown medium to fine SAND, some coarse to fine Gravel, trace Silt (Petroleum Odor)	31.2/.004
15		S-3	10	12						Gray medium to fine SAND, little medium to fine Gravel, little Silt (Petroleum Odor)	8.1/.008
20		S-4	15	17						Brown medium to fine Gravel and medium to fine Sand, little Silt (Petroleum Odor)	10.1/.006
										BORING COMPLETE AT 17 FEET	
25											
30											
35											
40											


Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_


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

				PROJECT NAME: River Park Center				BORING NO. <b>SB-8</b>						
				LOCATION: Yonkers, NY				JOB NO: 7190						
								GROUND ELEVATION: 55.0+/-						
BORING BY: ADT			DATE STARTED		11/26/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: RF			DATE COMPLETED		11/27/2007		0 Hr.	10'	Date	11/27/07	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg			
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24						
0														
5		S-1	1	3	11	6	5	5	12	Asphalt FILL: Reddish-brown coarse to fine SAND and coarse to fine Gravel, trace Silt, with Brick, Wood, Concrete, Asphalt	0.0/0.0			
10		S-2	5	7	2	2	2	3	12	FILL: Brown medium to fine SAND, some Silt, trace Gravel	0.0/0.0			
15		S-3	10	12	5	4	50/3"	-	12	FILL: Reddish-brown coarse to fine GRAVEL, trace Sand, trace Silt with Cobbles and Boulders	0.0/0.0			
20		S-4	15	17	13	8	5	5	6	Cobbles and Boulders	0.0/0.0			
										----- BORING COMPLETE AT 17 FEET				
25														
30														
35														
40														

Nominal I.D. of Hole	in	The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.
Nominal I.D. of Split Barrel Sampler	1 3/8 in	
Weight/type of Hammer on Drive Pipe	300 lb	
Weight/type of Hammer on Split Barrel	140 lb	
Drop of Hammer on Drive Pipe	in	
Core Size		

Pp: Pocket Penetrometer; WOH: Weight of Hammer; WOR: Weight of Rod  
 Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

				PROJECT NAME: River Park Center				BORING NO. <b>SB-9</b>							
				LOCATION: Yonkers, NY				JOB NO: 7190							
								GROUND ELEVATION: 63.0+/-							
BORING BY: Boart Longyear				DATE STARTED		11/28/2007		GROUNDWATER TABLE DEPTH							
INSPECTOR: RF				DATE COMPLETED		11/29/2007		0 Hr.	10'	Date	11/29/07	24 Hr.	N/A	Date	N/A
DEPTH (ft)	METHOD	SAMPLE No.	DEPTH		Blows on Spoon				REC (in)	SOIL DESCRIPTION AND STRATIFICATION	P.I.D./Hg				
			FROM (ft)	TO (ft)	0/6	6/12	12/18	18/24							
0															
5		S-1	1	3						Asphalt FILL: Black to Gray coarse to fine Gravel and coarse to fine Sand, trace Silt	0.0/0.0				
										.. Cinders					
										FILL: Black coarse to fine SAND, trace Silt with Cinders	0.0/0.0				
10															
		S-3	10	12						FILL: Brown medium to fine SAND, some Silt with Cinders	0.0/0.0				
										Gray-brown coarse to fine SAND, some Silt, trace Gravel with Cobbles					
15															
		S-4	15	17						Gray-brown coarse to fine SAND, some Silt with Cobbles	0.0/0.0				
20															
										BORING COMPLETE AT 18 FEET					
25															
30															
35															
40															

Nominal I.D. of Hole	in
Nominal I.D. of Split Barrel Sampler	1 3/8 in
Weight/type of Hammer on Drive Pipe	300 lb
Weight/type of Hammer on Split Barrel	140 lb
Drop of Hammer on Drive Pipe	in
Core Size	

The subsurface information shown hereon was obtained for the design and estimating purposes for our client. It is made available to authorized users only that they may have access to the same information available to our client. It is presented in good faith, but it is not intended as a substitute for investigations, interpretations or judgment of such authorized users. Information on the logs should not be relied upon without the geotechnical engineers recommendations contained in the report from which these logs were extracted.

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

Approximate Change in Strata: \_\_\_\_\_ Inferred Change in Strata: \_\_\_\_\_

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

<b>PROJECT NO.</b>		<b>N-7190</b>		<b>INSPECTED BY:</b>		<b>GP</b>		<b>BORING NO.</b>		<b>SV-1</b>		
<b>LOCATION</b>		<b>See Figure 1</b>		<b>APPROX. ELEV.</b>		<b>55.77</b>		<b>DATE 8/20/2007</b>				
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>							
0	█	38	50/6"	2.0 Hg 0.00 1.9 Hg 0.004	Topsoil Vacuum excavated to 5' FILL: Brown Sand, Gravel, Silt w/ Metal and Brick							
5					FILL: Brown fine SAND, little Silt, little Gravel w/ Brick							
10					...frequent cobbles and boulders							
15					Brown medium to fine SAND, some Silt, little Gravel							
20	Boring Complete At 16 Feet Soil Vapor Well installed, see Soil Vapor Well Detail sheet for schematic											
25												
30												
35												
40	SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.					DEPTH TO WATER: <u>NE</u> DATE: <u>8/20/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>						

Fig.

<b>PROJECT NO.</b>		<u>N-7190</u>		<b>INSPECTED BY:</b>		<u>GP</u>		<b>BORING NO.</b>		<u>SV-2</u>	
<b>LOCATION</b>		<u>See Figure 1</u>		<b>APPROX. ELEV.</b>		<u>62.97</u>		<b>DATE</b> <u>8/20/2007</u>			
<b>D E P T H  F T .</b>	<b>S A M P L E S</b>	<b>* S A M P L I N G</b>	<b>R E S I S T A N C E</b>	<b>P I D  R E A D .</b>	<b>DESCRIPTION</b>						
0					Topsoil						
					Vacuum excavated to 5'						
					FILL: Brown Sand, Gravel, Silt w/ Metal and Brick						
5					-----						
					FILL: Brown medium to fine SAND and Silt, little Gravel w/ Brick						
10											
		15		0.7							
				Hg 0.0							
		35		1.1							
				Hg 0.0	-----						
15					Brown medium to fine SAND, some Silt, little Gravel						
20					-----						
					Boring Complete At 19 Feet						
					Soil Vapor Well installed, see Soil Vapor Well Detail sheet for schematic						
25											
30											
35											
40											
<b>SAMPLER: 2-INCH O.D. SPLIT BARREL</b> <b>140 LB. HAMMER 30 INCH DROP * Blows/Ft.</b>					<b>DEPTH TO WATER:</b> <u>10'</u>		<b>DATE:</b> <u>8/20/2007</u>		<b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>		

Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b> <u>SV-3</u>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>67.76</u>		<b>DATE</b> <u>8/27/2007</u>
DEPTH FT.	SAMPLES	* RESISTANCE	PID READ	DESCRIPTION
0 — — — — 5 — — — — 10 — — — — 15 — — — — 20 — — — — 25 — — — — 30 — — — — 35 — — — — 40	■	50/2"	1.3 Hg 0.007	<p>Topsoil</p> <p>Vacuum excavated to 5'</p> <p>FILL: Brown fine SAND, little Gravel, little Silt w/ Brick</p> <hr/> <p>FILL: Dark/Brown-Gray medium to fine SAND, some Silt, little Gravel w/ Brick</p> <hr/> <p>Brown medium to fine SAND, little Gravel, little Silt with Cobbles and Boulders</p> <hr/> <p>Boring Complete At 13 Feet</p> <p>Soil Vapor Well installed, see Soil Vapor Well Detail sheet for schematic</p>
SAMPLER: 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			DEPTH TO WATER: <u>13'</u> DATE: <u>8/27/2007</u> REMARKS: <u>AT COMPLETION OF BORING</u>	

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b>	<b>SV-8</b>
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>56.5</u>		<b>DATE</b> <u>8/16/2007</u>	
DEPTH FEET	SAMPLES	* RESISTANCE	P I D R E A D	DESCRIPTION	
0 5 10 15 20 25 30 35 40			0 Hg 0.007  0 Hg 0.012	6" Asphalt Vacuum excavated to 5' FILL: Dark Brown Sand, Gravel, Silt w/ Brick, cobbles  -----  Boring Complete At 6 Feet  Soil Vapor Well installed, see Soil Vapor Well Detail sheet for schematic	
<b>SAMPLER:</b> 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.			<b>DEPTH TO WATER:</b> <u>NE</u> <b>DATE:</b> <u>8/16/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>		


Fig.

<b>PROJECT NO.</b> <u>N-7190</u>		<b>INSPECTED BY:</b> <u>GP</u>		<b>BORING NO.</b>	<b>SV-9</b>	
<b>LOCATION</b> <u>See Figure 1</u>		<b>APPROX. ELEV.</b> <u>74.08</u>		<b>DATE</b> <u>9/5/2007</u>		
DEPTH FEET	SAMPLES	* RESISTANCE SAMPLING	P I D READ	DESCRIPTION		
0 — — — — 5 — — — 10 — — — 15 — — — 20 — — — 25 — — — 30 — — — 35 — — — 40	█	28  35	0 Hg 0.004  0 Hg 0.004	<p>4" Concrete and 4" Stonebase Vacuum excavated to 5' FILL: Dark-Brown coarse to fine SAND, little Gravel, little Silt with Brick and Concrete</p> <hr/> <p>FILL: Dark-Brown coarse to fine SAND, little Gravel, little Silt with Brick</p> <hr style="border-top: 1px dashed black;"/> <p>Boring Complete At 13.5 Feet  Soil Vapor Well installed, see Soil Vapor Well Detail sheet for schematic</p>		
<b>SAMPLER:</b> 2-INCH O.D. SPLIT BARREL 140 LB. HAMMER 30 INCH DROP * Blows/Ft.				<b>DEPTH TO WATER:</b> <u>NE</u> <b>DATE:</b> <u>9/5/2007</u> <b>REMARKS:</b> <u>AT COMPLETION OF BORING</u>		

Fig.




**LOW-FLOW GROUNDWATER SAMPLING LOG**


Location: <u>Yonkers, NY</u>		Job Number: <u>7190A</u>		WELL I.D. : <u>MW-101S</u>					
Personnel: <u>NL</u>		Date: <u>8/14/2017</u>							
		PID: <u>0</u>							
Stickup? <u>Y/N</u>	Distance From Rim to PVC	Total Depth of Well Rim/PVC	Depth to Product Rim/PVC	Depth to Water (Rim/PVC)	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
	3"	19.78	N/E	14.93	4.85	17.37	18		
Turbidity at collection (NTU):		8.1	(Less than 5 NTU is desirable)	Duplicate Collected? <u>Y/N</u>			Filtered Sample <u>Y/N</u>		
Stabilization Parameters		+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	pH	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	8:28	18.55	7.05	1840	3.4	163	493	14.47	Y
	9:00	15.91	6.66	18.5	0.89	187	17.1	15.22	N
	9:05	15.91	6.75	1840	0.98	185	7.1	15.23	N
	9:10	15.91	6.79	1830	0.74	182	5.3	15.23	N
	9:15	15.91	6.84	1830	0.7	178	5.1	15.24	N
	9:20	15.9	6.94	1820	0.64	171	2.5	15.24	N
	9:25	15.9	7.01	1830	0.63	170	8.3	15.28	N
	9:30	15.89	7.04	1830	1.01	170	9.1	15.28	N
	9:35	15.86	7.03	1810	0.64	170	9.4	15.28	N
	9:40	15.86	7.03	1820	0.64	171	8.1	15.28	N
<b>Well Condition Summary</b>									
Cover: <u>Y / N</u>		Bolts: <u>Y / N</u>		Concrete Pad OK: <u>Y / N</u>		Gripper: <u>Y / N</u>			
<b>Sample Collection Information</b>									
Sample Time:	9:40	Appearance: <u>Very Clear</u>		Filtered Sample Turbidity:			OTHER:		
<small>Desired purge flow rate &lt;100mL/min (slow drip) &amp; turbidity &lt;10 if possible. If turbidity &gt; 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.                  Notes/ Calculations:                  Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.</small>									
<b>ABSORBENT SOCK</b>									
Sock Length (ft) =		Capacity (Qt.) =		Present:	Y / N	Product Measured (Inches) :			
Sock Installation Date:				Sock Changed :		Y / N			
Sock Depth (Depth to sock mid point):									




**LOW-FLOW GROUNDWATER SAMPLING LOG**

Location: <u>Yonkers, NY</u>		Job Number: <u>7190A</u>		WELL I.D. : <u>MW-101S</u>					
Personnel: <u>NL</u>		Date: <u>7/31/2017</u>							
PID: <u>2.3 ppm</u>									
Stickup? <u>Y/N</u>	Distance From Rim to PVC	Total Depth of Well Rim/PVC	Depth to Product Rim/PVC	Depth to Water (Rim/PVC)	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
	2"	19.79	N/E	12.71	7.08				
Turbidity at collection (NTU):		(Less than 5 NTU is desirable)		Duplicate Collected? <u>Y/N</u>			Filtered Sample <u>Y/N</u>		
Stabilization Parameters		+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	pH	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	12:20	23.33	7.82	1810	5.14	90	31.8	12.87	N
	12:34	19.41	7.15	2060	2.57	123	34.9	12.95	N
	12:38	20.09	7.07	2060	2.3	128	9.6	12.97	N
	12:41	19.05	7.02	2210	2.23	132	4.7	12.98	N
	12:44	17.47	6.97	2410	2.32	137	2.9	13	N
	12:46	17.25	6.95	2480	2.03	139	2.5	13	N
	12:49	17.05	6.96	2540	1.74	140	2.2	13.01	N
	12:51	16.95	6.97	2590	1.7	141	1.7	13.01	N
	12:54	16.95	6.97	2640	1.64	142	1.3	13.04	N
<b>Well Condition Summary</b>									
Cover: <u>Y / N</u>		Bolts: <u>Y / N</u>		Concrete Pad OK: <u>Y / N</u>		Gripper: <u>Y / N</u>			
<b>Sample Collection Information</b>									
Sample Time:	12:54	Appearance: <u>Very Clear</u>		Filtered Sample Turbidity:			OTHER:		
<small>Desired purge flow rate &lt;100mL/min (slow drip) &amp; turbidity &lt;10 if possible. If turbidity &gt; 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.                  Notes/ Calculations:                  Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.</small>									
<b>ABSORBENT SOCK</b>									
Sock Length (ft) =		Capacity (Qt.) =		Present:	Y / N	Product Measured (Inches) :			
Sock Installation Date:				Sock Changed :		Y / N			
Sock Depth (Depth to sock mid point):									


**LOW-FLOW GROUNDWATER SAMPLING LOG**

Location: <u>Yonkers, NY</u>		Job Number: <u>7190A</u>		WELL I.D. : <u>MW-102S</u>					
Personnel: <u>NL</u>		Date: <u>7/31/2017</u>							
PID: <u>0.3 ppm</u>									
Stickup? <u>Y/N</u>	Distance From Rim to PVC	Total Depth of Well Rim/PVC	Depth to Product Rim/PVC	Depth to Water (Rim/PVC)	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
	2"	20.13	N/E	11.73	8.4				
Turbidity at collection (NTU):		(Less than 5 NTU is desirable)		Duplicate Collected? <u>Y/N</u>			Filtered Sample <u>Y/N</u>		
Stabilization Parameters		+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	pH	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	10:32	23.85	8.34	917	12.12	91	7.2	11.95	N
	10:47	20.91	7.79	978	11.11	104	4.6	12.12	N
	10:50	19.11	7.69	965	10.53	108	2.5	12.17	N
	10:53	19.05	7.62	966	9.87	110	0.8	12.18	N
	10:56	18.95	7.56	968	9.39	113	0.4	12.19	N
	10:59	18.95	7.51	968	9	115	0	12.21	N
	11:02	19.08	7.47	967	8.61	117	0	12.23	N
	11:05	19.14	7.44	969	8.52	118	0	12.23	N
	11:08	19.16	7.43	968	8.56	119	0	12.25	N
<b>Well Condition Summary</b>									
Cover: <u>Y / N</u>		Bolts: <u>Y / N</u>		Concrete Pad OK: <u>Y / N</u>		Gripper: <u>Y / N</u>			
<b>Sample Collection Information</b>									
Sample Time:	11:08	Appearance: <u>Very Clear</u>		Filtered Sample Turbidity:			OTHER:		
<small>Desired purge flow rate &lt;100mL/min (slow drip) &amp; turbidity &lt;10 if possible. If turbidity &gt; 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.                  Notes/ Calculations:                  Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.</small>									
<b>ABSORBENT SOCK</b>									
Sock Length (ft) =		Capacity (Qt.) =		Present:	Y / N	Product Measured (Inches) :			
Sock Installation Date:				Sock Changed :		Y / N			
Sock Depth (Depth to sock mid point):									


**LOW-FLOW GROUNDWATER SAMPLING LOG**

Location: <u>Yonkers, NY</u>		Job Number: <u>7190A</u>		WELL I.D. : <u>MW-103D</u>					
Personnel: <u>NL</u>		Date: <u>7/31/2017</u>							
PID: <u>1.7 ppm</u>									
Stickup? <u>Y/N</u>	Distance From Rim to PVC	Total Depth of Well Rim/PVC	Depth to Product Rim/PVC	Depth to Water (Rim/PVC)	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
	2"	50.18	N/E	10.63'	39.55				
Turbidity at collection (NTU):		(Less than 5 NTU is desirable)		Duplicate Collected? <u>Y/N</u>			Filtered Sample <u>Y/N</u>		
Stabilization Parameters		+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	pH	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	8:38	18.92	8.61	2130	11.91	94	3.8	22.8	N
	9:02	18.83	8.69	2140	10.48	87	2.9	26.5	N
	9:05	18.23	8.96	2200	9.71	85	0.9	26.8	N
	9:08	18.78	9	2200	6.45	81	35.4	27.06	N
	9:11	18.68	9.13	2070	1.97	74	42.3	27.31	N
	9:15	18.65	9.12	2040	1.9	70	40	27.38	N
	9:17	18.63	9.12	2030	1.87	67	35.1	27.42	N
<b>Well Condition Summary</b>									
Cover: <u>Y / N</u>		Bolts: <u>Y / N</u>		Concrete Pad OK: <u>Y / N</u>		Gripper: <u>Y / N</u>			
<b>Sample Collection Information</b>									
Sample Time:	9:17	Appearance: <u>Very Clear</u>		Filtered Sample Turbidity:			OTHER:		
<small>Desired purge flow rate &lt;100mL/min (slow drip) &amp; turbidity &lt;10 if possible. If turbidity &gt; 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.                  Notes/ Calculations:                  Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.</small>									
<b>ABSORBENT SOCK</b>									
Sock Length (ft) =		Capacity (Qt.) =		Present:	Y / N	Product Measured (Inches) :			
Sock Installation Date:		Sock Changed :		Y / N					
Sock Depth (Depth to sock mid point):									


**LOW-FLOW GROUNDWATER SAMPLING LOG**

Location: <u>Yonkers, NY</u>		Job Number: <u>7190A</u>		WELL I.D. : <u>MW-104D</u>					
Personnel: <u>NL</u>		Date: <u>8.1.2017</u>							
PID: <u>1.0 ppm</u>									
Stickup? <u>Y/N</u>	Distance From Rim to PVC	Total Depth of Well Rim/PVC	Depth to Product Rim/PVC	Depth to Water (Rim/PVC)	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
		58.8	N/E	21.49	37.31	39.99	40		
Turbidity at collection (NTU):		54.7	(Less than 5 NTU is desirable)	Duplicate Collected? <u>Y/N</u>			Filtered Sample <u>Y/N</u>		
Stabilization Parameters		+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	pH	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	8:15	20.87	10.66	713	3.94	37	208	24.75	N
	9:15	21.25	10.68	694	3.31	15	67.4	34.18	N
	9:20	21.35	10.64	689	4.28	15	81.3	34.73	N
	9:23	21.34	10.61	690	3.46	14	65.9	34.82	N
	9:35	21.78	10.61	692	4.4	9	71.6	35.52	N
	9:40	21.72	10.62	694	3.94	10	66.4	35.88	N
	9:45	21.6	10.68	686	3.3	15	51.8	36.19	N
	9:50	22.15	10.69	684	3.64	11	55.4	36.28	N
	9:55	22.31	10.69	684	4.21	9	58.2	36.75	N
	10:00	21.98	10.71	688	4.52	13	54.7	37.38	N
<b>Well Condition Summary</b>									
Cover: <u>Y / N</u>		Bolts: <u>Y / N</u>		Concrete Pad OK: <u>Y / N</u>		Gripper: <u>Y / N</u>			
<b>Sample Collection Information</b>									
Sample Time:		Appearance: <u>Very Clear</u>		Filtered Sample Turbidity:			OTHER:		
<small>Desired purge flow rate &lt;100mL/min (slow drip) &amp; turbidity &lt;10 if possible. If turbidity &gt; 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.                  Notes/ Calculations:                  Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.</small>									
<b>ABSORBENT SOCK</b>									
Sock Length (ft) =		Capacity (Qt.) =			Present:	<u>Y / N</u>	Product Measured (Inches) :		
Sock Installation Date:				Sock Changed :		<u>Y / N</u>			
Sock Depth (Depth to sock mid point):									

**LOW-FLOW GROUNDWATER SAMPLING LOG**

Location: <u>Yonkers, NY</u>		Job Number: <u>7190A</u>		WELL I.D. : <u>MW-105S</u>					
Personnel: <u>NL</u>		Date: <u>8/14/2017</u>							
PID: <u>3.7 ppm</u>									
Stickup? <u>Y/N</u>	Distance From Rim to PVC	Total Depth of Well Rim/PVC	Depth to Product Rim/PVC	Depth to Water (Rim/PVC)	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
	3"	20.03	N/E	10.75	9.28	15.39	16		
Turbidity at collection (NTU):		0.5	(Less than 5 NTU is desirable)	Duplicate Collected? <u>Y/N</u>			Filtered Sample <u>Y/N</u>		
Stabilization Parameters		+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	pH	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	10:50	21.88	7.25	2300	2.79	60	288	1.09	N
	11:10	17.75	7.05	2280	0.47	47	4.3	11.16	N
	11:15	17.74	7.05	2260	0.51	46	2.5	11.16	N
	11:20	17.64	7.06	2250	0.54	45	2.9	11.17	N
	11:25	17.44	7.08	2240	0.56	43	1.5	11.17	N
	11:30	17.37	7.09	2230	0.52	41	0.5	11.17	N
<b>Well Condition Summary</b>									
Cover: <u>Y / N</u>		Bolts: <u>Y / N</u>		Concrete Pad OK: <u>Y / N</u>		Gripper: <u>Y / N</u>			
<b>Sample Collection Information</b>									
Sample Time:	11:30	Appearance: <u>Very Clear</u>		Filtered Sample Turbidity:			OTHER:		
<small>Desired purge flow rate &lt;100mL/min (slow drip) &amp; turbidity &lt;10 if possible. If turbidity &gt; 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization.                  Notes/ Calculations:                  Volume? Linear Ft of well casing; 1"=0.041 gal. 2"= 0.163 gal. 4"=0.653 gal.</small>									
<b>ABSORBENT SOCK</b>									
Sock Length (ft) =		Capacity (Qt.) =		Present:	Y / N	Product Measured (Inches) :			
Sock Installation Date:		Sock Changed :		Y / N					
Sock Depth (Depth to sock mid point):									

**LOW-FLOW GROUNDWATER SAMPLING LOG**

Location: <u>Yonkers, NY</u>		Job Number: <u>7190A</u>		WELL I.D. : <u>MW-105S</u>					
Personnel: <u>NL</u>		Date: <u>8/1/2017</u>							
		PID: <u>4.4 ppm</u>							
Stickup? <u>Y/N</u>	Distance From Rim to PVC	Total Depth of Well Rim/PVC	Depth to Product Rim/PVC	Depth to Water (Rim/PVC)	Standing Water Column (feet)	Middle of Saturated Zone (feet)	Depth to Sample Tube (feet)	TOV @ Well Head (ppmv)	Pump Peristaltic or Bladder
	3"	20.03	N/E	10.43	9.6	15.23	-16		
Turbidity at collection (NTU):		(Less than 5 NTU is desirable)		Duplicate Collected? <u>Y/N</u>		Filtered Sample <u>Y/N</u>			
Stabilization Parameters		+/- 0.5 deg C.	+/- 0.1 Unit	+/- 10 umhos/cm or within 3% if >300umho	1 ppm	+/- 10 mV	No Limit	<.3 feet drawdown desirable	No Limit
Volume Purged (gallons)	Time (actual Time) 5 minute Intervals	TEMP. (Deg. C)	pH	Specific Conductivity uS/cm	Dissolved Oxygen (mg/L)	ORP mV millivolts	Turbidity NTUs	DTW (feet)	Odors Y/N
	12:12	25.05	7.9	2200	12.01	-24	293	10.81	N
	12:40	20.82	7.74	1980	7.41	71	0	10.93	N
	13:05	21.73	7.67	1360	6.76	82	0	10.93	N
	13:15	20.97	7.52	1760	6	82	0	10.93	N
	13:30	17.95	7.46	1860	6.72	50	0	10.93	N
	13:35	17.52	7.29	1870	6.75	27	0	10.93	N
	13:40	17.32	7.23	1860	6.24	17	0	10.93	N
	13:43	17.23	7.17	1860	6.34	12	0	10.93	N
	13:48	17.15	7.11	1880	6.41	7	0	10.93	N
	13:52	17.17	7.1	1880	6.81	6	0	10.93	N
<b>Well Condition Summary</b>									
Cover: <u>Y / N</u>		Bolts: <u>Y / N</u>		Concrete Pad OK: <u>Y / N</u>		Gripper: <u>Y / N</u>			
<b>Sample Collection Information</b>									
Sample Time:	13:52	Appearance: <u>Very Clear</u>		Filtered Sample Turbidity:		OTHER: <u>Shavings</u>			
<small>Desired purge flow rate &lt;100mL/min (slow drip) &amp; turbidity &lt;10 if possible. If turbidity &gt; 10 collect filtered and unfiltered samples. Notify PM of high turbidity and collection of filtered samples prior to lab submittal. Minimum 20 minute purge to establish stabilization. Notes/ Calculations:</small>									
<b>ABSORBENT SOCK</b>									
Sock Length (ft) =		Capacity (Qt.) =			Present:	Y / N	Product Measured (Inches) :		
Sock Installation Date:				Sock Changed :		Y / N			
Sock Depth (Depth to sock mid point):									



**JERSEY BORING & DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO.**

**B-4**

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 3

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

GROUND WATER

PERMIT NO.

DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
9/22/2006		12	64	DIA.	4"	24"			9/26/06
				WT.	300	140			9/28/06
				FALL	24"	30"			DRILLER L.Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	3" spin				0-6" Black top 6"-1' Soil	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2					1-3' Roller bit 6" concrete & Rebar	
3						Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
4					3-4' Roller bit boulder	
5					4-7' soil	Signature
6						
7						Print name
8					7-10' Roller bit boulders	
9						Materials used on Boring
10					10-11' soil	
11						Benseal <u>  2  </u> Quick Gel <u>  2  </u> Hole Plug <u>  2  </u> Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits Tri Cone 2/2 15/16 Diamond -
12					11-14' Roller bit boulder	
13						Misc. material/equipment
14					14-16' soil	
15						<div style="border: 2px solid black; padding: 5px; text-align: center;"> <b>RECEIVED</b>  <b>JAN 29 2007</b>  <b>RECEIVED</b>  <b>M. G. McLAREN, P.C.</b> </div>
16					16-18' roller bit boulder	
17						
18					18-19' soil	
19						
20					19-21' Roller bit boulder	
21						
22					21-26' soil	
23						
24						
25						
26						
27						

**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-4**

PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 3

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	3"				26-28' Roller bit boulder	
29					28-30' soil	
30						
31						
32					30-33' Roller bit boulder	
33						
34					33-34' soil	
35					34-35' Roller bit boulders	
36					35-36' soil	
37					36-38' 6" Roller bit boulder	
38						
39						
40	▼				38-40' soil	
41						
42					40-42' Roller bit boulder	
43						
44					42-47' soil	
45						
46						
47						
48					47-49' Roller bit boulder	
49						
50						
51					49-54' soil	
52						
53						

**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-4**

PROJECT: Elm street - Yonkers Redevelopment

SHT. NO. 3 of 3

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
54						
55					54-58' Boulder	
56						
57						
58						
59					58-64' soil	
60						
61						
62						
63						
64						
65					64-65' Roller bit boulder	
66					65-66' soil	
67					66-70' Roller bit into rock	
68						
69						
70						
71					70-75' 1st run Rec: 59"	
72						
73		1st run				
74						
75						
76					EOB at 75'	
77						
78						
79						
80						

**JERSEY BORING & DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO.**

**B-5**

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 2

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

**GROUND WATER**

DATE	TIME	DEPTH	CASING	TYPE	CAS.	SAMP.	CORE	TUBE	PERMIT NO.
9/26/2006		7'	25'	DIA.	HW	SS	NX		DATE START 9/25/06
				WT.	300				DATE FINISH 9/26/06
				FALL	24"				DRILLER L. Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	3" spin				0-6" Blacktop Roller bit	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> X NO <input type="checkbox"/>
2					6"-3'6" soil	
3						
4					3'6" - 4'6" Roller bit boulder	Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
5						
6					4'6" - 10' soil w. misc. fill, brick	
7						
8						
9						Signature
10						
11					10-12' roller bit boulder	Print name
12						
13					12-14' soil	Materials used on Boring
14						
15					14-17' roller bit boulder	Benseal <input type="checkbox"/> 1
16						Quick Gel <input type="checkbox"/> 2
17						Hole Plug <input type="checkbox"/> 1
18					17-18' soil	Revert _____
19						Well gravel _____
20					18-21' roller bit boulder	Concrete _____
21						Asphalt _____
22					21-22'6" soil	Spoons _____
23						Traps _____
24					22'6"-25' roller bit into rock	Bits _____
25						Tri Cone 3 7/8 2 15/16
26		1st run			25-30' Core 1st run	Diamond _____
27					REC: 54"	Misc. material/equipment

PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 2

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28		1st run			Core 1st run REC: 54"	
29						
30						
31					EOB at 30'	
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						

PROJECT: Yonkers Redevelopment		SHT. NO. 1 of 2							
CLIENT: McLaren Engineering		JOB NO.: 06-209							
LOCATION: Elm Street, Yonkers, NY		ELEVATION							
GROUND WATER		PERMIT NO.							
DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
9/25/2006		10'		DIA.	4"				9/22/06
				WT.	300				DATE FINISH 9/22/06
				FALL	24"				DRILLER J. Cruz
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" blacktop	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2					6"-2' misc. fill	
3					2-3' Roller bit boulder	Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
4					3-8' soil	
5						
6						
7						
8						
9					8-9' Roller bit boulder	
10					9-15' soil	
11						
12						
13						
14						
15						
16	↓				15-16' Roller bit boulder	
17					16-22' soil	
18						
19						
20						
21						
22						
23						
24						22-25' Roller bit boulder
25						25-28' soil
26						
27						

Signature \_\_\_\_\_

Print name \_\_\_\_\_

Materials used on Boring

Benseal   1  

Quick Gel   1  

Hole Plug   1  

Revert \_\_\_\_\_

Well gravel \_\_\_\_\_

Concrete \_\_\_\_\_

Asphalt \_\_\_\_\_

Spoons \_\_\_\_\_

Traps \_\_\_\_\_

Bits \_\_\_\_\_

Tri Cone \_\_\_\_\_

Diamond \_\_\_\_\_

Misc. material/equipment \_\_\_\_\_

PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 2

CLIENT: M cLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28						
29		1st run			28-33' Core 1st run REC: 46"	
30						
31						
32						
33						
34					EOB at 33'	
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						

PROJECT: Yonkers Redevelopment	SHT. NO. 1 of 2
CLIENT: McLaren Engineering	JOB NO.: 06-209
LOCATION: Elm Street, Yonkers, NY	ELEVATION

GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START 9/27/06
10/3/2006		12'6"		DIA.	4"				DATE FINISH 10/3/06
				WT.	300				DRILLER J. santiago
				FALL	24"				INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	3" spin				0-6" blacktop 6"-5' soil	BOREHOLE GROUTED  YES <input checked="" type="checkbox"/> X NO <input type="checkbox"/>  Samples received in field by Client's Rep.  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> X  If YES, sign & print name
2						
3						
4						
5						
6					5-7' roller bit boulder	Signature  Print name  Materials used on Boring  Benseal <u>  2  </u> Quick Gel <u>  2  </u> Hole Plug <u>  1  </u> Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____ Tri Cone 2/2 15/16 Diamond 1  Misc. material/equipment
7						
8						
9						
10						
11						
12						
13						
14						
15						
16					15-18' Roller bit Cobbles	
17						
18						
19						
20						
21					18-20' soil	
22						
23						
24						
25						
26					20-25' Roller bit boulders	
27						
27	↓				25-27' soil	



**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-7**

PROJECT: Elm Street - Yonkers Redevelopment

SHT. NO. 2 of 2

CLIENT: M cLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	3"				27-29' 6" Roller bit boulder	
29						
30						
31	↓				29' 6" - 30' soil	
32						
33						
34						
35						
36					30-35' cored boulders & roller bit	
37						
38						
39					35-38' soil	
40						
41						
42	↓				38-40' Roller bit boulders	
43						
44						
45					40-43' soil	
46						
47						
48					43-44' Roller bit boulders	
49						
50						
51					44-49' 2nd run core rock REC: 51"	
52						
53						
					EOB at 49'	

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 3

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

GROUND WATER

CAS.

SAMP.

CORE

TUBE

PERMIT NO.

DATE

TIME

DEPTH

CASING

TYPE

HW

NX

DATE START 9-29-06

10/2/2006

10'

45'

DIA.

4"

DATE FINISH 10-2-06

WT.

300

DRILLER P. Lynch

FALL

24"

INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin					BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  If YES, sign & print name  Signature  Print name  Materials used on Boring Benseal <input type="checkbox"/> 2 Quick Gel <input type="checkbox"/> 2 Hole Plug <input type="checkbox"/> 1 Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits Tri Cone 2 - 2 15/16 Diamond 1  Misc. material/equipment
2					0-6" blacktop 6"-3' soil	
3						
4					3-6' Concrete rebar	
5						
6						
7					6-8' Roller bit boulders	
8						
9					8-9'6" soil	
10					9'6" - 10' cobbles 10 - 10' 6" soil	
11					10' 6" - 11' cobbles roller bit	
12						
13						
14					11'-20' soil	
15						
16						
17						
18						
19						
20						
21					20-21' cobbles & gravel	
22						
23					21-25' soil	
24						
25						
26					25-26' soil	
27	↓				26-27'6" cobbles	

PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 3

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	3"				27'6" - 30' soil	
29						
30						
31					30-43' soil	
32						
33						
34						
35						
36						
37						
38						
39					43-46' roller bit cobbles	
40						
41						
42					46-47' soil	
43						
44					47-49' roller bit cobbles	
45	▼					
46					49-49'6" soil	
47						
48					49'6" - 50' roller bit cobbles	
49						
50					50-51' soil	
51						
52					51-53' Roller bit cobbles	
53						

PROJECT: Elm street - Yonkers Redevelopment

SHT. NO. 3 of 3

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
54					53-55' Roller bit into rock	
55						
56		1st run			Core 1st run REC: 51"	
57						
58						
59						
60					EOB at 60'	
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						

JERSEY BORING & DRILLING CO., INC.				TEST BORING LOGS				BORING NO. B-9	
PROJECT: Yonkers Redevelopment							SHT. NO. 1 of 2		
CLIENT: McLaren Engineering							JOB NO.: 06-209		
LOCATION: Elm Street, Yonkers, NY							ELEVATION		
GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX	DATE START 10/3/06	
10/3/2006		6'	25'	DIA.	4"			DATE FINISH 10/3/06	
				WT.	300			DRILLER P. Lynch	
				FALL	24"			INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION				REMARKS
1					0-3' soil				BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2									
3									
4					3-18' cobbles				Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name  Signature  Print name  Materials used on Boring Benseal <input type="checkbox"/> 2 Quick Gel <input type="checkbox"/> 1 Hole Plug <input type="checkbox"/> 1 Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____  Misc. material/equipment
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19					18-27' soil				
20									
21									
22									
23									
24									
25									
26									
27									

JERSEY BORING & DRILLING CO., INC.		TEST BORING LOGS			BORING NO. B-9	
PROJECT: Yonkers Redevelopment				SHT. NO. 2 of 2		
CLIENT: M cLaren Engineering				JOB NO. 06-209		
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28					27-30' Roller bit into rock	
29						
30						
31		1st run			Core 1st run REC: 40"	
32						
33						
34						
35						
36					EOB at 35'	
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						

**JERSEY BORING & DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO.**

**B-10**

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 1

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

**GROUND WATER**

PERMIT NO.

DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
10/3/2006		5'		DIA.	4"				10/2/06
				WT.	300				10/3/06
				FALL	24"				DRILLER P. Lynch
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" casing				0-3' soil	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2						
3						
4						
5					3 - 10' Roller bit boulders	Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
6						
7						
8	↓					
9						Signature
10						
11		1st run			10-15' 1st run Rec: 37"	Print name
12						
13						
14						
15						Materials used on Boring
16						Benseal <input type="checkbox"/> 1
17						Quick Gel <input type="checkbox"/> 1
18						Hole Plug <input type="checkbox"/>
19						Revert <input type="checkbox"/>
20						Well gravel <input type="checkbox"/>
21						Concrete <input type="checkbox"/>
22						Asphalt <input type="checkbox"/>
23						Spoons <input type="checkbox"/>
24						Traps <input type="checkbox"/>
25						Bits
26						Tri Cone
27						Diamond <input type="checkbox"/>
						Misc. material/equipment
						NOTES:

**JERSEY BORING & DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO.**

**B-11**

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 3

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

GROUND WATER

DATE	TIME	DEPTH	CASING	TYPE	CAS.	SAMP.	CORE	TUBE	PERMIT NO.
10/4/2006		12	40	DIA.	HW	SS	NX		DATE START 10/2/07
				WT.	300				DATE FINISH 10/4/07
				FALL	24"				DRILLER L.Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" Black top 6"-2' Soil	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2						
3					2-3' Roller bit boulders	Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
4					3-5' Soil	
5						Signature
6					5-6'6" Roller bit cobbles	
7						Print name
8					6' 6" - 7' 6" Roller bit boulders	
9					7' 6" - 9' 6" Roller bit Concrete & Rebar	Materials used on Boring
10					9' 6" - 10' Soil	
11					10' - 13' Roller Bit Boulder	Benseal <u>  2  </u> Quick Gel <u>  3  </u> Hole Plug <u>  2  </u> Revert _____ Well gravel _____ Concrete _____ Asphalt <u>  1/4  </u> Spoons _____ Traps _____ Bits _____
12						
13					13-14' C gravel	Tri Cone Diamond <u>  -  </u>
14						
15					14-17" Roller Bit boulder	Misc. material/equipment
16						
17					17-18' Roller Bit boulder	
18					18-18' 6" Soil	
19					18' 6"- 19' Roller bit cobbles	
20					19'-19' 6" Soil	
21					19' 6" - 20' cobbles	
22						
23					20-25' Roller bit cobbles	
24						
25						
26					25-27' roller bit Gravel	
27						



**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-11**

PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 3

CLIENT: Elm Street - Yonkers Redevelopment

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	3"				27-30' Roller bit Boulder	
29						
30						
31					30-32' soil	
32					32-40' Roller bit boulders	
33						
34						
35						
36						
37						
38						
39						
40	↓					
41					40-45' cobbles	
42						
43						
44						
45						
46					45-49' Roller bit boulders	
47						
48						
49						
50					49-51' soil	
51						
52					51-52' 6" Roller bit boulders	
53						

**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-11**

PROJECT: Elm street - Yonkers Redevelopment

SHT. NO. 3 of 3

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
54					52' 6" -56' Roller bit cobbles	
55						
56					56-59' soil	
57						
58					59-60' Roller bit boulder	
59						
60					60-65' cobbles	
61						
62						
63						
64						
65					65-70' cobbles	
66						
67						
68						
69					70-73' soil	
70						
71						
72					73-75' Roller bit into rock	
73						
74						
75					Rec: 46"	
76						
77						
78		1st run				
79					EOB at 80'	
80						

PROJECT: Yonkers Redevelopment					SHT. NO. 1 of 3				
CLIENT: McLaren Engineering					JOB NO.: 06-209				
LOCATION: Elm Street, Yonkers, NY					ELEVATION				
GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX	DATE START 10/5/06	
10/9/2006		8'		DIA.	4"			DATE FINISH 10/9/06	
				WT.	300			DRILLER P. Lynch	
				FALL	24"			INSPECTOR	

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" Black top 6"-2' soil	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2						
3					2-4' soil	Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
4						
5					4-6' concrete & rebar	If YES, sign & print name
6						
7					6-20' Roller bit boulders	Signature
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21					20-27' Roller bit boulders	Print name
22						
23						
24						
25						
26						
27						

Materials used on Boring

Benseal

Quick Gel

Hole Plug

Revert

Well gravel

Concrete

Asphalt

Spoons

Traps

Bits

Tri Cone

Diamond

Misc. material/equipment

**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-12**

PROJECT: McLaren Engineering

SHT. NO. 2 of 3

CLIENT: Elm Street - Yonkers Redevelopment

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	↓				27-35' Roller bit boulders	
29						
30						
31						
32						
33						
34						
35					35-40' C gravel	
36						
37						
38						
39					40-47' soil	
40						
41						
42						
43						
44						
45						
46					47-49' Roller bit boulders	
47						
48						
49					49-60' Roller bit boulders	
50						
51						
52						
53						

PROJECT: Elm street - Yonkers Redevelopment	SHT. NO. 3 of 3
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CLIENT: McLaren Engineering	JOB NO. 06-209
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DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
54						
55						
56						
57						
58						
59						
60						
61						
62						
63		1st run			60-65'	
64					Core 1st run	
65					Rec: 20" rock	
66						
67						
68		2nd run			65-70'	
69					Core 2nd run	
70					Rec: 36"	
71					EOB at 70'	
72						
73						
74						
75						
76						
77						
78						
79						
80						

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 3

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

GROUND WATER

PERMIT NO.

DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP.	CORE	TUBE	DATE START
10/5/2006		10'	45'	DIA.	4"		NX		10-4-06
				WT.	300				10-5-06
				FALL	24"				J. santiago
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin					BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2					0-6" blacktop 6"-3' soil	
3						
4						Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name  Signature  Print name  Materials used on Boring Benseal <input type="checkbox"/> Quick Gel <input type="checkbox"/> Hole Plug <input type="checkbox"/> Revert <input type="checkbox"/> Well gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Spoons <input type="checkbox"/> Traps <input type="checkbox"/> Bits Tri Cone Diamond  Misc. material/equipment
5						
6					3-10' Roller bit boulders	
7						
8						
9						
10						
11						
12					10-13' soil	
13						
14					13-14' boulders	
15						
16					14-18' soil	
17						
18						
19					18-19' Roller bit boulders	
20					19-21' soil	
21						
22					21-22' Roller bit boulders	
23						
24					22-26' soil	
25						
26						
27	↓					

PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 3

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	3"				26-31' boulders	
29						
30						
31						
32					31-38' Gravel	
33						
34						
35						
36						
37						
38						
39					38-48' boulders	
40						
41						
42						
43						
44						
45	▼					
46						
47						
48						
49					48-50' cobbles	
50						
51					50-55' Roller bit boulders	Tri Cone Diamond
52						
53						

Benseal \_\_\_\_\_  
Quick Gel \_\_\_\_\_  
Hole Plug \_\_\_\_\_

PROJECT: Elm street - Yonkers Redevelopment

SHT. NO. 3 of 3

CLIENT: McLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
54						
55						
56					EOB at 55'	
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						Benseal _____
72						Quick Gel _____
73						Hole Plug _____
74						
75						
76						Tri Cone
77						Diamond
78						
79						
80						



PROJECT: Yonkers Redevelopment		SHT. NO. 1 of 1							
CLIENT: McLaren Engineering		JOB NO.: 06-209							
LOCATION: Elm Street, Yonkers, NY		ELEVATION							
GROUND WATER		PERMIT NO.							
DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
10/4/2006		12	64	DIA.	4"				10/3/06
				WT.	300				DATE FINISH 10/4/06
				FALL	24"				DRILLER L.Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" Black top	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2					6"-4' soil	
3						Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
4					4-5' Roller bit boulder	
5						Signature
6					5-8' soil	
7						Print name
8					8-10' 6" Roller bit boulder	
9						Materials used on Boring
10					10' 6" - 13' soil	
11						Benseal <input type="checkbox"/> 1 Quick Gel <input type="checkbox"/> 1 Hole Plug _____ Revert _____ Well gravel _____ Concrete _____ Asphalt <input type="checkbox"/> 1/4 Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____
12					13-14' cobbles	
13						Misc. material/equipment
14					14-22' roller bit boulders	
15						22-27' 1st run REC: 47"
16						
17						1st run
18						
19						EOB at 27'
20						
21						
22						
23						
24						
25						
26						
27	↓					

JERSEY BORING & DRILLING CO., INC.				TEST BORING LOGS					BORING NO. <b>B-16</b>
PROJECT: Yonkers Redevelopment							SHT. NO. 1 of 1		
CLIENT: McLaren Engineering							JOB NO.: 06-209		
LOCATION: Elm Street, Yonkers, NY							ELEVATION		
GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX	DATE START 10/3/06	
		No		DIA.	4"			DATE FINISH 10/4/06	
		water		WT.	300			DRILLER P. Lynch	
				FALL	24"			INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION			REMARKS	
1					0-4' Concrete & Rebar			BOREHOLE GROUTED  YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Samples received in field by Client's Rep.  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  If YES, sign & print name	
2									
3									
4									
5					4-15' Roller bit boulders			Signature  Print name  Materials used on Boring  Benseal _____ Quick Gel _____ Hole Plug <u>  2  </u> Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits Tri Cone 6" roller bit _____ Diamond _____  Misc. material/equipment  NOTES:  broke wheel off 6" roller bit had to move.	
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16					EOB at 15'				
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									

JERSEY BORING & DRILLING CO., INC.				TEST BORING LOGS				BORING NO. B-16A	
PROJECT: Yonkers Redevelopment							SHT. NO. 1 of 1		
CLIENT: McLaren Redevelopment							JOB NO.: 06-209		
LOCATION: Elm Street, Yonkers, NY							ELEVATION		
GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX	DATE START	10/4/06
10/4/2006		7'		DIA.	4"			DATE FINISH	10/4/06
				WT.	300			DRILLER	P. Lynch
				FALL	24"			INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION				REMARKS
1					0-2' soil				BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2									
3									Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name  Signature  Print name  Materials used on Boring Benseal <input type="checkbox"/> <u>2</u> Quick Gel <input type="checkbox"/> Hole Plug <input type="checkbox"/> <u>1</u> Revert <input type="checkbox"/> Well gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Asphalt <input type="checkbox"/> Spoons <input type="checkbox"/> Traps <input type="checkbox"/> Bits <input type="checkbox"/> Tri Cone <input type="checkbox"/> Diamond <input type="checkbox"/>  Misc. material/equipment  NOTES:  Obstruction in way would lock up rods & break all wrenches, pull off hole.
4									
5									
6									
7									
8					2' -18' 6" Roller bit boulders				
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20					18' 6" - 20' soil				
21					EOB at 20'				
22									
23									
24									
25									
26									
27									

**JERSEY BORING & DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-19**

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 4

CLIENT: McLaren Engineering

JOB NO.: 06-219

LOCATION: Elm Street, Yonkers, NY

ELEVATION

GROUND WATER

PERMIT NO.

DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
10/6/2006		11'		DIA.	4"				10/4/06
				WT.	300				10/6/06
				FALL	24"				DRILLER L.Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-5' soil	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
2						
3						
4						
5						
6					5-10' cobbles	Signature
7						
8						
9						
10						
11					10-13' 6" roller bit boulder	Print name
12						
13						
14						
15						
16					13' 6" - 15' roller bit boulder	Materials used on Boring Benseal _____ Quick Gel _____ Hole Plug _____ Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____
17						
18						
19						
20						
21	3"				20-45' roller bit boulders	Tri Cone _____ Diamond _____  Misc. material/equipment
22						
23						
24						
25						
26						
27						

**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-19**

PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 4

CLIENT: McLaren Engineering

JOB NO. 06-219

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	3"					
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46					45-50' Roller bit boulders	
47						
48						
49						
50						
51					50-53' soil	
52						
53	↓					

**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-19**

PROJECT: Yonkers Redevelopment

SHT. NO. 3 of 4

CLIENT: McLaren Engineering

JOB NO. 06-219

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
54					53-54' Roller bit Boulder	
55					54-65' Roller bit cobbles & gravel	
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66					65-67' Roller bit Boulder	
67					67-70' soil	
68						
69						
70	▼					
71					70-73' Roller bit cobbles	
72					73-74' soil	
73						
74						
75					74-77' Roller bit Cobbles	
76					77-78' Roller bit boulder	
77						
78						
79					78-80' Soil	
80						

PROJECT: Yonkers Redevelopment

SHT. NO. 4 of 4

CLIENT: McLaren Engineering

JOB NO.06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
80					80-84' 6" Roller bit cobbles	
81						
82						
83						
84						
85					84' 6" - 85' boulder	
86		1st run			85'-90' 1st run core REC: 52"	
87						
88						
89						
90						
91					EOB at 90'	
92						
93						
94						
95						
96						
97						
98						
99						
100						
101						
102						
103						
104						
105						

<b>JERSEY BORING &amp; DRILLING CO., INC.</b>				<b>TEST BORING LOGS</b>				<b>BORING NO.</b>	<b>B-22</b>
PROJECT:Yonkers Redevelopment							SHT. NO. 1 of 2		
CLIENT: McLaren Engineering							JOB NO.: 06-209		
LOCATION: Elm Street, Yonkers, NY							ELEVATION		
GROUND WATER					CAS.	SAMP.	CORE	TUBE	
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX	PERMIT NO.	
10/10/2006		10'		DIA.	4"			DATE START 10/9/06	
				WT.	300			DATE FINISH 10/10/06	
				FALL	24"			DRILLER P. Lynch	
								INSPECTOR	
DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS			
1					0-4' Roller bit boulders	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>			
2									
3									
4									
5					4-25' Roller bit boulders & cobbles	Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name			
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
						Signature			
						Print name			
						Materials used on Boring			
						Benseal <u>  2  </u>			
						Quick Gel <u>  1  </u>			
						Hole Plug <u>  1  </u>			
						Revert _____			
						Well gravel _____			
						Concrete _____			
						Asphalt _____			
						Spoons _____			
						Traps _____			
						Bits			
						Tri Cone _____			
						Diamond <u>  -  </u>			
						Misc. material/equipment			



PROJECT: Yonkers Redevelopment

SHT. NO. 2 of 2

CLIENT: M cLaren Engineering

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS	
28					25-30' Decomposed rock		
29							
30							
31		1st run			Core 1st run REC: 42"		
32							
33							
34							
35							
36					EOB at 35'		
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							

PROJECT: Yonkers Redevelopment	SHT. NO. 1 of 1
CLIENT: McLaren Engineering	JOB NO.: 06-209
LOCATION: Elm Street, Yonkers, NY	ELEVATION

GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START 10/10/06
10/10/2006		5'		DIA.	4"				DATE FINISH 10/10/06
				WT.	300				DRILLER P. Lynch
				FALL	24"				INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" Black top	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  If YES, sign & print name
2					6"- 4' soil	
3						
4						
5					4-6' Roller bit boulder	
6						Signature
7						Print name  Materials used on Boring Benseal _____ Quick Gel _____ Hole Plug _____ Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____  Misc. material/equipment
8						
9					6-20' soil	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22					1st run core REC: 60"	
23		1st run				
24						
25	↓					
26					EOB at 25'	
27						

PROJECT: Yonkers Redevelopment	SHT. NO. 1 of 1
CLIENT: McLaren Engineering	JOB NO.: 06-209
LOCATION: Elm Street, Yonkers, NY	ELEVATION

GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START
10/6/2006		5'		DIA.	4"				10/6/06
				WT.	300				DATE FINISH
				FALL	24"				10/6/06
									DRILLER L. Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1					0-1' soil	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> X NO <input type="checkbox"/>  Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> X If YES, sign & print name  Signature _____  Print name _____  Materials used on Boring Benseal _____ Quick Gel _____ Hole Plug _____ Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____  Misc. material/equipment _____
2					1-2' timber/wood	
3					2-3' brick	
4					3-5' Roller bit boulder	
5						
6					5-8' Roller bit into rock	
7						
8						
9		1st run			8-13' Core 1st run Rec: 40"	
10						
11						
12						
13					EOB at 13'	
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

PROJECT: Yonkers Redevelopment	SHT. NO. 1 of 1
CLIENT: McLaren Engineering	JOB NO.: 06-209
LOCATION: Elm Street, Yonkers, NY	ELEVATION

GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START
10/9/2006		10'		DIA.	4"				10/9/06
				WT.	300				DATE FINISH
				FALL	24"				10/9/06
									DRILLER L. Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" Black top	<p>BOREHOLE GROUTED</p> <p>YES <input checked="" type="checkbox"/> X NO <input type="checkbox"/></p> <p>Samples received in field by Client's Rep.</p> <p>YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> X</p> <p>If YES, sign &amp; print name</p> <hr/> <p>Signature</p> <hr/> <p>Print name</p> <hr/> <p>Materials used on Boring</p> <p>Benseal _____</p> <p>Quick Gel _____</p> <p>Hole Plug _____</p> <p>Revert _____</p> <p>Well gravel _____</p> <p>Concrete _____</p> <p>Asphalt _____</p> <p>Spoons _____</p> <p>Traps _____</p> <p style="padding-left: 20px;">Bits</p> <p>Tri Cone _____</p> <p>Diamond _____</p> <p>Misc. material/equipment</p>
2						
3					6" - 6' cobbles	
4						
5						
6						
7					6-7' Roller bit boulders	
8					7-8' soil	
9						
10					8-10' cobbles	
11					10-11' Roller bit boulder	
12	▼				11-12' cobbles	
13					12-13' Roller bit boulder	
14					13-14' cobbles	
15					14-15' Roller bit into rock	
16		1st run			1st run REC: 48"	
17						
18						
19						
20						
21					EOB at 20'	
22						
23						
24						
25						
26						
27						

PROJECT: Yonkers Redevelopment					SHT. NO. 1 of 1				
CLIENT: McLaren Engineering					JOB NO.: 06-209				
LOCATION: Elm Street, Yonkers, NY					ELEVATION				
GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START 10/11/06
10/11/2006		6' 3"		DIA.	4"				DATE FINISH 10/11/06
				WT.	300				DRILLER Jose Santiago
				FALL	24"				INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" casing				0-6" Blacktop 6"-3' brick & gravel (misc. fill)	BOREHOLE GROUTED  YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
2						
3						
4		1st run			3-8' Core 1st run Rec: 19"	Samples received in field by Client's Rep.  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  If YES, sign & print name
5						
6						
7		2nd run			8-13' Core 2nd run Rec: 16"	Signature
8						
9						
10					EOB at 13'	Print name
11						
12						
13	↓					Materials used on Boring  Benseal _____ Quick Gel _____ Hole Plug _____ Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____  Misc. material/equipment
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

PROJECT: Yonkers Redevelopment		SHT. NO. 1 of 1							
CLIENT: MclAren Engineering		JOB NO.: 06-209							
LOCATION: Elm Street, Yonkers, NY		ELEVATION							
GROUND WATER		PERMIT NO.							
DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
10/10/2006		18' 11"	64	DIA.	4"				10/10/06
				WT.	300				DATE FINISH 10/10/06
				FALL	24"				DRILLER J. Santiago
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" Black top	<b>BOREHOLE GROUTED</b> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name  Signature _____  Print name _____  Materials used on Boring Benseal <input type="checkbox"/> 1 Quick Gel <input type="checkbox"/> 1 Hole Plug <input type="checkbox"/> 1 Revert _____ Well gravel _____ Concrete _____ Asphalt <input type="checkbox"/> 1/4 Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____  Misc. material/equipment
2					6"-2' roller bit boulder	
3					2-3' Wood	
4					3-8' roller bit boulder	
5						
6						
7						
8						
9					8-9' soil	
10					9-10' Roller bit - boulder	
11					10-13' soil	
12						
13						
14					13-16' Roller bit boulder	
15						
16						
17					16-18' soil	
18						
19					18-19' Roller bit boulder	
20					19-20" Roller bit boulder	
21		1st run			20-25' Core 1st run REC: 41"	
22						
23						
24						
25	↓					
26					EOB at 25'	
27						

**JERSEY BORING & DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO.**

**B-28**

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 1

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

GROUND WATER

PERMIT NO.

DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
				DIA.	4"				10/10/06
				WT.	300				DATE FINISH
				FALL	24"				10/11/06
									DRILLER L. Ramos
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	3" spin				0-6" Black top	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
2						
3					6"-5' cobbles	
4						
5						
6					5-10' Roller bit boulders	Signature
7						
8						
9						
10						
11					10-15' Roller bit boulders	Print name
12						
13						
14						Materials used on Boring
15						Benseal _____
16					1st run	Quick Gel _____
17					REC: 35"	Hole Plug _____
18		1st run				Revert _____
19						Well gravel _____
20	▼					Concrete _____
21					EOB at 20'	Asphalt _____
22						Spoons _____
23						Traps _____
24						Bits _____
25						Tri Cone _____
26						Diamond _____
27						Misc. material/equipment

PROJECT: Yonkers Redevelopment	SHT. NO. 1 of 2
CLIENT: McLaren Engineering	JOB NO.: 06-209
LOCATION: Elm Street, Yonkers, NY	ELEVATION

GROUND WATER					CAS.	SAMP.	CORE	TUBE	PERMIT NO.
DATE	TIME	DEPTH	CASING	TYPE	HW	SS	NX		DATE START 10/9/06
10/10/2006		14'		DIA.	4"				DATE FINISH 10/10/06
				WT.	300				DRILLER L.Ramos
				FALL	24"				INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" spin				0-6" blacktop 6"-5' Cobbles	BOREHOLE GROUTED  YES <input checked="" type="checkbox"/> X NO <input type="checkbox"/>  Samples received in field by Client's Rep.  YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>  If YES, sign & print name
2						
3						
4						
5						
6					5-7' roller bit boulder	Signature  Print name  Materials used on Boring  Benseal _____ Quick Gel _____ Hole Plug _____ Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____  Misc. material/equipment
7						
8						
9						
10						
11						
12						
13						
14						
15						
16					15-20' Roller bit boulders	
17						
18						
19						
20						
21					20-25' Roller bit boulders	
22						
23						
24						
25						
26					25-35' Roller bit decomposed rock	
27	↓					



**JERSEY BORING &  
DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO. B-29**

PROJECT: McLaren Engineering

SHT. NO. 2 of 2

CLIENT: Elm Street - Yonkers Redevelopment

JOB NO. 06-209

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
28	4"				25-35' Roller bit Decomposed rock	
29						
30						
31						
32						
33						
34						
35						
36		1st run			Core 1st run Rec: 38"	
37						
38						
39						
40	▼				EOB at 40'	
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						

**JERSEY BORING & DRILLING CO., INC.**

**TEST BORING LOGS**

**BORING NO.**

**B-30**

PROJECT: Yonkers Redevelopment

SHT. NO. 1 of 1

CLIENT: McLaren Engineering

JOB NO.: 06-209

LOCATION: Elm Street, Yonkers, NY

ELEVATION

GROUND WATER

PERMIT NO.

DATE	TIME	DEPTH	CASING	TYPE	CAS. HW	SAMP. SS	CORE NX	TUBE	DATE START
10/11/2006		3'	4	DIA.	4"				10/11/06
				WT.	300				10/11/06
				FALL	24"				DRILLER P. Lynch
									INSPECTOR

DEPTH FEET	CASING BLOWS	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SAMPLE RECOVERY	IDENTIFICATION	REMARKS
1	4" ↓				0-6" blacktop	BOREHOLE GROUTED YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>  Samples received in field by Client's Rep. YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If YES, sign & print name
2						
3						
4						
5						
6						
7						
8						
9						
10						
11		1st run			1st run REC: 52"	Signature  Print name  Materials used on Boring  Benseal _____ Quick Gel _____ Hole Plug _____ Revert _____ Well gravel _____ Concrete _____ Asphalt _____ Spoons _____ Traps _____ Bits _____ Tri Cone _____ Diamond _____  Misc. material/equipment
12						
13						
14						
15						
16					EOB at 15'	NOTES:  broke wheel off 6" roller bit ha to move.
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

## TEST PIT FIELD NOTES

Job No: 106100  
Location: Yonkers, NY  
Project Title: River Park Center Project  
Client: SFC, L.L.C.  
Performed by: Chris Humphries  
Dates: 12/18/06 – 12/19/06  
Weather: Partly cloudy, 50-55 F

### TEST PIT No.1

0' – 1.5' Asphalt and gravel base coarse  
1.5' – 14' Fill - Dense to medium dense material,  
consisting of fine to coarse sand with little  
silt, some to and fine coarse gravel,  
cobble, and boulders.  
Brick foundation present between 1.5'-6'.  
Timber present between 5'-6'  
Ash present between 11.5'-12'.

Groundwater present at 14.' Groundwater  
appears contaminated, possibly by crude  
oil.

Test pit appears to be original location of  
river bottom.

### TEST PIT No.2

- 0' – 1' Roots and organic material.
- 1' – 7.5' Fill - Dense to medium dense material consisting of fine to coarse sand with some clay, little silt. Some to and coarse gravel, cobbles, and boulders.  
Brick foundation present between 3'-5'.
- 7.5'-14' Undisturbed, dense to medium dense material consisting of fine to coarse sand, with little to some silt. Some to and fine coarse gravel, cobbles, and boulders.

No water present.

### TEST PIT No.3

- 0' – 2' Decomposed asphalt and base coarse
- 2' – 5' Orange/brown sand and clay. Traces of fire extinguishing materials at 3'-4'. Some coarse gravel.
- 5'– 6' Fill – Dense to medium dense dark brown sand with some clay, with little silt. Some coarse gravel.
- 6'-7' Fill – Dense to medium dense orange/brown sand with some clay, with little silt. Some coarse gravel.
- 7'-7.5' Fill - Dense to medium dense light brown sand with some clay, with little silt. Some coarse gravel.
- 7.5'-8' Organic layer with dense to medium dense fine to coarse sand.
- 8'-14' Undisturbed dense to medium dense material consisting of fine to coarse sand, with little to some silt, some to and fine coarse gravel, cobbles, and boulders.

Water present at 3.5'

TEST PIT No.4

- 0' – 1.5' Asphalt and base coarse
- 1.5' – 5' Fill – Dense to medium dense material consisting of fine to coarse sand, with little silt, some to and fine coarse gravel, cobbles, and boulders.
- 5' – 6' Organic layer with dense to medium dense fine to coarse sand.
- 6'-8' Fill – Dense to medium dense material consisting of fine to coarse sand, with little silt, some to and fine coarse gravel, cobbles, and boulders.
- 8'-12.5' Undisturbed, dense to medium dense material consisting of fine to coarse sand, with little silt, some to and fine coarse gravel, cobbles, and boulders.

No water present.  
Bedrock encountered at 12.5'.