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March 2, 2005

BY HAND
Mr. Geoffrey Griffis
Chairperson
Board of Zoning Adjustment
441 4th Street, NW, Room 210
Washington, DC 20001

Re: BZA Application No. 17276
2101 Foxhall Road, N.W.; Square 1346, Lot 822

Dear Mr. Griffis:

In addition to the bound filing submitted on this date, enclosed you will find a Preliminary Geotechnical Engineering Report dated September 21, 2004, performed by Schnabel Engineering North, LLC.

Thank you for your attention to this matter.

Sincerely,

ROBINS, KAPLAN, MILLER & CIRESI L.L.P.

Richard B. Nettler
Jeannine Rustad

Enclosure (as stated)
cc: Mr. Felipe Paraud
Alma Gates, ANC 3D Commissioner
Office of Planning, Joel Lawson
David Murphy, NPS
Ms. Chandra Hardy
Friends of Whitehaven (c/o William Snape, III, Esquire)
Certain Residents of W Street (c/o Maggie Brady)
(All with enclosures by hand)

Word 45668866.1

BZA
Case No. 17276
Exhibit No. 49

Board of Zoning Adjustment
District of Columbia
CASE NO. 17276
EXHIBIT NO. 49

Schnabel

Schnabel Engineering North, LLC

656 Quince Orchard Road, Suite 700
Gaithersburg, Maryland 20878

Phone (301) 417-2400
Fax (301) 417-2730
www.schnabel-eng.com

September 21, 2004

First Capital Trust
c/o Mr. Ted Visnic
M.B. Visnic, Inc.
1686 E. Gude Rd.
Rockville, MD 20850

Subject: **Preliminary Geotechnical Engineering Report, Phillips Property, Foxhall Road and W St., N.W., Washington, D.C. (Our Reference No. 04121184)**

Dear Mr. Visnic:

Schnabel Engineering is pleased to submit this preliminary geotechnical engineering report for the above referenced project. These services have been performed in accordance with our proposal/agreement dated July 30, 2004.

1.0 Scope of Services

Services performed under this agreement included the drilling of five soil test borings and the preparation of a preliminary geotechnical engineering report. This report includes the following:

1. Evaluation of estimated subsurface conditions within the areas explored on the site.
2. Preliminary foundation recommendations for support of the proposed development.
3. Recommendations regarding the handling of ground water in design.
4. Recommendations concerning earthwork and bedrock issues that could impact the development.

5. Recommendations concerning other geotechnical issues that could affect the pricing or development of the property.

Services with respect to specific design recommendations, environmental matters, chemical laboratory testing, removal and disposal of contaminated soil or ground water, construction dewatering, erosion control, wetlands investigations, stormwater management, cost or quantity estimates, plans, specifications, and construction observations and testing and services not specifically identified, are not included in the scope of services.

2.0 Site Description and Proposed Development

The site is located at southeast corner of the intersection of Foxhall and W. Streets, in Northwest Washington, D.C. A site vicinity map is included as Figure 1. Based on our site visits, the site is relatively wooded and is slightly to steeply sloped. We understand that the proposed construction will consist of single-family residences and new roadways. No information on proposed grades or design loads was available at this time. We have considered minimal column and wall loads of about 50 kips and 4 kips per linear foot, respectively.

3.0 Subsurface Conditions

Five soil test borings (Nos. SB-1, SB-3, SB-5, SB-7, and SB-9) were drilled at the site from September 14 to September 16, 2004. Approximate test boring locations are shown on Figure 2. The test boring logs are provided in Appendix A. It is noted that borings SB-2, SB-4, SB-6, and SB-8 were located in the field, but were not drilled.

3.1 Stratification

Soils encountered in the subsurface investigation have been designated by strata for the purposes of our discussion herein. These stratum designations do not imply continuity of the materials described but give the general description and characteristics of the materials at the site. The subsoils indicated by the test borings have been described by the generalized strata as given below:

Stratum A: (Fill)	From the existing ground surface to depths between 2.5 feet and 9.0 feet, in borings SB-5 and SB-7.	Brown sandy silt FILL and PROBABLE FILL, trace gravel, brick fragments, concrete fragments, roots, mica and bark; loose to firm (N = 9 to 20).
Stratum B: (Terrace)	From the existing ground surface and beneath Stratum A, to depths of between 18.5 feet to 20.0 feet, the maximum depth investigated in the borings.	Brown and gray, sandy SILT (ML), silty SAND (SM), and sandy LEAN CLAY (CL), trace mica, roots, wood fragments, gravel, quartz and cobble fragments, firm to very compact (N = 8 to 81).
Stratum C: (Residual)	Below Stratum B, in boring SB-9, to a depth of 19.1 feet the maximum depth investigated in the boring.	Tan, white and dark brown, DISINTEGRATED ROCK, with mica, generally very compact (N = 100/7").

Up to about 0.2 to 0.3 feet of topsoil was encountered at the surface grade of the borings; these depths may vary at other locations. The above stratification is shown in detail on the boring logs in Appendix A.

Numbers after the description of the soil strata indicate the minimum and maximum penetration resistances, or N values, in each stratum. N values indicate the penetration resistance in blows per foot of a 2-inch O.D., 1-3/8 inch I.D. split-spoon sampler driven with a 140-pound hammer falling 30 inches per ASTM D-1586. After the initial set of 6 inches to set the sampler in undisturbed material, the number of blows required to drive the sampler an additional 12 inches was taken as the N value.

Disintegrated rock has been arbitrarily defined as residual earth material with a standard penetration resistance between 60 blows per foot and refusal. It may exhibit certain rock-like qualities. The denser portions of this material possess characteristics of soft rock and may require rock excavation methods for removal. Refusal is defined as a penetration resistance or 100 blows per 2 inches or less.

The soil group symbols indicated on the boring logs, and in the generalized subsoil stratum descriptions above, represent the Unified Soil Classification System (USCS) group symbols and are based on visual observation of the specimens recovered, per ASTM D-2488.

The criteria for visual identification of soil specimens are presented in Appendix A. There may be variations between samples visually classified and specimens where laboratory testing was performed to determine soil classification per ASTM D-2487.

3.2 Geology

The existing fill soils of Stratum A are believed to be associated with previous development and grading of the site, or due to demolition of the existing building that was located on the site and filling of its basement. The underlying natural soils of Stratum B are believed to be Terrace Deposits of the late Miocene period. The disintegrated rock of Stratum C represents residual soils derived from in-place weathering of the underlying bedrock believed to be Kensington Tonalite.

3.3 Ground Water

Ground water measurements were taken in the borings during drilling and after completion. Ground water observations indicated that ground water was encountered at about 8.8 feet below the ground surface in boring SB-3, before the augers were pulled. After augers were pulled there was no ground water observed in the borings to the depths the boring sidewalls caved. The boring sidewalls caved between about 4.3 and 13.1 feet below the existing ground surface.

Water level readings have been made at the time estimates stated on the boring logs. This data have been reviewed and generalized interpretations have been made in this report. However, fluctuations in the level of the ground water may occur due to variations in environmental conditions, surface drainage, time of year, and other factors not evident at the time the measurements were made and reported herein. It is normal for ground water fluctuations of 3 to 6 feet to occur during the course of the year.

4.0 Preliminary Geotechnical Engineering Analysis

The preliminary geotechnical engineering analysis was based on the data obtained from the soil borings drilled at the site. From a geotechnical viewpoint, it is our opinion that it is feasible to develop the subject site for the proposed single-family residences. Proposed site development grades and lowest floor grades were not available at the time of this report. It should be feasible to support new buildings on spread footings founded on natural soils or new compacted structural fill. The non-engineered fill that exists in the vicinity of borings SB-5 and SB-7 is unsuitable to support spread footings due to the possibility of excessive building settlements. It will be necessary to lower foundations through the fill, or to replace the fill with new structural fill and to place spread footings on the structural fill. Details of our preliminary recommendations are given below.

4.1 Foundation Support

Spread footings may be founded on the natural soils of Stratum B or new compacted structural fill and may be designed for a soil bearing pressure of about 3000 psf. Existing fill was encountered in the borings at depths of 2.5 and 9 feet below existing grades in borings SB-7 and SB-5 respectively. Spread footings should be lowered through existing fill and placed on firm natural soils of Stratum B. In lieu of lowering the footings to the natural soils, it is also feasible to excavate the fill below the footings and to replace it with new compacted structural fill. The structural fill should extend at least 1 foot beyond footing edges for lateral support.

New structural fill should be compacted to at least 95 percent of the maximum dry density per ASTM D-698. Material to be used as structural fill should classify as ML, SM, SC, SP, SW, GM, GC, GP, or GW per ASTM D-2487. All fill materials should be observed and approved by the geotechnical engineer prior to use.

Column and wall footings should be at least 24 inches and 16 inches wide, respectively, for shear considerations. Exterior footings should be placed at least 2.5 feet below the proposed ground surface for frost protection.

4.2 Floor Slab Support

Earth supported floor slabs are considered feasible. However, soil test borings indicated loose fill material of Stratum A in areas. Some undercutting of the existing fill and replacement with new compacted fill or crushed stone may be necessary.

4.3 Subdrainage

Ground water was encountered in soil test boring SB-3 at a depth of about 8.8 feet below existing grades. Therefore, special underfloor subdrainage systems may be necessary in areas where cuts are deep. Perimeter foundation drainage should be installed adjacent to all below grade walls that extend more than three feet below exterior grades. Additional borings with temporary monitoring wells are recommended during the final investigation to better determine ground water levels and actual subdrainage requirements.

4.4 Bedrock

Material requiring rock excavation methods such as blasting or hoe-ramming was encountered at a depth of 18.5 feet at the location of Boring No. SB-9. The bedrock at the site is known to be highly variable and pinnacles of bedrock may be encountered in between the borings.

4.5 Earthwork

Subgrade preparation for floor slabs and new structural fill should include stripping of all topsoil, soft surface soils and any other deleterious matter. On-site soil of Stratum A is not expected to be suitable for reuse as new compacted fill. The majority of the Stratum B soils are expected to be suitable for reuse as fill, although the clayey portions of this Stratum are not expected to be suitable. Drying of soils may be required in order to obtain compaction.

5.0 Recommendations for Additional Studies

Additional borings should be drilled once the building locations, proposed lowest levels, proposed cuts and fill, and structural loads are available. A final geotechnical engineering report should be prepared for the design phase of this project based on the final grades, building configuration and grading. This report should include final foundation recommendations, a settlement evaluation, and subdrainage requirements.

6.0 General and Limitations

This preliminary report has been prepared for use by your office and the design professional in conceptual planning in accordance with generally accepted geotechnical engineering practices. No warranty, either express or implied, is made as to the professional advice included in this report. This report has not been prepared for use by parties other than those named above. It may not contain sufficient information for other parties or other uses. Soil samples obtained for this study will be retained until November 17, 2004, and then discarded unless other disposition is requested.

We appreciate the opportunity to be of service to you on this project. Please contact our office if you have any questions concerning this report.

Very truly yours,

SCHNABEL ENGINEERING NORTH, LLC

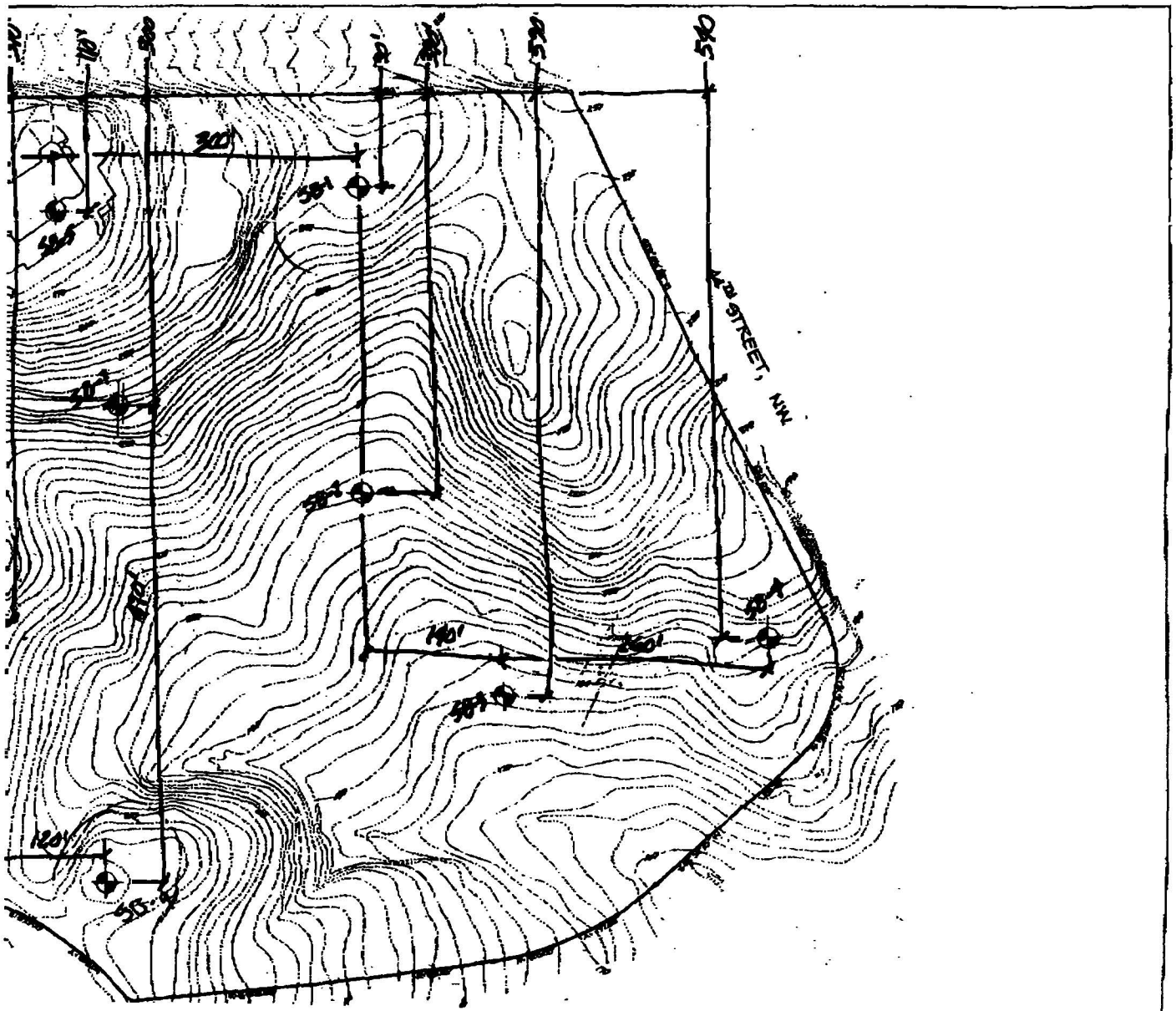
Joan Bentel
Senior Staff Engineer

Victor Omelchenko, P.E.
Principal

JB/VO/tbk
G:\04121184\WP\FIN.AL\Phillips Property Preliminary Report.doc

Figures: (1) Site Vicinity Map
(2) Approximate Soil Boring Location Plan

Appendix A: Subsurface Investigation Procedures (1 Sheet)
Soil Test Boring Log General Notes (1 Sheet)
Identification of Soil (1 Sheet)
Test Boring Logs (5 Sheets)



REFERENCE: Base plan for this drawing was provided by Macris, Hendricks & Glascock.

Schnabel Engineering

PHILLIPS PROPERTY
FOXHALL RD & W. ST, NW
WASHINGTON, D.C.

TEST BORING
LOCATION PLAN

PROJECT NO. 04121184
FIGURE 02

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Feb 18 '05 17:43 P.10

APPENDIX A

- Subsurface Investigation Procedures
- Soil Test Boring Log General Notes
- Identification of Soil
- Test Boring Logs

SUBSURFACE INVESTIGATION PROCEDURES

1. Test Borings - Hollow Stem Augers

The borings are advanced by turning an auger with a center opening of 2-¼ or 3-¼ inches. A plug device blocks off the center opening while augers are advanced. Cuttings are brought to the surface by the auger flights. Sampling is performed through the center opening in the hollow stem auger, by standard methods, after removal of the plug. Usually, no water is introduced into the boring using this procedure.

2. Standard Penetration Tests

Testing is performed by driving a 2-inch O.D., 1-3/8 inch I.D. sampling spoon driven with a 140-pound hammer falling 30 inches, according to ASTM D-1586. After an initial 6 inches to assure the sampling spoon is in undisturbed material, the number of blows required to drive the sampler an additional 12 inches is generally taken as the N value. In the event 30 or more blows are required to drive the sampling spoon the initial 6 inch interval, the sampling spoon is driven to a total penetration resistance of 100 blows or 18 inches, whichever occurs first. The sampling operation is terminated after a total of 100 hammer blows and the depth of penetration is recorded.

3. Boring Locations

Test boring locations were established in the field by Macris, Hendricks & Glascock and are shown on Figure 2. Boring SB-7 was offset twenty feet to the north due to the sloped ground surface.

Test Boring Log General Notes

1. Numbers in the sampling data column indicate the number of blows required to drive a 2-inch O.D., 1-3/8 inch I.D. split spoon sample through three 6-inch intervals, or as indicated, using a 140 pound hammer falling 30 inches, according to ASTM D-1586. The sum of the second and third 6-inch blow count intervals is the N value of the Standard Penetration Test (SPT).

2. Strata descriptions are based on visual inspection and are in accordance with the Unified Soil Classification System, ASTM D-2488.

3. Refusal at the surface of rock, boulder, or obstruction is defined as a penetration resistance of 100 blows for 2 inches penetration or less.

4. Disintegrated rock is defined as residual earth material with a penetration resistance between 60 blows per foot and refusal.

5. Key to abbreviations and symbols:

w %	= Moisture Content	3T	= 3 inch Tube Sample
☒	= Area Sampled	24/20	= Tube Sample Pushed 24 inches, 20 inches recovered
▨	= Rock Coring	REC	= Rock Core Recovery
WOR	= Weight of Rod	RQD	= Rock Quality Designation
WOH	= Weight of Hammer	WOW	= Water Observation Well

6. The boring logs and related information depict subsurface conditions at the specific locations and at the particular time when drilled. Soil conditions at other locations may differ from conditions at the boring locations. Also, the passage of time may result in a change in the subsurface soil and ground water conditions at the boring locations.

7. The stratification lines represent the approximate boundary between soils and/or rock types as estimated in the drilling and sampling operation. Some variation may be expected vertically between samples taken. The soil profile, water level observations, and penetration resistances presented on the boring logs have been made with reasonable care and accuracy, but must be considered only an approximate representation of subsurface conditions to be encountered at the particular location.

8. Estimated ground water levels are indicated on the logs. These are only estimates from available data and may vary with variations in environmental conditions, precipitation, surface drainage, and time of the year, evaporation, adjacent construction, porosity of the soil, site topography and similar factors.

SCHNABEL ENGINEERING

Consulting Geotechnical Engineers

IDENTIFICATION OF SOIL

I. DEFINITION OF SOIL GROUP NAMES ASTM D-2487-83

			Symbol	Group Name
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels - More than 50% of coarse fraction retained on No. 4 sieve Coarse, ¾" to 3" Fine, No. 4 to ¾"	Clean Gravels Less than 5% fines	GW	Well graded gravel
			GP	Poorly graded gravel
		Gravels with Fines More than 12% fines	GM	Silty gravel
			GC	Clayey gravel
	Sands - 50% or more of coarse fraction passes No. 4 sieve Coarse, No. 10 to No. 4 Medium, No. 40 to No. 10 Fine, No. 200 to No. 40	Clean Sands Less than 5% fines	SW	Well-graded sand
			SP	Poorly graded sand
		Sands with fines More than 12% fines	SM	Silty sand
			SC	Clayey sand
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays - Liquid Limit less than 50 Low to medium plasticity	Inorganic	CL	Lean clay
			ML	Silt
		Organic	OL	Organic clay
				Organic silt
	Silts and Clays - Liquid Limit 50 or more Medium to high plasticity	Inorganic	CH	Fat clay
			MH	Elastic silt
		Organic	OH	Organic clay
				Organic silt
Highly Organic Soils	Primarily organic matter, dark in color, and organic odor		PT	Peat

II. DEFINITION OF MINOR COMPONENT PROPORTIONS

Minor Component Adjective Form	Approximate Percentage of Fraction by Weight
Gravelly, Sandy	30% or more coarse grained
With	
Sand, Gravel	15% or more coarse grained
Silt, Clay	5% to 12% fine grained
Trace	
Sand, Gravel	Less than 15% coarse grained
Silt, Clay	Less than 5% fine grained

III. GLOSSARY OF MISCELLANEOUS TERMS

SYMBOLS - Unified Soil Classification Symbols are shown above as group symbols. Use A Line Chart for laboratory identification. Dual symbols are used for borderline classification.

BOULDERS & COBBLES - Boulders are considered rounded pieces of rock larger than 12 inches, while cobbles range from 3" to 12 inches.

DISINTEGRATED ROCK - Residual rock material with a standard penetration resistance (SPT) of more than 60 blows per foot, and less than refusal. Refusal is defined as a SPT of 100 blows for 2" or less penetration.

ROCK FRAGMENTS - Angular pieces of rock, distinguished from transported gravel, which have separated from original vein or strata and are present in a soil matrix.

QUARTZ - A hard silica mineral often found in residual soils.

IRONITE - Iron oxide deposited within a soil layer forming cemented deposits.

CEMENTED SAND - Usually localized rock-like deposits within a soil stratum composed of sand grains cemented by calcium carbonate or other materials.

MICA - A soft plate of silica mineral found in many rocks, and in residual or transported soil derived therefrom.

ORGANIC MATERIALS (Excluding Peat) -

Topsoil - Surface soils that support plant life and which contain considerable amounts of organic matter;
Organic Matter - Soil containing organic colloids throughout its structure;
Lignite - Hard, brittle decomposed organic matter with low fixed carbon content (a low grade of coal).

FILL - Man made deposit containing soil, rock and often foreign matter.

PROBABLE FILL - Soils which contain no visually detected foreign matter but which are suspect with regard to origin.

LENSES - 0 to ½ inch seam of minor soil component.

LAYERS - ½ to 12 inch seam of minor soil component.

POCKET - Discontinuous body of minor soil component.

COLOR SHADES - Light to dark to indicate substantial difference in color.

MOISTURE CONDITIONS - Wet, moist, or dry to indicate visual appearance of specimen.

Schnabel Engineering

TEST BORING LOG

Project: Phillips Property

Boring Number: SB-1

Contract Number: 04121184

Sheet: 1 of 1

Boring Contractor: Recon Drilling, Inc.

Boring Foreman: C. Rodas

Drilling Method: 2-1/4 I.D. Hollow Stem Auger

Drilling Equipment: CME 450 ATV

SEA Representative: J. Bentel

Dates Started: 9/15/04 **Finished:** 9/15/04

Location: See Boring Location Plan

Hammer Type:

Ground Surface Elevation: 244.3± (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Completion	9/15	9:40	Dry	—	—
Casing Pulled	9/15	9:50	Dry	—	12.5'

DEPTH (ft)	STRATA DESCRIPTION	SYMBOL	ELEV. (ft)	STRATUM	WL	SAMPLING DEPTH	SAMPLING DATA
0.2	Topsoil	ML	244.1				6+7+8
	sandy SILT, micaceous, trace gravel and roots, moist, reddish-yellowish brown, trace dark brown						10+12+11
	trace dark gray at 5.0 feet					5	7+8+8
							5+7+8
				B		10	
	trace tan at 13.5 feet						8+11+12
						15	
	trace yellow at 18.5 feet						8+11+12
20.0	BOTTOM OF BORING @ 20.0 FT.		224.3			20	

Unconfined Compressive Strength, tsf/ft²

PL MC LL

N VALUE, blows/ft.

Comments:

TEST BORING LOG GAITHERSBURG BORING LOGS 04121184.GPJ SCHNABEL.GDT 9/20/04

Schnabel Engineering

TEST BORING LOG

Project: Phillips Property

Boring Number: SB-3

Contract Number: 04121184

Sheet: 1 of 1

Boring Contractor: Recon Drilling, Inc.

Boring Foreman: C. Rodas

Drilling Method: 2-1/4 I.D. Hollow Stem Auger

Drilling Equipment: CME 450 ATV

SEA Representative: J. Bentel

Dates Started: 9/16/04 **Finished:** 9/16/04

Location: See Boring Location Plan

Hammer Type:

Ground Surface Elevation: 178.6± (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Encountered	9/16	7:52	12.5'	—	—
Completion	9/16	8:04	14.8'	—	—
Casing Pulled	9/16	8:18	8.8'	—	13.1'

DEPTH (ft)	STRATA DESCRIPTION	SYMBOL	ELEV. (ft)	STRATUM	WL	SAMPLING DEPTH	SAMPLING DATA	Unconfined Compressive Strength, ksf/ft² / PL MC LL / N VALUE, blows/ft
0.3	Topsoil sandy SILT, with mica, trace gravel and roots, moist, brown	ML	178.3				3+3+5	
2.5	sandy lean CLAY, micaceous, trace roots and wood fragments, moist, brown	CL	176.1				4+7+7	
5.0	sandy SILT, micaceous, moist, brown, tan, dark brown	ML	173.6			5	4+6+8	
	trace white at 8.5 feet			B		10	5+7+8	
						15	10+11+15	
						20	11+20+20	
20.0	BOTTOM OF BORING @ 20.0 FT.		158.6					

Comments:

TEST BORING LOG G:\GTHERSBURG BORING LOGS 04121184.GPJ SCHNABEL.GDT 9/20/04

Schnabel Engineering — TEST BORING LOG

Project: Phillips Property

Boring Number: SB-5
Contract Number: 04121184
Sheet: 1 of 1

Boring Contractor: Recon Drilling, Inc.
Boring Foreman: C. Rodas
Drilling Method: 2-1/4 I.D. Hollow Stem Auger
Drilling Equipment: CME 450 ATV
SEA Representative: J. Bentel
Dates Started: 9/14/04 Finished: 9/14/04
Location: See Boring Location Plan
Hammer Type:
Ground Surface Elevation: 283.4± (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Completion	9/14	12:20	Dry	—	—
Casing Pulled	9/14	12:30	Dry	—	4.3'

DEPTH (ft)	STRATA DESCRIPTION	SYMBOL	ELEV. (ft)	STRATUM	WL	SAMPLING DEPTH	SAMPLING DATA
0.2	Topsoil	FILL	283.2				
	sandy silt FILL, trace mica and roots, moist, brown						4+6+3
	with brick fragments and gravel at 2.5 feet						5+6+6
				A		5	14+8+5
9.0	sandy SILT, with mica, trace roots, moist, reddish-brown	ML	274.4				4+4+5
	micaceous at 13.5 feet			B		15	6+6+7
	brown, tan, trace dark gray and white at 18.5 feet						5+6+7
20.0	BOTTOM OF BORING @ 20.0 FT.		263.4			20	

Unconfined Compressive Strength, tons/ft.²
PL MC LL
N VALUE, blows/ft.

Comments:

TEST BORING LOG GAITHERSBURG BORING LOGS 04121184.GPJ SCHNABEL.GDT 9/29/04

Schnabel Engineering

TEST BORING LOG

Project: Phillips Property

Boring Number: **SB-7**
Contract Number: 04121184
Sheet: 1 of 1

Boring Contractor: Recon Drilling, Inc.
Boring Foreman: C. Rodas
Drilling Method: 2-1/4 I.D. Hollow Stem Auger
Drilling Equipment: CME 450 ATV
SEA Representative: J. Bental
Dates Started: 9/14/04 Finished: 9/14/04
Location: See Boring Location Plan
Hammer Type:
Ground Surface Elevation: 245.0± (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Completion	9/14	3:50	Dry	---	---
Casing Pulled	9/14	4:00	Dry	—	12.5'

DEPTH (ft)	STRATA DESCRIPTION	SYMBOL	ELEV. (ft)	STRATUM	WL	SAMPLING DEPTH	SAMPLING DATA
0.2	Topsoil	FILL	244.8	A			8+10+10
	sandy silt PROBABLE FILL, trace bark, concrete fragments, gravel and roots, moist, brown						
2.5	silty SAND, trace mica and roots, moist, brown	SM	242.5				20+58+23
5.0	sandy SILT, with mica, moist, reddish-brown	ML	240.0	B		5	9+11+12
	micaceous, with quartz and cobble fragments at 8.5 feet					10	11+12+15
	brown, tan, trace white at 13.5 feet					15	6+9+12
20.0	BOTTOM OF BORING @ 20.0 FT.		225.0			20	8+9+12

Unconfined Compressive Strength, tons/ft.²
PL MC LL
N VALUE, blows/ft.

Comments:
Offset boring 20 feet north, Elev. +6 feet.

TEST BORING LOG GAITHERSBURG BORING LOGS 04121184.GPJ SCHNABEL.GDT 9/20/04

Schnabel Engineering — TEST BORING LOG

Project: Phillips Property

Boring Number: SB-9
Contract Number: 04121184
Sheet: 1 of 1

Boring Contractor: Recon Drilling, Inc.
Boring Foreman: C. Rodas
Drilling Method: 3-1/4 I.D. Hollow Stem Auger
Drilling Equipment: CME 450 ATV
SEA Representative: J. Bentel
Dates Started: 9/16/04 Finished: 9/16/04
Location: See Boring Location Plan
Hammer Type:
Ground Surface Elevation: 218.8± (feet)

Groundwater Observations

	Date	Time	Depth	Casing	Caved
Completion	9/16	9:56	Dry	---	---
Casing Pulled	9/16	10:09	Dry	—	12.3'

DEPTH (ft)	STRATA DESCRIPTION	SYMBOL	ELEV. (ft)	STRATUM	WL	SAMPLING DEPTH	SAMPLING DATA
0.2	Topsoil	ML	218.6				6+7+8
	sandy SILT, with mica, trace roots, moist, brown, trace dark brown						10+10+10
	tan at 5.0 feet					5	5+8+8
				B			15+18+18
						10	
	trace white and dark brown at 13.5 feet						18+27+22
						15	
18.5			200.3				
19.1	DISINTEGRATED ROCK, with mica, moist, tan, white, dark brown		199.7	C			65+35/1"
	BOTTOM OF BORING @ 19.1 FT.						

Unconfined Compressive Strength, tsf
PL MC LL
N VALUE, blows/ft.

Comments:

TEST BORING LOG GAITHERSBURG BORING LOGS 04121184.GPJ SCHNABEL.GDT 9/20/04