GEOTECHNICAL ENGINEERING REPORT

BRADBURY SUBDIVISION
SUITLAND-SILVER HILL, MD 20746

CDDI PROJECT NO. 04-020

PREPARED FOR

COME BACK TERPS LLC
5055 AMESBURY DR
COLUMBIA, MD 21044

PREPARED BY

CAPITOL DEVELOPMENT DESIGN, INC.
4600 POWDER MILL ROAD, SUITE 200
BELTSVILLE, MD 20705

JUNE 22, 2020

CAPITOL DEVELOPMENT DESIGN, INC.

ENGINEERS PLANNERS SURVEYORS

4600 Powder Mill Road, Suite 200, Beltsville, Maryland 20705 Tel:(301) 937-3501 Fax:(301) 937-3507

June 22, 2020

Mr. Ghazi Hussain
Come Back Terps LLC
5055 Amesbury Dr
Columbia, MD 21044

Re: Geotechnical Report
Bradbury Subdivision
Suitland-Silver Hill, MD 20746
CDDI Job No.: 04-020

Dear Mr. Hussain:

Capitol Development Design Inc. (CDDI) is pleased to submit this geotechnical investigation report for the above referenced project. Per information provided to us, we understand that the property will be developed as residential lots. To obtain information of the subsurface conditions at the site, eight (8) soil test borings to depths from 10 to 25 feet were obtained and a report of subsurface investigation and studies was completed on December 28, 2006. The following report sections discuss the results of field and laboratory studies to verify two of eight borings in the previous report.

All samples obtained from soil test borings will be retained in our laboratory for a period of thirty (30) days from the date of this report. After that time, the samples will be discarded unless other disposition is requested by the client.

We appreciate the opportunity to be of service to you for this project. Please call the undersigned if you have any questions regarding this report.

Sincerely,

Puzhen Wang

Puzhen (Mike) Wang
Staff Engineer

STATE OF MARYLAND
DONGXIA WANG
No. 37194
PROFESSIONAL ENGINEER

Dongxia Wang, Ph.D., P.E.
Geotechnical Division Manager

TABLE OF CONTENTS

APPENDICES

1.0 PURPOSE AND SCOPE

The purpose of this study was to investigate the subsurface soil and groundwater conditions for the Bradbury Subdivision, Suitland-Silver Hill, MD 20746 and to verify some logs of a previous study for the proposed development. The project site is shown as Figure 1 in Appendix.

To achieve this objective, the scope of work undertaken for this investigation included the following.

- Planning and executing a subsurface exploration program to evaluate soil and groundwater conditions. This program consisted of drilling 2 soil testing borings.

- Conducting a geotechnical-related laboratory testing program for the soil classification and for correlation of engineering properties.

2.0 ELEVATION DATUM

The approximate ground surface elevations of the soil test borings were obtained and interpolated from existing ground surface elevation information obtained from survey drawing or elevation obtained in the field by CDDI survey.

3.0 SUBSURFACE INVESTIGATION

A total of two (2) soil test borings were conducted from June 12, 2020 and June 15, 2020. The borings are shown as Figure 2 Boring Location Plan in Appendix. The soil borings were drilled to a depth of 15 feet below the existing ground surface. Two test borings were advanced at their respective staked locations as shown on the Boring Location Plan in Appendix. The boring logs are based on visual-manual classification of the soils by our field geologist /geotechnical engineer, amended by the results of our geotechnical laboratory testing program. Test boring logs are included in Appendix.

Borings were drilled using an ATV-mounted drill rig. Test borings were advanced by using hollow-stem augers and soil samples were obtained using the Standard Penetration Tests (SPT) in accordance with ASTM D1586. SPT samples were obtained for each boring at depth intervals of every 2.5 feet in the upper 10 feet and at 5 feet thereafter. A representative portion of each split spoon sample was placed in a glass jar and was transported to our laboratory.

In the split-barrel sampling procedure, a 2.0-inch O.D. split-barrel sampling spoon is driven into the ground with a 140-pound hammer, free falling a distance of 30 inches. The blows required to advance the sampling spoon to a specified distance are reported as

the penetration resistance values. The values are shown on boring logs at the depths of their occurrence. The N-value is the sum of standard penetration resistance values that advanced through the last 12-inches of sampling. The N-value is an indication of the relative density of in-place granular soils and or the consistency of cohesive soils.

Groundwater level was monitored in the boring during, at completion, and after 24 hours.

Samples obtained from the boring were inspected by a geotechnical engineer and the field logs were edited accordingly. The final logs that indicated the subsurface conditions encountered are included in the Appendix.

Table I summarizes the current subsurface exploration program, and photographs documenting the subsurface exploration program are attached to this report as Appendix.

4.0 LABORATORY TESTING PROGRAM

Representative soil samples were selected and tested in our laboratory to determine soil classification and for correlation engineering properties. Laboratory tests were performed on selected jar samples of soils recovered from test borings VB-1 and VB-3. The laboratory testing program included visual classifications, moisture content determination, organic content, Atterberg limits tests, and grain size analysis using sieves. The laboratory test results from this exploration are included on the applicable boring logs and in the Appendix of this report.

A geotechnical engineer classified each soil sample on the basis of texture and plasticity in accordance with the Unified Soil Classification System (USCS). A brief explanation of the USCS is included with this report. The stratification lines designating the interfaces between earth materials on the borings logs are approximate; in situ, the transitions may be gradual, rather than distinct.

All of the tests were performed in the laboratory in general conformance with applicable ASTM test procedures.

Tests of laboratory testing are summarized in Table II and the laboratory test results are presented in Appendix.

5.0 SITE AND SUBSURFACE CONDITIONS

The field investigation was conducted between 06/12/2020 and 6/15/2020. A total of two (2) borings (VB-1 and VB-3) were drilled at the locations shown on Figure 2 in Appendix A.

5.1 Soil Conditions

The current exploration at the site revealed the following soil sequence from the ground surface downward. Based on the results of the subsurface exploration, three (3) general strata were identified at the site:

a) Stratum I (Top Soil)
b) Stratum II (Very Loose to Medium Dense Cohesionless Soil)
c) Stratum III (Medium Stiff to Stiff Cohesion Soil)

The subsurface conditions described below are generalized and the strata type and depths could vary between the borings.

Stratum I – Top Soil was encountered in each soil boring to a depth of about 12 inches.

Stratum II – Generally described as brown, dark brown Silty SAND (SM), Poorly Graded SAND with Gravel (SP), Silty Clayey SAND (SC-SM). Stratum II was encountered beneath Stratum I in each soil test boring. Standard penetration N-value ranged from Weight of Hammer (WHO) to 18 blow per foot (bpf) indicative of very loose to medium dense relative densities.

Stratum III – Generally described as brown and yellowish brown SILT with Sand (ML) and Sandy Lean CLAY (CL). Stratum III was encountered beneath Stratum II and only in VB-3. Standard penetration N-value was from 5 bpf to 11 bpf indicative of medium stiff to stiff consistencies.

6.0 GROUNDWATER OBSERVATIONS

Groundwater observations were made in every borehole during drilling, after completion, and after 24 hours of drilling operations. Ground water was only encountered in VB-1at a depth of 2.0 below ground surface after 24 hours of drilling as noted on the boring logs in Appendix.

Fluctuations in the level and quantity of ground water will occur due to variations in rainfall, temperature, soil permeability and other factors and not evident at the time of the water level measurements recorded on the boring logs.

7.0 ANALYSIS AND RECOMMENDATIONS

Foundations for structures must satisfy two (2) basic and independent design criteria: (a) the maximum· bearing pressure transmitted to the soils should not exceed the allowable bearing pressure based on an adequate factor of safety with respect to soil or rock shear

strength; and (b) foundation movements resulting from consolidation, shrinkage or swelling of the supporting soils should be within tolerable limits for the structure. Construction factors such as installation of foundation units, excavation procedures, and surface and groundwater conditions must also be considered.

Base on the preliminary structural information, it is understood that the attached single houses will be slab on-grade structure. At the time of our study, the final finish floor elevation and structure loads are not available. However, it is anticipated to be consistent with the existing ground surface, and the load is expected to be light. Reviewing the existing topographic, some cut and/or fill is expected. Due to the anticipated site grading and the expected structural loads, it is anticipated that the structure may be supported by shallow footings founded in natural soils and/or on control fill.

7.1 Shallow Footings:

Shallow spread footings are anticipated to be placed in natural sandy to clayey soil and/or engineering fills below finish grades.

Footings found in proof-rolled natural soil and engineering fills may be sized based on a maximum net allowable bearing pressure of 2000 lbs per sq. ft. and with a minimum footing dimension of 24 inches. Shallow foundations should be placed at a minimum of 2.5 ft. below grade or lowest final grade, whichever is deeper. The recommended bearing values are based on a minimum factor of safety of 2.5 with respect to measured shear strength of natural soils and anticipated shear strength of properly compacted select fill. Settlement of foundations proportioned based on these allowable pressures should .be within tolerable limits for the structure.

Due to the general natural of soils encountered in the soil borings, the bearing capacity at the final footing elevations should be verified in the field by the geotechnical engineer to ensure the bearing capacity at the bottom of each footing excavation adequate for the design loads.

7.2 Floor Slab:

Building floor slab may be supported by the on-grade materials or compacted fill. Appropriate subgrade _preparation and compaction will be required to minimize differential settlement of fill-supported · slabs. Slab-on-grade or slab-on-fill construction is recommended that the slab be supported on a 4- to 6-inch-thick clean sand and gravel or gravel layer placed on a properly prepared subgrade. Recommendations for subgrade preparation including proof-rolling are included in the Site Grading section of th.is report. Impervious sheeting should be placed between the slab and granular course to act as a vapor barrier.

7.3 Retaining Walls:

With the preliminary site information provided by Civil Engineers, retaining walls are planned at some locations. However, no structural details or finish elevations are available at this time of study. Walls retaining soils and fills will be subjected to lateral earth pressures. The magnitude of lateral earth pressure will depend upon the type and density of the backfill and/or natural soil adjacent to the wall, the rigidity of the wall and the drainage conditions behind the wall. Provided minor wall rotation occurs (active condition), the design lateral earth pressure should be 50 lbs per cu. ft and 40 lbs per cu. ft equivalent fluid pressures for cohesive and granular backfill, respectively. Active earth pressure distributions are commonly used for the design of free-standing retaining walls.

If any restrained walls are required, we .recommend using an "at-rest" earth pressure distribution with no wall rotation assumed. With cohesive backfill, a lateral earth pressure at least equivalent to that exerted by a fluid weighing 70 lbs per cu. ft. should be used for design. For a free-draining granular backfill within the entire area between the wall and a plane extending up from the base of the wall at an angle of 45 degrees or flatter, the design lateral earth pressure for "at-rest" conditions could be reduced to a 50 lbs per cu. ft equivalent fluid pressure.

The design lateral earth pressures provided above do not include a factor of safety. Surcharge due to sloping ground surface above the wall and other loads located adjacent to and above the base of the wall can have significant influence in lateral earth pressure and should be considered during design. Also, there is no. provision in the above pressures for hydrostatic loading on the wall.

Walls retaining fine-grained soils are subjected to seasonal freezing temperatures may be subject to long-term accumulative moisture movement due to soil creep and freeze-thaw action. It is desirable to use free draining granular backfill behind such walls to minimize the movement. We recommend that a chimney of clean granular material be placed directly against the back of these walls and that the bottom portion be connected to a drain system in accordingly.

7.4 Stormdrain Bridge:

A stormdrain bridge which consists of a single 72” RCP and a twin 60” HDPE is supposed near VB-1 and the footing of the headwalls will be approx. 3’ deep. The soil at the depth is very loose sandy material and bearing capacity is about 2000 psf.

8.0 GENERAL AND LIMITATIONS

This report has been prepared through the interpretation of subsurface investigation and test data at the point investigated in order to aid in the house construction of this site and to assist

your office in the design of the project. It is intended for use with regard to the specific project discussed herein and any substantial changes in loads, location, or grades should be brought to our attention so that we may determine how this may affect our recommendations.

Some variations in the soil conditions should be anticipated. An allowance should be established to account for additional costs that may be required during construction.

We have prepared this report for the use of the design professional for design purposes in accordance with generally accepted geotechnical engineering practices.

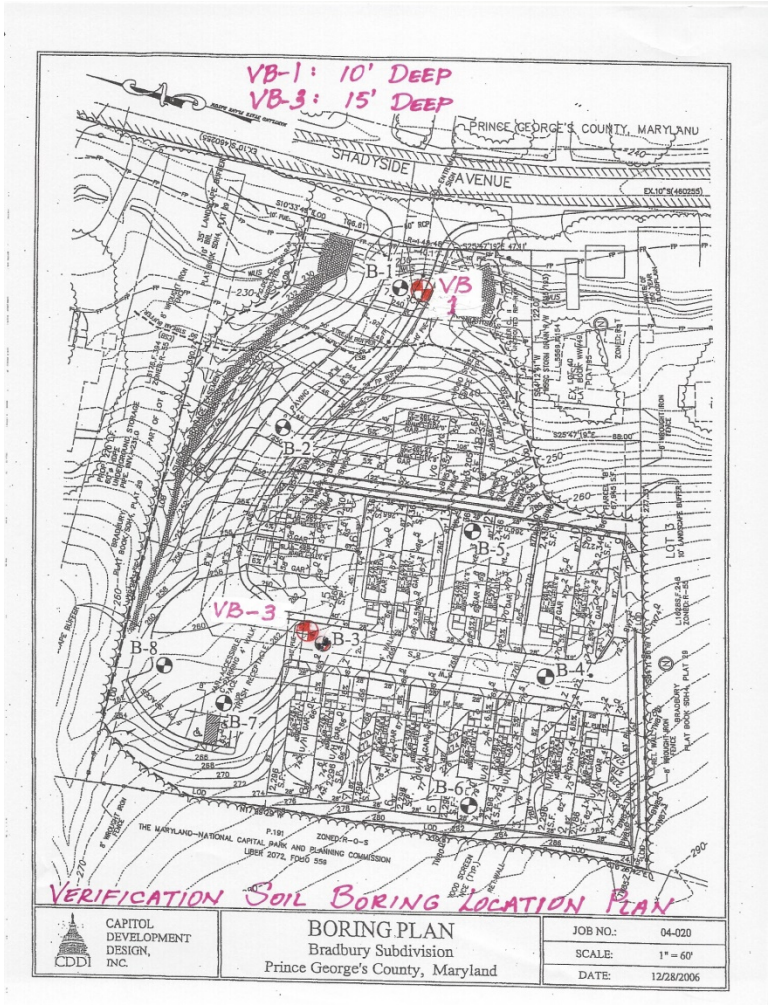
The soil classifications presented in this report are based upon the data obtained from the soil borings performed at indicated locations and from any other information discussed in this report. This report does not reflect any variations that may occur across the site. The nature and extent of such variations may not become evident until construction. If variations appear evident, the conclusion and recommendations of this report should then be reviewed by CDDI's geotechnical engineer in light of the new information.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No other warranties, either expressed or implied, are intended or made. In the event that any changes in the nature, design or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions of this report modified or verified in writing by CDDI's geotechnical engineer.

APPENDIX A – FIGURES

CAPITOL DEVELOPMENT DESIGN, INC.	**Project Name**	**CDDI Project No.**
	Bradbury Subdivision, MD	04-020

Figure 1. Site Map



CAPITOL DEVELOPMENT DESIGN, INC.	**Project Name**	**CDDI Project No.**
	Bradbury Subdivision, MD	04-020

Figure 2. Boring Location Plan

APPENDIX B – BORING LOGS

TABLE B-1. SUMMARY OF SUBSURFACE EXPLORATIONS

Boring ID.	Depth (ft.)	Ground Surface Elev. (ft.)	Coordinates		Water Level* (ft.)		
			Northing	Easting	During Drilling	At Completion	After 24 hours
VB-1	15	232.27	434125.1274	1331834.2576	Dry	Dry	2
VB-3	15	264.26	434109.9508	1331611.6875	Dry	Dry	Dry

* Ground water was measured from ground surface;

CAPITOL DEVELOPMENT DESIGN INC.
4600 Powder Mill RD. STE#200
Beltsville, MD
Telephone: 301-937-3501
Fax: 301-397-3507

BORING LOG

Contracted With Come Back Terps LLC
Project Name Bradbury Subdivision,
Location Prince George's County, MD

Boring # VB-1
Job # 04-020

SAMPLER

Surf. Elev. 232.27 ft
Depth Water Encountered ft
Depth Water at End Drill ft
After 24 hrs. 2 ft

Weight of Hammer 140 lbs
Height of Fall 30 in
Drill Make and Model CME-45C
Caved Depth ft

Hole Diameter 8 in
Depth to Rock ft
Boring Method HSA
Depth of Boring 15 ft

Driller L.Johnson
Logged by P. Wang
Date Started 6/12/2020
Date Completed 6/12/2020

DEPTH (ft)	Elev. (ft)	SOIL SYMBOL	SOIL DESCRIPTION Name, Symbol, Proportions, Color, Moisture, Density, Structure	STRATA DEPTH	No.	N-Value/ RQD (%)	Type	Rec. (in)	BORING & SAMPLE NOTES
			12" Topsoil.	0					
	230		Brown, moist, very loose, Silty Clayey SAND (SC-SM)	1	S-1	1-2-2 (4)	SPT	12	No water encountered.
					S-2	2-1-2 (3)	SPT	10	
5			Dark brown, moist, very loose, Silty SAND (SM)	5					
	225				S-3	3-1-2 (3)	SPT	12	
					S-4	0-0-0 (0)	SPT	15	WOH/18"
10									
	220								
					S-5	0-0-4 (4)	SPT	18	WOH/12"-4 Boring backfilled and restored in kind.
15			Bottom of borehole at 15.0 feet.						

CAPITOL DEVELOPMENT DESIGN INC.
4600 Powder Mill RD. STE#200
Beltsville, MD
Telephone: 301-937-3501
Fax: 301-397-3507

BORING LOG

Contracted With Come Back Terps LLC
Project Name Bradbury Subdivision,
Location Prince George's County, MD

Boring # VB-3
Job # 04-020

SAMPLER

Surf. Elev. 264.26 ft
Depth Water Encountered ft
Depth Water at End Drill ft
Afterhrs.

Weight of Hammer 140 lbs
Height of Fall 30 in
Drill Make and Model CME-45C
Caved Depth 4.5 ft

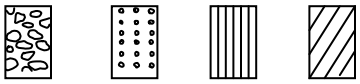
Hole Diameter 8 in
Depth to Rock ft
Boring Method HSA
Depth of Boring 15 ft

Driller L.Johnson
Logged by P. Wang
Date Started 6/15/2020
Date Completed 6/15/2020

DEPTH (ft)	Elev. (ft)	SOIL SYMBOL	SOIL DESCRIPTION Name, Symbol, Proportions, Color, Moisture, Density, Structure	STRATA DEPTH	No.	N-Value/ RQD (%)	Type	Rec. (in)	BORING & SAMPLE NOTES
			12" Topsoil	0					
			Brown, moist, medium dense, Poorly Graded SAND with Gravel (SP)	1	S-1	4-3-5 (8)	SPT	11	No water encountered.
	260				S-2	7-7-11 (18)	SPT	13	
5			Yellowish brown, moist, stiff, SILT with Sand (ML)	5	S-3	10-5-5 (10)	SPT	13	
			Brown, moist, medium stiff to stiff, Sandy Lean CLAY (CL)	7.5	S-4	5-6-5 (11)	SPT	2	
	255								
10									
	250				S-5	3-2-3 (5)	SPT	16	Boring backfilled and restored in kind.
15			Bottom of borehole at 15.0 feet.						

GENERAL NOTES

Drilling and Sampling Symbols



Gravel Sand Silt Clay

Split Spoon (SS) Auger Cutting (AU) Shelby Tube (ST) Rock Core (RC)

N = Standard penetration, blows per foot of a 140 lbs hammer for 30" drop
RQD = Rock Quality Designation
LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index

Cohesionless Soils

If the sand or silt content of a soil is great enough, the soil becomes non-cohesive or semi-cohesive. The soil classification becomes SAND or SILT with the other soil constituents being modifying.

Based on N-Value

0 to 4 Blows…….Very Loose	30 to 59 Blows…….Dense
5 to 9 Blows…….Loose	Over 60 Blows…….Very Dense
10 to 29 Blows…….Medium Dense	

Cohesive Soils

If clay content is sufficient so that clay dominates soil properties, then CLAY becomes the major soil constituent as modifier. Other minor soil constituents may be added according to classification breakdown for cohesion less soils: i.e. silty clay, trace of some sand, trace of gravel.

Based on N-Value

0 to 3 Blows…….Very Soft	16 to 30 Blows……..Stiff
4 to 5 Blows…….Soft	30 to 60 Blows……..Very Stiff
6 to 16 Blows……...Firm	Over 61 Blows……..Hard

Based on Penetrometer Value

Below 0.25……...Very Soft	1.00 to 1.99……..Stiff
0.25 to 0.49……..Soft	2.00 to 3.99……..Very Stiff
0.50 to 0.99……..Firm	Over 4.00…….Hard

Quantity Modifiers

Term	% of Dry Weight
trace	0 to 10
little	11 to 20
some	21 to 35
and/with	36 to 50

Particle Size Identifications

Boulder …….....Over 8 inch diameter
Cobbles……...3 inch to 8 inch
Gravel……..Coarse……1 inch to 3 inch
Medium…….1/2 inch to 1 inch
Fine……....4.75 mm to 1/2 inch
Sand……....Coarse……....2 mm to 4.75 mm
Medium……..0.425 mm to 2 mm
Fine……....0.075 mm to 0.425 mm
Silt/Clay…….....Below 0.075 mm

APPENDIX C – LABORATORY TEST RESULTS

CAPITOL DEVELOPMENT DESIGN INC.
4600 Powder Mill RD. STE#200
Beltsville, MD
Telephone: 301-937-3501
Fax: 301-397-3507

Table C-1: SUMMARY OF LABORATORY RESULTS

CLENT Come Back Terps LLC **PROJECT NAME** Bradbury Subdivision

Project Number 04-020 **PROJECT LOCATION** Prince George's County, MD

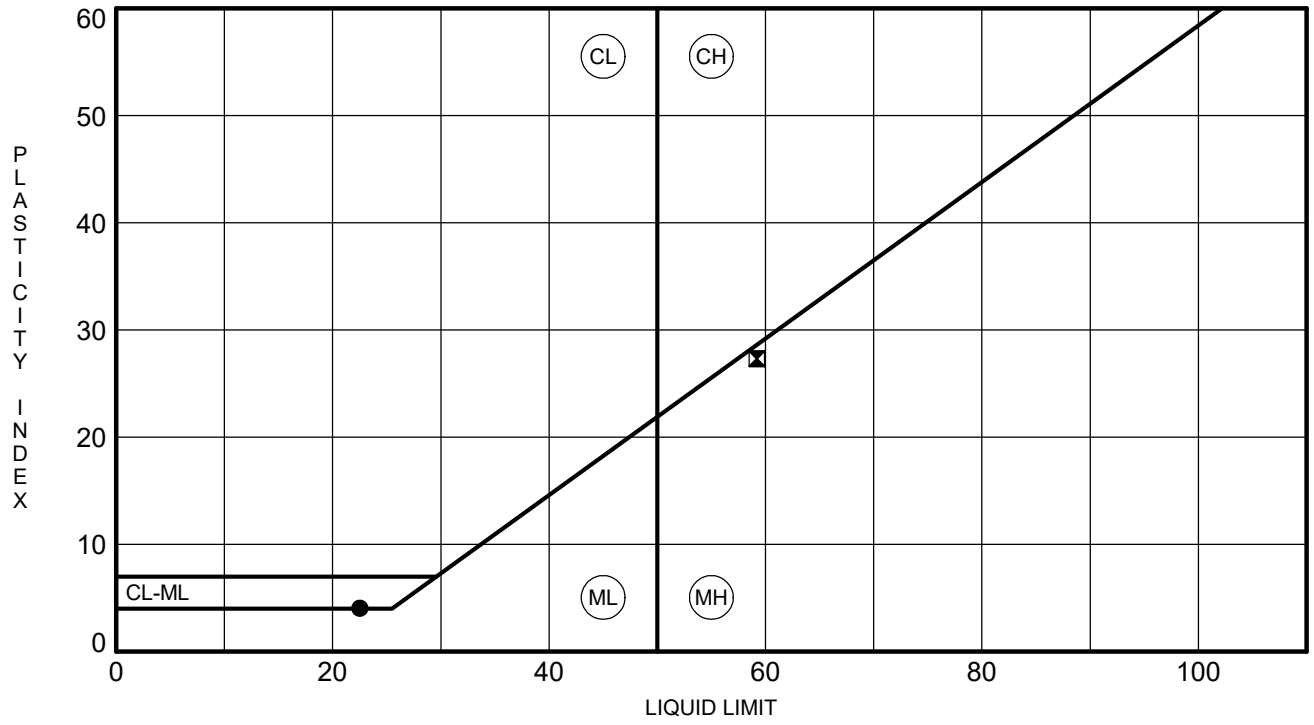
Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Class-ification	Water Content (%)	Organic Content (%)	Satur-ation (%)	Void Ratio
VB-1	0.0	23	18	5	4.75	33	SC-SM	27.3			
VB-1	3.5							20.5	4.3		
VB-1	6.0							38.7	2.4		
VB-1	8.5	59	32	27	4.75	41	SM	60.9			
VB-1	13.5							61.5	5.5		
VB-3	0.0							5.3	0.6		
VB-3	3.5	NP	NP	NP	4.75	3	SP	2.5			
VB-3	6.0	24	25	NP	4.75	73	ML	16.0			
VB-3	8.5	27	18	9			CL	8.8			
VB-3	13.5	34	20	14	4.75	54	CL	35.2			

CAPITOL DEVELOPMENT DESIGN INC.
4600 Powder Mill RD. STE#200
Beltsville, MD
Telephone: 301-937-3501
Fax: 301-397-3507

ATTERBERG LIMITS' RESULTS

CLENT Come Back Terps LLC **PROJECT NAME** Bradbury Subdivision

Project Number 04-020 **PROJECT LOCATION** Prince George's County, MD



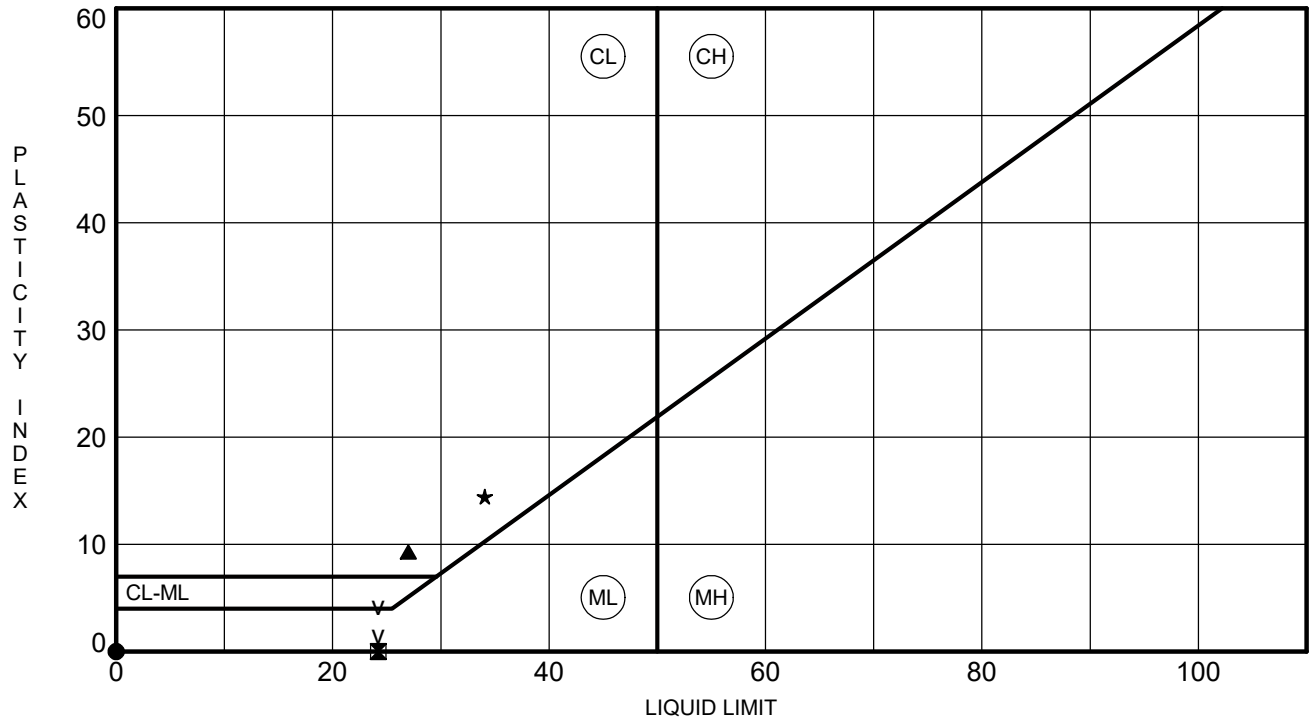
	BOREHOLE	DEPTH	LL	PL	PI	Fines	Classification
●	**VB-1**	**0.0**	**23**	**18**	**5**	**33**	**SILTY, CLAYEY SAND(SC-SM)**
⧓	**VB-1**	**8.5**	**59**	**32**	**27**	**41**	**SILTY SAND(SM)**

CAPITOL DEVELOPMENT DESIGN INC.
4600 Powder Mill RD. STE#200
Beltsville, MD
Telephone: 301-937-3501
Fax: 301-397-3507

ATTERBERG LIMITS' RESULTS

CLENT Come Back Terps LLC **PROJECT NAME** Bradbury Subdivision

Project Number 04-020 **PROJECT LOCATION** Prince George's County, MD



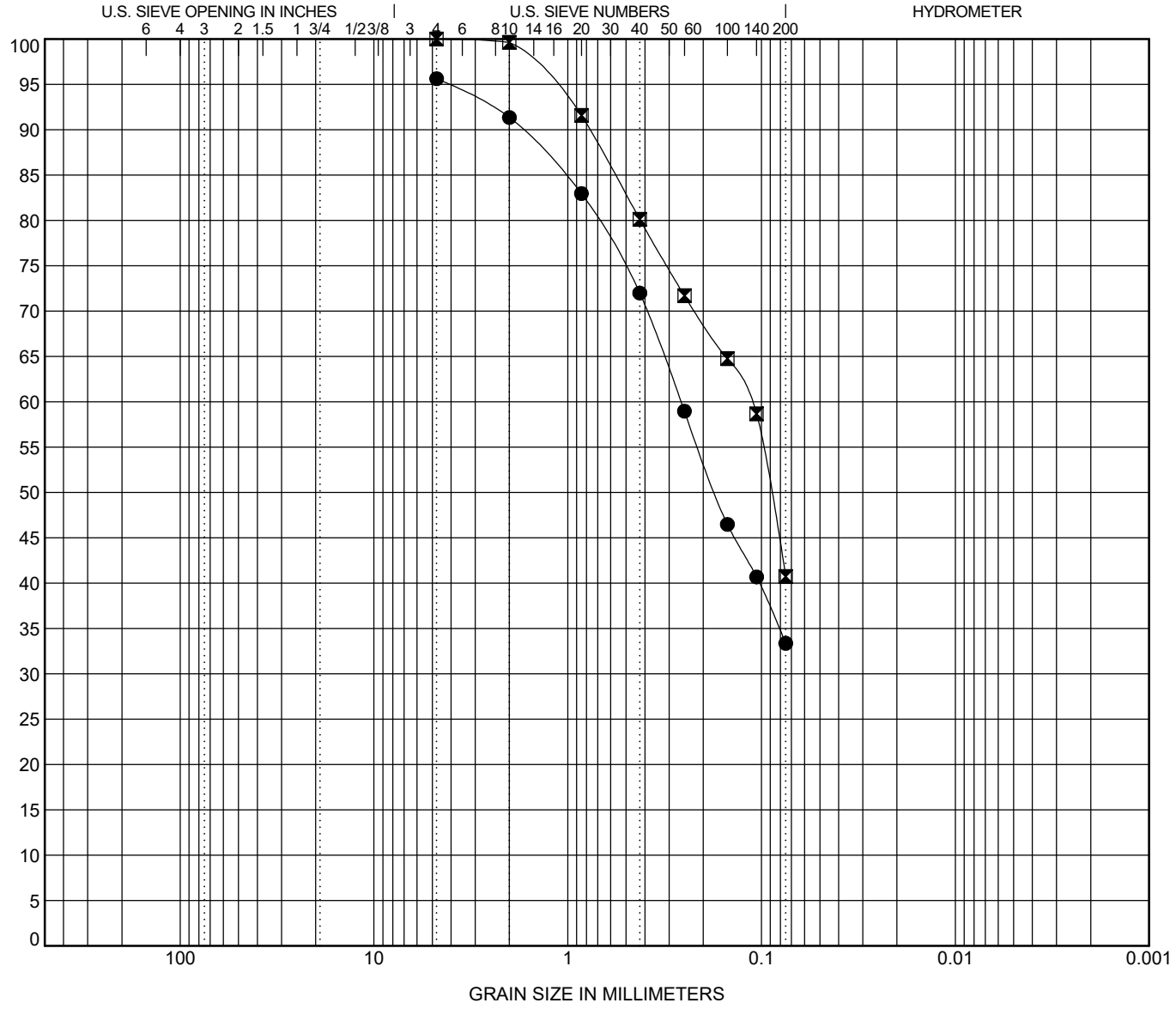
	BOREHOLE	DEPTH	LL	PL	PI	Fines	Classification
●	**VB-3**	**3.5**	**NP**	**NP**	**NP**	**3**	**POORLY GRADED SAND with GRAVEL(SP)**
⊠	**VB-3**	**6.0**	**24**	**25**	**NP**	**73**	**SILT with SAND(ML)**
▲	**VB-3**	**8.5**	**27**	**18**	**9**		**SANDY LEAN CLAY(CL)**
★	**VB-3**	**13.5**	**34**	**20**	**14**	**54**	**SANDY LEAN CLAY(CL)**

CAPITOL DEVELOPMENT DESIGN INC.
4600 Powder Mill RD. STE#200
Beltsville, MD
Telephone: 301-937-3501
Fax: 301-397-3507

GRAIN SIZE DISTRIBUTION

CLENT Come Back Terps LLC **PROJECT NAME** Bradbury Subdivision

Project Number 04-020 **PROJECT LOCATION** Prince George's County, MD



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BOREHOLE	DEPTH	CLASSIFICATION	LL	PL	PI	Cc	Cu
●	**VB-1**	**0.0**	**SILTY, CLAYEY SAND(SC-SM)**	**23**	**18**	**5**		
⊠	**VB-1**	**8.5**	**SILTY SAND(SM)**	**59**	**32**	**27**		

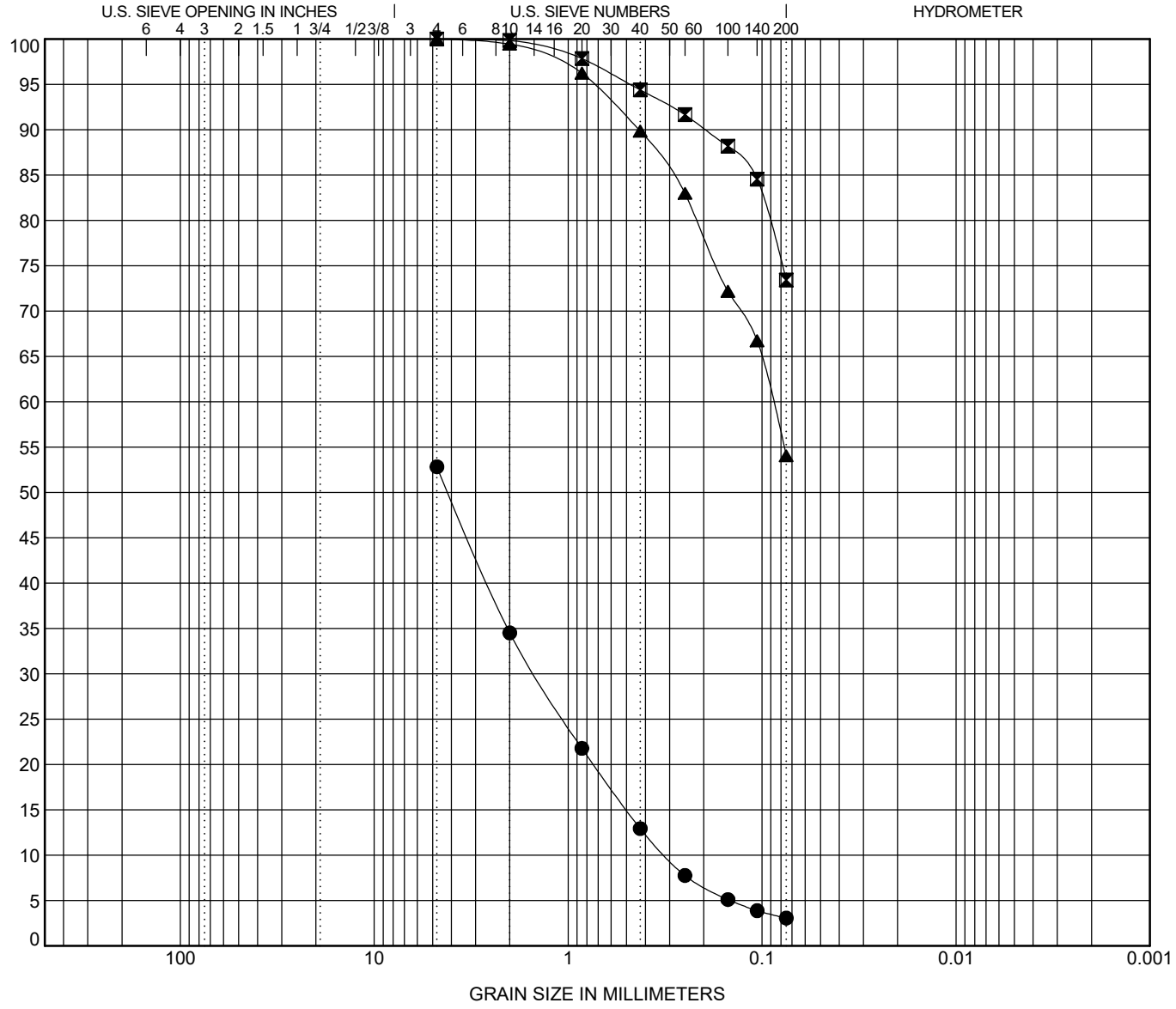
	BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**VB-1**	**0.0**	**4.75**	**0.261**				**62.3**	**33.4**	
⊠	**VB-1**	**8.5**	**4.75**	**0.114**			**0.0**	**59.3**	**40.7**	

CAPITOL DEVELOPMENT DESIGN INC.
4600 Powder Mill RD. STE#200
Beltsville, MD
Telephone: 301-937-3501
Fax: 301-397-3507

GRAIN SIZE DISTRIBUTION

CLENT Come Back Terps LLC **PROJECT NAME** Bradbury Subdivision

Project Number 04-020 **PROJECT LOCATION** Prince George's County, MD



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

BOREHOLE	DEPTH	CLASSIFICATION	LL	PL	PI	Cc	Cu
● VB-3	3.5	POORLY GRADED SAND with GRAVEL(SP)	NP	NP	NP		
⊠ VB-3	6.0	SILT with SAND(ML)	24	25	NP		
▲ VB-3	13.5	SANDY LEAN CLAY(CL)	34	20	14		

BOREHOLE	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● VB-3	3.5	4.75		1.477	0.315		49.8	3.1	
⊠ VB-3	6.0	4.75				0.0	26.6	73.4	
▲ VB-3	13.5	4.75	0.088			0.0	46.0	54.0	