

DOCUMENT 00 2200

GEOTECHNICAL DATA

1. GENERAL

- 1.1 Geotechnical Engineering Services investigation data is not part of the Contract Documents whether contained herein, indicated on the drawings or obtained directly or indirectly from the Owner or Architect.

2. DESCRIPTION OF DOCUMENTS

- 2.1 In the preparation of the Contract Documents, the Architect has relied upon boring logs and other data.
- 2.2 The data is not guaranteed as to accuracy or completeness, and may be inadequate for purposes of bidding. Where estimated quantities have been shown for contract items, such quantities are solely for the purpose of comparing bids, and are not intended to constitute an explicit or implicit representation as to the nature of subsurface materials which may be encountered.
- 2.3 Availability of this data is not intended to relieve Bidders of their responsibility to familiarize themselves with conditions that may affect cost, progress or performance of the Work.
- 2.4 The submission of a bid constitutes an agreement by the Bidder that he shall make no claim against the Owner or Architect because subsurface data made available is not representative of actual subsurface conditions.
- 2.5 In event that subsurface conditions or other available data actually encountered vary from those used for design purposes to the extent that, in the sole opinion of the Architect, a change in the work is necessary, such change will be made as provided by the Conditions of the Contract.

3. SUBSURFACE INVESTIGATION REPORT

- 3.1 The geotechnical report is attached hereto for reference only . The geotechnical report is titled:

"Report Soil and Foundation Investigation, Proposed Science Building, Blackwood, New Jersey, Camden County College", dated April 1, 2010, prepared by Melick-Tully and Associates, P.C.

The Geotechnical Engineering Services data includes the above noted report as well as any and all supplemental information developed by Melick-Tully and Associates, P.C.

4. RELEASE STATEMENT

- 4.1. By submission of a bid, the Bidder releases the Owner and Architect from any responsibility or obligation as to the accuracy or completeness or for any additional compensation for work performed under the Contract due to assumptions based on use of such furnished information.

Bidder also understands that this Geotechnical Engineering Services report (subsurface information) is not part of the Contract Documents.

5. ATTACHMENT

- 5.1. The following 68 pages are the above referenced geotechnical report.

END OF DOCUMENT 00 2200

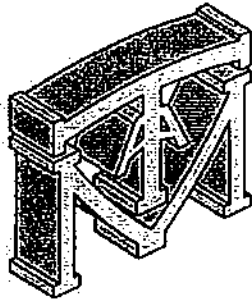
REPORT
SOILS AND FOUNDATION INVESTIGATION

**PROPOSED SCIENCE BUILDING
BLACKWOOD, CAMDEN COUNTY, NEW JERSEY
CAMDEN COUNTY COLLEGE**

April 1, 2010

**Prepared By:
Melick-Tully and Associates, P.C.
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MTA Project No. 8802-001*1D



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AND ASSOCIATES, P.C.**
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April 1, 2010

Vitetta
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Marlton, New Jersey 07053

Attention: Mr. William Corfield

**Report
Soils and Foundation Investigation
Proposed Science Building
Blackwood, Camden County, New Jersey
Camden County College**

Introduction

This report presents the results of a soils and foundation investigation conducted by Melick-Tully and Associates, P.C. (MTA) for the proposed Science Building to be constructed at the Camden County College campus in Blackwood, New Jersey. The Blackwood campus is located near the intersection of College Drive and Peter Cheeseman Road.

Proposed Construction

Information provided to us indicates the Science Building would be a three-story, steel frame structure with masonry walls. The building would be of slab-on-grade construction and would be an irregularly shaped structure approximately 31,000 square feet in footprint area situated between the existing Laser Institute Building, Criminal Justice Center, Taft Hall, and Wolverton Library. A Grading Plan prepared by Consulting Engineer Services dated December 14, 2009 indicates the ground floor of the building would be established at Elevation +108 feet which would require cuts of less than one foot in the northern portion of the building and fills of up to

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approximately four feet to reach the desired floor levels in the south and southwest portion of the building area. Structural loading information provided to us indicates that column loads would range from about 120 to 550 kips and wall loads would be about 1.5 to 2 kips per linear foot.

Purpose and Scope of Work

The purpose of our services was to:

- 1) explore the subsurface soil and groundwater conditions at selected locations within the proposed building area and review the available geotechnical information provided to us;
- 2) estimate the relevant geotechnical engineering properties of the encountered materials;
- 3) evaluate the site foundation requirements considering the anticipated structural loads and encountered subsurface conditions;
- 4) recommend an appropriate type of foundation for support of the proposed structure and provide geotechnical-related foundation design and installation criteria, including an estimate of the Site Class as defined by the International Building Code 2006, New Jersey Edition for seismic design purposes;
- 5) provide recommendations for the support and the need for subdrainage of the ground level floor slab;
- 6) estimate the post-construction settlements of the recommended floor and foundation systems; and
- 7) discuss appropriate earthwork operations or considerations consistent with the recommended site and foundation solutions.

To accomplish these purposes, a subsurface exploration program consisting of five widely spaced test borings was performed by MTA. We also reviewed the logs of 15 test borings performed by others for the proposed Science Building, as well as test borings performed by others for the surrounding buildings. The borings recently performed by MTA were advanced using truck-mounted drilling equipment and extended to depths of 25 feet beneath the existing surface levels.

All field work was performed under the direct technical observation of a representative of MTA. Our representative approximately located the explorations in the field relative to existing site features shown on the plans provided to us, maintained continuous logs of the explorations as the work proceeded, and supervised the soil sampling operations so as to develop the required subsurface information.

Soil samples suitable for identification purposes were extracted from the borings at closely spaced intervals in general accordance with the procedures of the Standard Penetration Test. The soil samples were brought to our office and further examined in our soil mechanics laboratory. Based on our visual observations of the soil samples as well as our review of grain-size data obtained by others for the previous test borings performed at the site, no additional laboratory testing was performed.

The approximate locations of the borings performed by MTA for this study, as well as the previous borings performed by others for the Science Building, are shown on the Plot Plan, Plate 2. Detailed descriptions of the encountered subsurface conditions in the MTA borings are presented on the individual Logs of Borings, Plates 3A through 3E. The soils were visually classified in general accordance with the Unified Soil Classification System shown on Plate 4. The results of the previous test borings and grain-size information provided to us are presented in Appendix I.

The results of our subsurface explorations and review of the previous explorations and laboratory testing performed by others at the site have provided the basis for our engineering analyses and geotechnical design recommendations. The following discussions of our findings and recommendations are subject to the limitations attached as Appendix II to this report.

Site Conditions

Surface Features: The majority of the proposed Science Building consists of open grass areas with several trees and tree rows around the perimeter. Topographic information provided to us indicates that the ground surface slopes downward from the north to the southeast from a high of approximately Elevation +108.5 feet in the northeast corner of the proposed building to a low of about Elevation +104 feet in the southwest corner of the proposed building area.

Subsurface Conditions: The subsurface conditions encountered in the test borings performed for this study, as well as those reported in the explorations performed by others, generally consisted of a surficial layer of topsoil which ranged from approximately two to six inches in thickness, underlain by interlayered sands and silty sands which ranged in relative density from dense to loose. Groundwater was encountered in the recent borings at depths on the order of 20 to 25 feet beneath the existing surface levels. Similar groundwater levels were encountered in the explorations performed by others. The relative density of the sandy soils was generally observed to be loose at or near the groundwater levels. The borings were advanced with hollow-stem auger drilling equipment which, when drilling in clean sands, commonly results in loose characteristics near the groundwater levels. When a head of water was introduced and maintained in the augers, the resulting N values were observed to be higher than in the borings where this was not performed, indicating a denser soil condition.

Findings and Recommendations

General: Based on the results of our study and review of available information, it is our opinion that:

- 1) Following the site preparation procedures recommended in this report, the proposed building may be supported by conventional spread foundations established on the undisturbed natural soils or properly placed granular controlled compacted fill placed to achieve the desired construction levels. These materials would also provide adequate support for the ground floor slab.
- 2) Only minor cuts are expected to be required at the site and, as such, controlled compacted fill required to complete the site grading operations is expected to consist of imported soils.
- 3) Groundwater was encountered at depths on the order of 20 feet or more beneath the existing surface levels and will not impact the design of the proposed slab-on-grade structure which would be established at or above the current surface levels.

The following sections of this report present geotechnical related discussions of the above items.

Site Preparation and Earthwork: Following clearing of trees and vegetation and grubbing of stumps and roots, the existing surface topsoil and uncontrolled fill should be excavated from within and at least five feet beyond the limits of the proposed building area. The topsoil would not be suitable for use as controlled compacted fill or backfill in building area. Any utilities and their associates backfill which encroach upon the building area should be completely removed and relocated and the resulting excavations properly backfilled.

Following removal of the topsoil and uncontrolled fill and excavation to the planned construction subgrade elevations where required, the exposed natural soils in the proposed building area should be thoroughly proofrolled and compacted to a dense and stable consistency with at least ten passes of a heavy smooth drum vibratory compactor. The proofrolling should be performed with the vibrator disengaged where vibrations would affect existing improvements. Any soils

which cannot be compacted to a dense and stable consistency should be excavated to the surface of stable subgrade materials and backfilled with granular controlled compacted fill.

Following proofrolling and compaction of the exposed soils, granular controlled compacted fill should be placed as required to reach the proposed building subgrade levels. The fill could consist of the use of approved portions of excavated on-site granular materials, if generated during the grading operation. However, due to the minimal excavations expected to reach the building floor level, it is expected that imported materials would be required. Any imported fill planned in the building area should consist of uncontaminated, relatively well-graded granular soils containing less than 15 percent by weight of material passing a U.S. Standard No. 200 sieve and having a maximum particle size of four inches. The fill supplier should provide documentation that the imported soils are not contaminated.

All on-site and imported fill installed in the building area should be placed in horizontal layers on the order of twelve inches or less in loose thickness and be uniformly compacted with a heavy, self-propelled vibratory roller to at least 95 percent of their maximum dry density as determined by the ASTM D-1557 Modified Proctor test procedure. Backfill placed in confined areas such as foundation or utility excavations should be spread in thinner layers, on the order of six to eight inches in loose thickness, and compacted to the same degree using portable vibratory compaction equipment.

Groundwater was observed in the test borings at depths on the order of 20 feet or more beneath the existing surface levels, and we do not anticipate that groundwater will be a design concern for the slab-on-grade structure. Any surface runoff or perched water which may be encountered during construction should be controlled by localized pumping from sumps established

within or adjacent to the construction excavations. We recommend that the contract documents require the contractor to provide the means, methods and labor necessary to maintain dry excavations at all times. We also recommend that the site be graded during construction as necessary to convey surface water runoff away from the proposed subgrades and site excavations.

The majority of the natural granular soils were observed to contain minor percentages of silt and clay. As a result, it should be anticipated that caving of construction excavation sidewalls could occur. Consequently, subsurface utility trench excavations and foundation excavations may require sloping of the excavation sidewalls or temporary support. In addition, it may not be feasible to install foundation concrete without forming the excavations if caving occurs during the excavation operations. All construction excavations should be performed in accordance with all governing safety regulations. The soils encountered in the explorations would typically be considered Type "C" soil as defined by the current OSHA Excavation Regulations.

Foundation Design Criteria: Following the site preparation procedures previously described, the proposed building may be supported by conventional shallow foundations established on the recompacted natural sandy soils or properly placed, granular controlled compacted fill installed above the natural soils. The foundations may be proportioned to impose maximum allowable net bearing pressures of up to 3,000 pounds per square foot.

We recommend that all exterior foundations be established at least three feet below the adjacent exterior grades, or deeper if required by local building code, to provide protection from frost penetration. Interior foundations in permanently heated portions of the building may be established at convenient depths beneath the floor slab.

We estimate that maximum post-construction settlements of foundations designed and constructed in accordance with our recommendations would be on the order of one inch, or less. Estimated differential settlements are expected to be less than three-quarters of one inch.

Based on the results of the explorations performed by MTA, and the deeper exploration performed by others (TB-4), it is our opinion that the subsurface conditions are representative of a Site Class "E" for seismic design purposes as defined by the International Building Code 2006, New Jersey Edition. However, as previously discussed, the N values which are commonly used in determining the Site Class may be low due to the groundwater levels and drilling methodology. Alternate testing methods could be employed to further investigate the conditions related to seismic criteria. Depending upon the costs associated with designing for a Site Class "E" seismic condition as opposed to Site Class "D", it may be advantageous to perform site specific seismic testing to determine if the seismic Site Class could be upgraded to a Site Class "D".

Floor Slab Design Criteria: Following the site preparation procedures previously described, the ground floor slab of the proposed building may be supported at-grade by the undisturbed natural sandy soils or by properly placed granular controlled compacted fill installed to reach the design levels. We recommend that a minimum four-inch thick layer of porous fill such as clean crushed stone or washed gravel be placed beneath the floor slab to provide a capillary break between the concrete and the underlying subgrade soils. We estimate that post-construction settlements of the floor slab supported by soils prepared in accordance with our recommendations would be on the order of one-quarter of one inch.

Vitetta
April 1, 2010
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Please contact us if you have any questions regarding this report.

The following Plates and Appendices are attached and complete this report:

Plate 1 – Site Location Map
Plate 2 – Plot Plan
Plates 3A through 3E – Logs of Borings
Plate 4 – Unified Soil Classification System
Appendix I – Test Borings and Laboratory Testing Performed by Others
Appendix II – Limitations

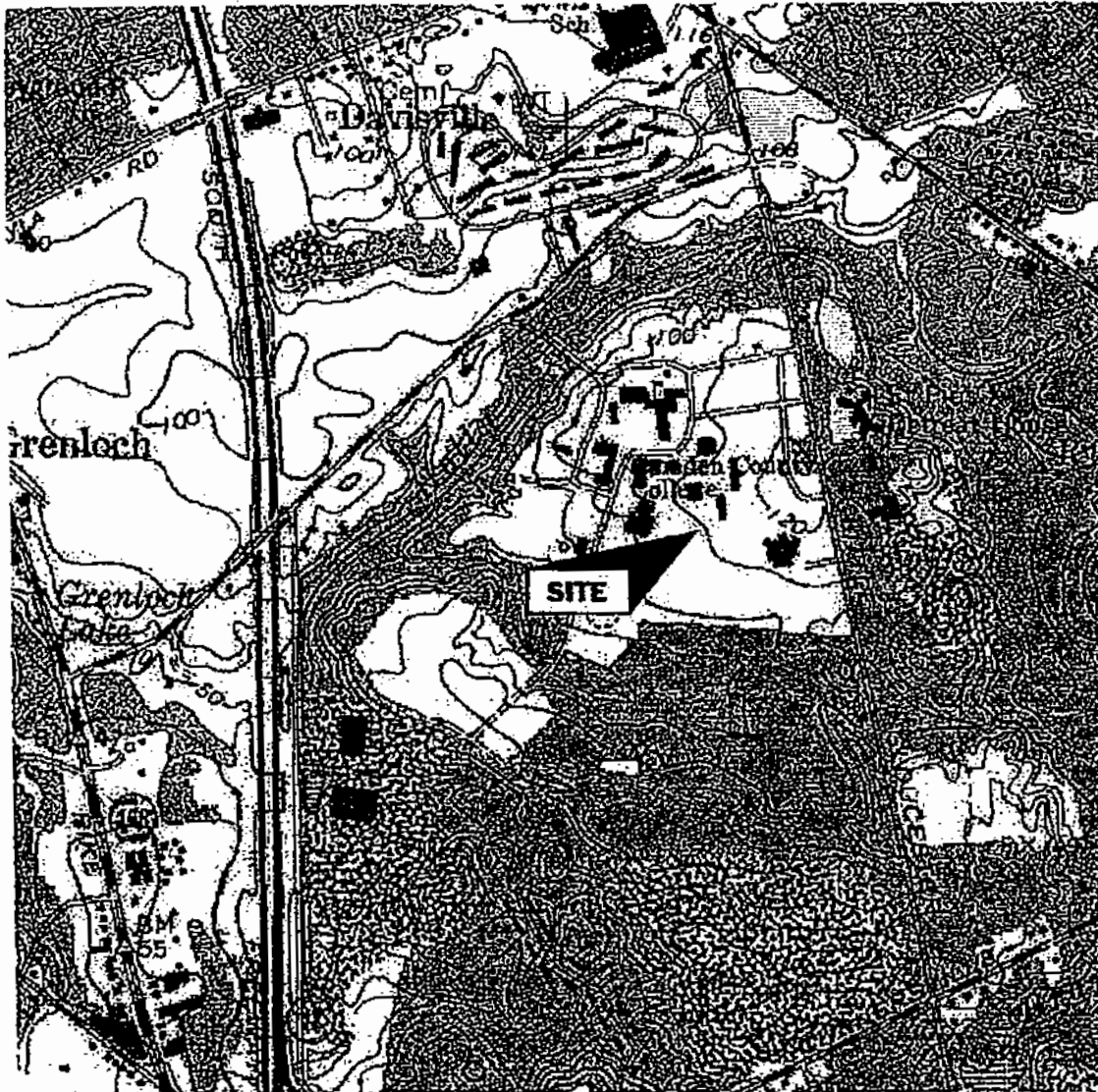
Respectfully submitted,

MELICK-TULLY and ASSOCIATES, P.C.



Mark R. Denno, P.E.
Vice President

MRD/mh
8802-001*1D
(3 copies submitted)



FROM: MSRMAPS (<http://marmaps.com/Print/mogs.aspx?T=2&S=12&X=620&Y=5504&W=3&co>) - USGS 2 km NE of Turnersville, New Jersey



MELICK-TULLY AND ASSOCIATES, P.C.

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SITE LOCATION MAP

PROPOSED SCIENCE BUILDING
BLACKWOOD, NEW JERSEY
CAMDEN COUNTY COLLEGE

JOB NO. 8802-001*1D

FILE NO. 24506

DR. BY
VJD

CHK. BY
MRD

DATE
3-23-10

SCALE
1"=1,200'

PLATE
1

LOG OF BORING

BORING NO. 1

COMPLETION DATE: 3/19/10

SURFACE ELEVATION: +105.5 ft (±)

WATER LEVEL: 21.5'

JOB NUMBER: 8802-001*1D

READING DATE: 3/19/10

DEPTH (ft.)	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH (ft.)
	S1	17			4" Sandy topsoil	
	S2	14			Brown fine to medium sand, trace silt, trace fine gravel (moist)(medium dense)	
5					- grading yellow-brown in color	5
	S3	7			- (loose) @ 5'	
10					- (very dense) @ 10'	10
	S4	64		SP		
15						15
	S5	12			- grading orange-brown in color (medium dense) @ 15'	
20					- (loose) @ 20'	20
	S6	9			- grading orange-red-brown in color	
25					- running sands clogging augers. Cannot advance hole.	25
					Boring completed @ 25'	
					Groundwater encountered @ 21.5'	
30						30

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:

- TRACE 0 - 10%
 LITTLE 10 - 20%
 SOME 20 - 35%
 AND OVER 35%

Typist/Date: sjs/mh 03/10

LOG OF BORING

BORING NO. 2

COMPLETION DATE: 3/19/10
JOB NUMBER: 8802-001*1D

SURFACE ELEVATION: +105 ft (±)

WATER LEVEL: 23.5'
READING DATE: 3/19/10

DEPTH (ft.)	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH (ft.)
	S1	12			6" Sandy topsoil	
	S2	15			Gray-brown fine to medium sand, trace silt (moist)(medium dense) - grading orange-brown in color	
5	S3	10			- grading light brown in color	5
10	S4	38		SP	- (dense) @ 10'	10
15	S5	17			- (medium dense) @ 15'	15
20	S6	12			- red mottling	20
25	S7	8			- grading (wet)(loose) @ 23'	25
30					Boring completed @ 25' Groundwater encountered @ 23.5'	30

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:

- TRACE 0 - 10%
- LITTLE 10 - 20%
- SOME 20 - 35%
- AND OVER 35%

Typist/Date: sjs/mh 03/10

LOG OF BORING

BORING NO. 3

COMPLETION DATE: 3/19/10
JOB NUMBER: 8802-001*1D

SURFACE ELEVATION: +106 ft (±)

WATER LEVEL: 24'
READING DATE: 3/19/10

DEPTH (ft.)	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH (ft.)
	S1	10			4" Topsoil	
	S2	9			Yellow-brown fine to medium sand, trace silt (moist)(medium dense)	
5					- loose @ 3'	
	S3	11			- medium dense @ 5'	5
10	S4	26		SP		10
15	S5	25				15
20	S6	18				20
25	S7	13				25
30					Boring completed @ 25' Groundwater encountered @ 24'	30

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:

- TRACE 0 - 10%
- LITTLE 10 - 20%
- SOME 20 - 35%
- AND OVER 35%

Typist/Date: sjs/mh 03/10

Sheet: 1 of 1 PLATE: 3C

LOG OF BORING

BORING NO. 4

COMPLETION DATE: 3/19/10
JOB NUMBER: 8802-001*1D

SURFACE ELEVATION: +107 ft (±)

WATER LEVEL: 25'
READING DATE: 3/19/10

DEPTH (ft.)	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH (ft.)
	S1	9			5" Topsoil	
	S2	10		SP/SM	Light brown fine to medium sand, trace to little silt (moist)(loose to medium dense)	
5	S3	64			Orange-brown fine to medium sand, trace silt (moist)(very dense)	5
10	S4	33		SP	- (dense) @ 10'	10
15	S5	15			- (medium dense) @ 15'	15
20	S6	14			- grading with red mottles	20
25	S7	14			- grading (very moist to wet)	25
30					Boring completed @ 25' Groundwater encountered @ 25'	30

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:

- TRACE 0 - 10%
- LITTLE 10 - 20%
- SOME 20 - 35%
- AND OVER 35%

Typist/Date: sjs/mh 03/10

LOG OF BORING

BORING NO. 5

COMPLETION DATE: 3/19/10
JOB NUMBER: 8802-001*1D

SURFACE ELEVATION: +107.5 ft (±)

WATER LEVEL: *
READING DATE: 3/19/10

DEPTH (ft.)	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH (ft.)
	S1	9			6" Topsoil	
	S2	18		SM	FILL - Brown fine to medium sand, trace silt, trace fine gravel (moist)(loose) Orange-brown fine to medium sand, little silt (moist)(medium dense)	
5	S3	27			Gray-brown fine to medium sand, trace silt, little fine gravel (moist)(medium dense)	5
10	S4	65		SP	- grading orange-brown in color (very dense) @ 10'	10
15	S5	21			- (medium dense) @ 15'	15
20	S6	16			- grading with red mottles	20
25	S7	16				25
30					Boring completed @ 25' *Groundwater not encountered	30

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH
2. INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:

- TRACE 0 - 10%
- LITTLE 10 - 20%
- SOME 20 - 35%
- AND OVER 35%

Typist/Date: sjs/mh 03/10

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS More than 50% of material is LARGER than No. 200 Sieve	GRAVEL & GRAVELLY SOILS More than 50% of coarse fraction RETAINED on No. 4 Sieve	CLEAN GRAVELS (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amount of fines)	GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.
			GM	Silty gravels, gravel-sand-silt mixtures.
		SAND AND SANDY SOILS More than 50% of coarse fraction PASSING a No. 4 Sieve	CLEAN SAND (Little or no fines)	SW
	SANDS WITH FINES (Appreciable amount of fines)		SP	Poorly-graded sands, gravelly sands, little or no fines.
			SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures.
	FINE GRAINED SOILS More than 50% of material is SMALLER than No. 200 Sieve.	SILTS AND CLAYS Liquid limit LESS than 50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
CL			Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	
OL			Organic silts and organic silty clays of low plasticity.	
SILTS AND CLAYS Liquid limit GREATER than 50		MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils.	
		CH	Inorganic clays of high plasticity, fat clays.	
		OH	Organic clays of medium to high plasticity, organic silts.	
HIGHLY ORGANIC SOILS			PT	Peat, humus, swamp soils with high organic contents

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

GRADATION*		COMPACTNESS* sand and/or gravel		CONSISTENCY* clay and/or silt	
% Finer by Weight		Relative Density		Range of Shearing Strength in Pounds per Square Foot	
Trace	0% to 10%	Loose	0% to 40%	Very Soft	less than 250
Little	10% to 20%	Medium Dense	40% to 70%	Soft	250 to 500
Some	20% to 35%	Dense	70% to 90%	Medium	500 to 1000
And	35% to 50%	Very Dense	90% to 100%	Stiff	1000 to 2000
				Very Stiff	2000 to 4000
				Hard	Greater than 4000

*Values are from laboratory or field test data, where applicable. When no testing was performed, values are estimated.

UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL CLASSIFICATION CHART

APPENDIX I

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-1

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER Not EncounteredDATE START 12/8/09 at 10:35AMDATE FINISH 12/8/09 at 11:25AM

CASING O.D. _____

L.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inchesL.D. 1.5 inchWEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	4	8			Top 5": TOPSOIL	
	DRILL				4	4	Bottom 19": Dark Tan Brown Silty f. SAND, trace gravel, (moist)	
5	N	S-2	5	4			R: 24": Dark Yellowish Tan Brown m-f SAND, trace silt (dry)	
	O	S-3	2	3			Auger to 4ft.	
10	C	S-4	18	26			R: 21": Dark Yellowish Tan Brown m-f SAND, trace silt (dry)	
	A				3	10	R: 24": Yellowish Tan Brown c-f SAND, some gravel (dry)	
	S	S-5	6	16			Auger to 8ft.	
	I				28	37	R: 22": Yellowish Tan Brown c-m SAND, some gravel, (dry)	
15	N	S-6	4	11			R: 23": Yellowish Tan Brown c-m SAND, some gravel, (dry)	
	G				22	25	Auger to 15ft.	
	U							
20	S							
	E	S-7	3	4			R: 24": Yellowish Tan Brown f. SAND, trace silt, (dry)	
25	D				5	6	Auger to 20ft	
		S-8	2	6			R: 24": Yellowish Tan Brown f. SAND, trace silt, (dry)	
30					6	7	Auger to 23	
		S-9	3	4			R: 24": Yellowish Tan Brown f. SAND, trace silt, (moist)	
35					5	5	END OF BORING AT 25FT.	
							HOLE BACKFILLED WITH CUTTINGS	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSOSHEET 1 OF 1HOLE TB-1CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-2

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER Not Encountered

DATE START 12/8/09 at 11:35AM

DATE FINISH 12/8/09 at 12:30AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches

I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	3	3			Top 6": TOPSOIL	
	DRILL				9	10	Bottom 18": Dark Light Brown Silty f. SAND, (moist)	
5	N	S-2	15	8	8	9	R: 24": Yellowish Tan Brown m-f SAND, trace silt (dry)	
	O	S-3	2	3			Auger to 4ft.	
10	C	S-4	19	24	9	16	R: 24": Yellowish Tan Brown c-m SAND, some gravel (dry)	
	A				26	34	Auger to 8ft.	
15	S	S-5	11	31			R: 24": Yellowish Tan Brown c-m SAND, some gravel, (dry)	
	I				27	30		
20	N	S-6	4	19			R: 24": Tan Dark Brown c. SAND, some gravel, (dry)	
	G				22	32	Auger to 15ft. Hard drilling	
25	U							
	S							
30	E	S-7	5	6			R: 24": Yellowish Tan Brown m-f SAND, trace silt, (dry)	
	D				5	6	Auger to 20ft	
35	S-8		4	4			R: 24": Yellowish Red Brown f. SAND, trace silt, (dry)	
					5	6	Auger to 23	
	S-9		6	4			R: 24": Yellowish Tan Brown f. SAND, trace silt, (dry)	
					5	5	END OF BORING AT 25FT. HOLE BACKFILLED WITH CUTTINGS	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSO

SHEET 1 OF 1

HOLE TB-2

TRACTOR _____ CONTRACTOR QUINLAN WELL DRILLING

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-3

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER Not Encountered

DATE START 12/8/09 at 9:35AM

DATE FINISH 12/8/09 at 10:25AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches

I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	2	4			Top 5": TOPSOIL	
	DRILL				3	4	Bottom 13": Dark Tan Brown Silty f. SAND, trace organics (moist)	
		S-2	7	9			R: 18": Yellowish Tan Brown m-f SAND, some gravel (dry)	
	N				8	6	Auger to 4ft.	
5	O	S-3	16	17			R: 21": Yellowish Tan Brown Silty c-m SAND, some gravel (dry)	
					13	27		
	C	S-4	40	50/4"			R: 6": Yellowish Tan Brown Silty c-m SAND, some gravel (dry)	
	A						Spoon refusal at 6'-10". Auger to 8ft.	
	S	S-5	10	18			R: 19": Yellowish Dark Brown c-m SAND, trace f. gravel, trace silt (dry)	
10	I				25	30		
	N	S-6	8	14			R: 24": Yellowish Tan Brown c-f SAND, some f. gravel, (dry)	
	G				16	16	Auger to 15ft.	
	U							
15	S							
	E	S-7	3	5			R: 24": Yellowish Tan Brown m-f SAND, trace silt, (dry)	
	D				6	6	Auger to 20ft	
20								
		S-8	4	4			R: 24": Yellowish Tan Brown m-f SAND, trace silt, (dry)	
					6	7	Auger to 23	
25		S-9	4	4			R: 24": Yellowish Tan Brown m-f SAND, trace silt, (moist)	
					5	6		
							END OF BORING AT 25FT.	
							HOLE BACKFILLED WITH CUTTINGS	
30								
35								

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DRILL RIG OPERATOR JOE QUINLAN
 SOIL & ROCK DESCRIP. _____
 REG. GEOTECH. ENGINEER _____
 CHIEF INSPECTOR YAW DANSO

CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

SHEET 1 OF 1 HOLE TB-3

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-4

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 26. FTDATE START 12/9/09 at 10:15AMDATE FINISH 12/9/09 @ 12:30PM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inchesI.D. 1.5 inchWEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30-inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	2	2			Top 6": TOPSOIL	
	DRILL				2	2	Bottom 18": Yellowish Tan Brown Silty f. SAND, (wet)	
5	N	S-2	2	2			R:24" Yellowish Tan Brown c-m SAND, trace gravel (moist)	
	O	S-3	11	19	5	6	Auger to 4ft. R:24" Yellowish Tan Brown c-m SAND, some gravel (dry)	
10	C	S-4	34	38	31	17	R:24" Yellowish Tan Brown c-m SAND, some gravel (dry)	
	A				45	42	Auger to 8ft.	
	S	S-5	6	16			R:24" Yellowish Tan Brown c-m SAND, trace gravel (dry)	
	I				26	30		
15	N	S-6	7	15			R:24" Yellowish Tan Brown c. SAND, trace gravel (dry)	
	G				13	13	Auger to 15ft.	
	U							
	S							
20	E	S-7	4	8			R: 0" NO RECOVERY	
	D				9	8	Auger to 20ft	
25		S-8	2	4			R:24" Yellowish Tan Brown m-f SAND, (dry)	
					6	6	Auger to 25	
30		S-9	3	3			R:24" Yellowish Tan Brown c-m SAND, (wet)	
					3	7		
35		S-10	1	1			R:24" Yellowish Tan Brown c-f SAND, trace gravel (wet)	
					5	7		

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DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSO

SHEET 1 OF 2HOLE TB-4CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-4

ACTUAL COORDINATES _____ SURF. ELEV. _____
 DATUM _____ DEPTH TO WATER _____

DATE START 12/9/09 at 10:15AM DATE FINISH 12/9/09 @ 12:30PM

CASING O.D. _____ I.D. _____ WEIGHT OF HAMMER-CASING _____ HAMMER FALL-CASING _____
 SAMPLER O.D. 2.0 inches I.D. 1.5 inch WEIGHT OF HAMMER-SAMPLER 140# HAMMER FALL-SAMPLER 30-inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
35		S-11	1	2			R:24" Yellowish Tan Brown m-f SAND, trace silt (wet)	
					6	5		
40		S-12	5	3			R:24" Yellowish Tan Brown m-f SAND, trace silt (wet)	
					3	4		
45		S-13	1	1			R:24" Yellowish Tan Brown m-f SAND, trace silt (wet)	
					2	2		
		S-14	3	3			R:24" Yellowish Tan Brown m-f SAND, trace silt (wet)	
					4	5		
50							END OF BORING AT 49FT. Monitoring well install at 40ft. Well removed on 12/11/09 HOLE BACKFILLED WITH CUTTINGS	
55								

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DRILL RIG OPERATOR JOE QUINLAN
 SOIL & ROCK DESCIP. _____
 REG. GEOTECH. ENGINEER _____
 CHIEF INSPECTOR YAW DANSO

SHEET 2 OF 2 HOLE TB-4

CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

SM 282c (00)

KS ENGINEERS, P.C.

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-5

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 26. FT

DATE START 12/8/09 at 1:30PM

DATE FINISH 12/8/09 @ 2:30PM

CASING O.D. _____ I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER 30-inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	4	10			Top 5": TOPSOIL	
	DRILL				10	13	Bottom 19": Dark Gray Brown Silty f. SAND, (moist)	
5		S-2	11	17			R:24" Yellowish Tan Brown c-f SAND, trace gravel (dry)	
	N				13	15	Auger to 4ft.	
	O	S-3	4	11			R:17" Yellowish Tan Brown Gravelly c-m SAND, (dry)	
10					33	50/4"	Spoon refusal at 5'-8"	
	C	S-4	3	22			R:19" Yellowish Tan Brown Gravelly c-m SAND, (dry)	
	A				49	50/4"	Auger to 8ft.	
	S	S-5	15	27			R:24" Yellowish Tan Brown Gravelly c-m SAND, (dry)	
15					47	50		
	J							
	N	S-6	13	17			R:24" Yellowish Tan Brown c-f SAND, some gravel (dry)	
20					19	22	Auger to 15ft.	
25								
30		S-7	3	5			R:24" Yellowish Tan Brown f. SAND, trace gravel (dry)	
					5	8	Auger to 20ft	
35								
		S-8	3	4			R:24" Yellowish Tan Brown c-f SAND, trace silt (dry)	
					6	4	Auger to 25	
30								
		S-9	3	4			R:24" Yellowish Tan Brown c-f SAND, trace silt (wet)	
30					3	5	END OF BORING AT 27FT.	
							HOLE BACKFILLED WITH CUTTINGS	

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DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSO

SHEET 1 OF 1

CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

HOLE TB-5

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.HOLE TB-6COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER Not EncounteredDATE START 12/8/09 at 8:00AMDATE FINISH 12/8/09 at 9:30AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inchesI.D. 1.5 inchWEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	3	5			Top 4": TOPSOIL	
	DRILL				6	5	Bottom 20": Yellowish Tan Brown m-f SAND, trace silt, (moist)	
5	N	S-2	4	3			R: 24": Yellowish Tan Brown m-f SAND, trace silt, (moist)	
	O	S-3	3	5			Auger to 4ft.	
10	C	S-4	7	13			R: 24": Yellowish Tan Brown m-f SAND, trace gravel, (moist)	
	A				4	5	R: 24": Yellowish Tan Brown c-f SAND, some gravel, (dry)	
	S	S-5	3	8			Auger to 8ft.	
	I				15	17	R: 22": Yellowish Tan Brown c-f SAND, some gravel, trace silt (dry)	
15	N	S-6	5	10			R: 24" Yellowish Tan Brown f. SAND, trace silt (dry)	
	G				11	11	Auger to 15ft.	
	U							
20	S							
	E	S-7	3	5			R:22" Yellowish White Brown f. SAND, trace silt (dry)	
25	D				6	7	Auger to 20ft	
		S-8	2	6			R:24" Yellowish Tan Brown f. SAND, trace silt (dry)	
					4	7	Auger to 23	
30		S-9	4	4			R:24" Yellowish Tan Brown f. SAND, trace silt (moist)	
					5	5	END OF BORING AT 25FT.	
35							HOLE BACKFILLED WITH CUTTINGS	

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DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSO

SHEET 1 OF 1HOLE TB-6CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

HOLE TB-7

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 26ft

DATE START 12/8/09 at 2:40PM

DATE FINISH 12/8/09 at 3:45PM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches

I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0 / 6	6 / 12	12 / 18	18 / 24		
0.0	AUGER	S-1	7	6			Top 5": TOPSOIL	
	DRILL				7	6	Bottom 20": Dark Tan Brown Silty f. SAND, (moist)	
5	N	S-2	4	3	4	20	R: 24": Dark Tan Brown Silty f. SAND, some gravel (moist) Auger to 4ft.	
	O	S-3	8	11			R: 24": Yellowish Tan Brown c-m SAND, some f. gravel, (moist)	
10	C	S-4	31	48			R: 24": Yellowish Tan Brown c-m SAND, some f. gravel, (dry)	
	A				36	40	Auger to 8ft.	
	S	S-5	4	14			R: 24": Yellowish Tan Brown m-f SAND, some gravel, (dry)	
	I				21	19		
15	N	S-6	5	9			R:24" Yellowish Tan Brown m-f SAND, (dry)	
	G				7	9	Auger to 15ft.	
	U							
	S							
20	E	S-7	5	4			R:24" Yellowish Tan Brown f. SAND, (dry)	
	D				4	6	Auger to 20ft	
25		S-8	3	3			R:24" Yellowish Tan Brown f. SAND, (dry)	
					3	4	Auger to 23	
30		S-9	3	2			R:24" Yellowish Tan Brown f. SAND, (wet)	
					2	3	END OF BORING AT 27FT. HOLE BACKFILLED WITH CUTTINGS	
35								

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DRILL RIG OPERATOR
SOIL & ROCK DESCRIP.
REG. GEOTECH. ENGINEER
CHIEF INSPECTOR

JOE QUINLAN

YAW DANSO

SHEET 1 OF 1

CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

HOLE TB-7

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

HOLE TB-8

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 25.5ft

DATE START 12/9/09 at 1:30PM

DATE FINISH 12/9/09 at 3:35PM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches

I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS / 16 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0 / 6	6 / 12	12 / 18	18 / 24		
0.0	AUGER	S-1	3	2			Top 6": TOPSOIL	
	DRILL				5	10	Bottom 18": Yellowish Tan Brown c-f SAND, trace silt (moist)	
5	N	S-2	12	8	8	8	R: 24": Yellowish Tan Brown c-f SAND, trace silt (moist) Auger to 4ft.	
	O	S-3	2	3			R: 24": Yellowish Tan Brown c-f SAND, trace silt (moist)	
10	C	S-4	8	7			R: 24": Yellowish Tan Brown c-f SAND, trace gravel (moist)	
	A				8	12	Auger to 8ft.	
	S	S-5	5	10			R: 24": Yellowish Tan Brown c-f SAND, trace gravel (moist)	
	I				11	12		
15	N	S-6	5	9			R:24" Grayish Tan Brown m-f SAND, trace gravel (moist)	
	G				11	13	Auger to 15ft.	
	U							
	S							
20	E	S-7	4	6			R:24" Yellowish Tan Brown f. SAND, trace gravel (moist)	
	D				6	9	Auger to 20ft	
25		S-8	3	3			R:24" Yellowish Tan Brown f. SAND, (moist)	
					4	4	Auger to 23	
30							END OF BORING AT 27FT. HOLE BACKFILLED WITH CUTTINGS	
35		S-9	1	2			R:24" Yellowish Tan Brown m-f SAND, (wet)	
					1	3		

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DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSO

SHEET 1 OF 1

HOLE TB-8

CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-9

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 25.5ftDATE START 12/9/09 at 9:10AMDATE FINISH 12/9/09 at 10:00AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inchesI.D. 1.5 inchWEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	3	4			Top 4": TOPSOIL	
	DRILL				6	6	Bottom 20": Dark Gray Silty c-m SAND, (moist)	
		S-2	4	2			R: 24": Yellowish Tan Brown m-f SAND, trace silt (moist)	
	N				3	4	Auger to 4ft.	
5	O	S-3	2	2			R: 24": Yellowish Tan Brown c-f SAND, (dry)	
					4	6		
	C	S-4	6	8			R: 24": Yellowish Tan Brown c-m SAND, (dry)	
	A				7	5	Auger to 8ft.	
	S	S-5	3	7			R: 24": Yellowish Tan Brown c-m SAND, trace gravel, (dry)	
10	I				8	9		
	N	S-6	4	8			R:24" Yellowish Tan Brown c-m SAND, trace gravel, (dry)	
	G				9	9	Auger to 15ft.	
	U							
15	S							
	E	S-7	8	7			R:24" Yellowish Tan Brown m-f SAND, (dry)	
	D				11	11	Auger to 20ft	
20		S-8	7	6			R:24" Yellowish Tan Brown f. SAND, (dry)	
					8	9	Auger to 23	
25		S-9	3	3			R:24" Yellowish Tan Brown m-f SAND, trace gravel, (wet)	
					3	6		
							END OF BORING AT 27FT.	
30							HOLE BACKFILLED WITH CUTTINGS	
35								

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DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSOSHEET 1 OF 1HOLE TB-9CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

HOLE TB-10

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 26ft

DATE START 12/9/09 at 8:00AM

DATE FINISH 12/9/09 at 9:00AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches

I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	3	3			Top 5": TOPSOIL	
	DRILL				5	8	Bottom 19": Gray Tan Brown m-f SAND, trace silt, (moist)	
5	N	S-2	9	7			R: 24": Yellowish Tan Brown m-f SAND, trace silt (moist)	
	O	S-3	2	3			Auger to 4ft. R: 24": Yellowish Tan Brown f. SAND, trace silt (moist)	
10	C	S-4	5	8			R: 18": Yellowish Tan Brown c-f SAND, (moist)	
	A				9	11	Auger to 8ft.	
	S	S-5	2	6			R: 24": Yellowish Tan Brown c-f SAND, (dry)	
	I				9	11		
15	N	S-6	3	10			R:24" Yellowish Tan Brown c-m SAND, trace gravel, (dry)	
	G				11	14	Auger to 15ft.	
	U							
20	S							
	E	S-7	7	9			R:24" Yellowish Tan Brown f. SAND, (dry)	
25	D				11	12	Auger to 20ft.	
30		S-8	3	6			R:24" Yellowish Tan Brown m-f. SAND, (dry)	
					7	8	Auger to 23	
35								
		S-9	4	5			R:24" Yellowish Tan Brown m-f SAND, (wet)	
					4	5	END OF BORING AT 27FT. HOLE BACKFILLED WITH CUTTINGS	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSO

SHEET 1 OF 1

CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

HOLE TB-10

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

HOLE TB-11

COUNTY CAMDEN COUNTY SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 26ft

DATE START 12/9/09 at 8:00AM

DATE FINISH 12/9/09 at 9:00AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches

I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS 16 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	3	4			Top 5": TOPSOIL	
	DRILL				4	11	Bottom 19": Gray Tan Brown f. SAND, trace silt, (moist)	
5	N	S-2	11	7			R: 24": Yellowish Tan Brown m-f SAND, trace silt (moist)	
	O		2	3		6	Auger to 4ft.	
10	C	S-3			3	6	R: 18": Yellowish Tan Brown m-f SAND (moist)	
	A		3	5			R: 18": Yellowish Tan Brown m-f SAND (moist)	
15	S	S-4	2	8			Auger to 8ft.	
	I		2	8			R: 24": Yellowish Tan Brown m-f SAND, trace gravel (moist)	
20	N	S-5	3	9			R:24" Yellowish Tan Brown c-m SAND, trace gravel, (moist)	
	G				12	15	Auger to 15ft.	
25	U	S-6						
	S							
30	E	S-7	3	5			R:24" Yellowish Tan Brown f. SAND, (moist)	
	D				6	8	Auger to 20ft	
35		S-8	4	4			R:17" Yellowish Tan Brown f. SAND, (moist)	
					4	5	Auger to 23	
		S-9	2	2			R:24" Yellowish Tan Brown f. SAND, (wet)	
					4	8	END OF BORING AT 27FT. HOLE BACKFILLED WITH CUTTINGS	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR JOE QUINLAN
 SOIL & ROCK DESCRIP. _____
 REG. GEOTECH. ENGINEER _____
 CHIEF INSPECTOR YAW DANSO

SHEET 1 OF 1

CONTRACT _____ CONTRACTOR QUINLAN WELL DRILLING

HOLE TB-11

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.HOLE TB-12COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 25ftDATE START 12/11/09 at 9:40AMDATE FINISH 12/11/09 at 10:40AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inchesI.D. 1.5 inchWEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS 1/6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	4	2			Top 3": TOPSOIL	
	DRILL				3	3	Bottom 21": Gray Tan Brown Silty m-f SAND, (moist)	
5	N	S-2	1	1			R: 24": Gray Tan Brown m-f SAND, (moist)	
	O	S-3	1	1			Auger to 4ft. R: 24": Yellowish Tan Brown c-m SAND, (moist)	
10	C	S-4	4	5			R: 24": Yellowish Tan Brown c-f SAND, some gravel (dry)	
	A				8	11	Auger to 8ft.	
	S	S-5	6	12			R: 24": Yellowish Tan Brown c-f SAND, some gravel (dry)	
	I				14	16		
15	N	S-6	5	11			R: 24": Yellowish Tan Brown m-f SAND, (dry)	
	G				10	11	Auger to 15ft.	
	U							
	S							
20	E	S-7	2	2			R: 24": Yellowish Tan Brown m-f SAND, (dry)	
	D				3	3	Auger to 20ft	
		S-8	3	2			R: 24": Yellowish Tan Brown f. SAND, (moist)	
25					2	3	Auger to 23	
		S-9	1	2			R: 24": Yellowish Tan Brown c-f SAND, (wet)	
					2	3		
30							END OF BORING AT 27FT.	
							HOLE BACKFILLED WITH CUTTINGS	
35								

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR

JOE QUINLAN

SOIL & ROCK DESCRIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSOCONTRACT _____ CONTRACTOR QUINLAN WELL DRILLINGSHEET 1 OF 1HOLE TB-12

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.

HOLE TB-13

COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 25ft

DATE START 12/11/09 at 9:40AM

DATE FINISH 12/11/09 at 10:40AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inches

I.D. 1.5 inch

WEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS 16 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	3	4			Top 4": TOPSOIL.	
	DRILL				3	2	Bottom 20": Gray Tan Brown Silty m-f SAND, (moist)	
5	N	S-2	1	2			R: 10": Gray Tan Brown Silty m-f SAND, (moist)	
	O	S-3	1	1	1	1	Auger to 4ft. R: 24": Yellowish Tan Brown c-f SAND, (dry)	
10	C	S-4	3	4			R: 24": Yellowish Tan Brown c-f SAND, (dry)	
	A				6	7	Auger to 8ft.	
	S	S-5	2	5			R: 24": Yellowish Tan Brown c-f SAND, some f. gravel, (dry)	
	I				9	10		
15	N	S-6	3	8			R: 24": Yellowish Tan Brown c-f SAND, some f. gravel, (dry)	
	G				11	13	Auger to 15ft.	
	U							
20	S							
	E	S-7	7	9			R: 24": Yellowish Tan Brown c-f SAND, some f. gravel, (dry)	
25	D				12	11	Auger to 20ft	
30		S-8	6	4			R: 24": Yellowish Tan Brown c-f SAND, (moist)	
					4	4	Auger to 23	
35								
		S-9	2	1			R: 24": Yellowish Tan Brown c-f SAND, (wet)	
					3	5		
							END OF BORING AT 27FT. HOLE BACKFILLED WITH CUTTINGS	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR JOE QUINLAN
 SOIL & ROCK DESCIP. _____
 REG. GEOTECH. ENGINEER _____
 CHIEF INSPECTOR YAW DANSO

SHEET 1 OF 1

HOLE TB-13

TRACT _____ CONTRACTOR QUINLAN WELL DRILLING

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.HOLE TB-14COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 22ftDATE START 12/11/09 at 7:00AMDATE FINISH 12/11/09 at 8:40AM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inchesI.D. 1.5 inchWEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS 16 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	5	4			Top 2": TOPSOIL	
	DRILL				4	3	Bottom 22": Gray Tan Brown Silty c-f SAND, (moist)	
5	N	S-2	3	2			R: 24": Yellowish Tan Brown f. SAND, (moist)	
	O	S-3	1	1			Auger to 4ft. R: 18": Yellowish Tan Brown c-f SAND, (moist)	
10	C	S-4	6	7			R: 24": Yellowish Tan Brown c-f SAND, (dry)	
	A				8	10	Auger to 8ft.	
	S	S-5	4	9			R: 24": Yellowish Tan Brown c-f SAND, (dry)	
	I				9	3		
15	N	S-6	5	11			R: 24": Yellowish Tan Brown c-f SAND, some gravel, (dry)	
	G				14	19	Auger to 15ft.	
	U							
20	S							
	E	S-7	5	5			R: 24": Yellowish Tan Brown m-f SAND, (dry)	
25	D				6	3	Auger to 20ft	
		S-8	2	2			R: 24": Yellowish Tan Brown c-f SAND, (wet)	
30					3	3	Auger to 23	
		S-9	2	1			R: 24": Yellowish Tan Brown c-f SAND, (wet)	
35					2	4	END OF BORING AT 27FT.	
							HOLE BACKFILLED WITH CUTTINGS	

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR
SOIL & ROCK DESCRIP.
REG. GEOTECH. ENGINEER
CHIEF INSPECTOR

JOE QUINLAN

YAW DANSO

NTRACT _____ CONTRACTOR QUINLAN WELL DRILLINGSHEET 1 OF 1HOLE TB-14

PROJECT: CAMDEN COUNTY COLLEGE SCIENCE BLDG.COUNTY CAMDEN COUNTY

SUBSURFACE EXPLORATION LOG

HOLE TB-15

ACTUAL COORDINATES _____

SURF. ELEV. _____

DATUM _____

DEPTH TO WATER 22ftDATE START 12/11/09 at 10:30AMDATE FINISH 12/11/09 at 12:00PM

CASING O.D. _____

I.D. _____

WEIGHT OF HAMMER-CASING _____

HAMMER FALL-CASING _____

SAMPLER O.D. 2.0 inchesI.D. 1.5 inchWEIGHT OF HAMMER-SAMPLER 140#

HAMMER FALL-SAMPLER _____

30inches

DEPTH BELOW SURF. (FT)	CASING BLOWS /6 IN	SAMPLE NO.	BLOWS ON SAMPLER (INCH)				DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. (%)
			0/6	6/12	12/18	18/24		
0.0	AUGER	S-1	2	5			Top 3": TOPSOIL	
	DRILL				6	6	Bottom 21": Gray Tan Brown c-f SAND, some silt (moist)	
		S-2	4	4			R: 24": Yellowish Tan Brown c-f SAND, trace silt (moist)	
	N				2	3	Auger to 4ft.	
5	O	S-3	2	2			R: 24": Yellowish Tan Brown c-f SAND, (dry)	
					2	3		
	C	S-4	3	5			R: 24": Yellowish Tan Brown c-m SAND, (dry)	
	A				6	10	Auger to 8ft.	
	S	S-5	4	7			R: 24": Yellowish Tan Brown c-m SAND, (dry)	
10	I				9	14		
	N	S-6	10	15			R: 6": Yellowish Tan Brown c-f SAND, some gravel, (dry)	
	G				22	22	Rock in spoon tip. Auger to 15ft.	
	U							
15	S							
	E	S-7	6	7			R: 24": Yellowish Tan Brown c-f SAND, some gravel, (dry)	
	D				15	18	Auger to 20ft	
20		S-8	4	5			R: 24": Yellowish Tan Brown m-f SAND, (wet)	
					4	5	Auger to 23	
25		S-9	2	2			R: 24": Yellowish Tan Brown m-f SAND, (wet)	
					3	8		
							END OF BORING AT 27FT.	
30							HOLE BACKFILLED WITH CUTTINGS	
35								

The subsurface information shown here was obtained for design and estimate purposes. It is made available so that users may have access to the same information available to the State. It is presented in good faith. By the nature of the exploration process, the information represents only a small fraction of the total volume of the material at the site. Interpolation between data samples may not be indicative of the actual material encountered.

DRILL RIG OPERATOR

JOE QUINLAN

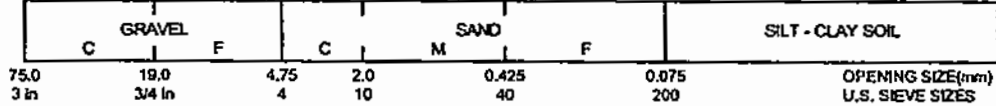
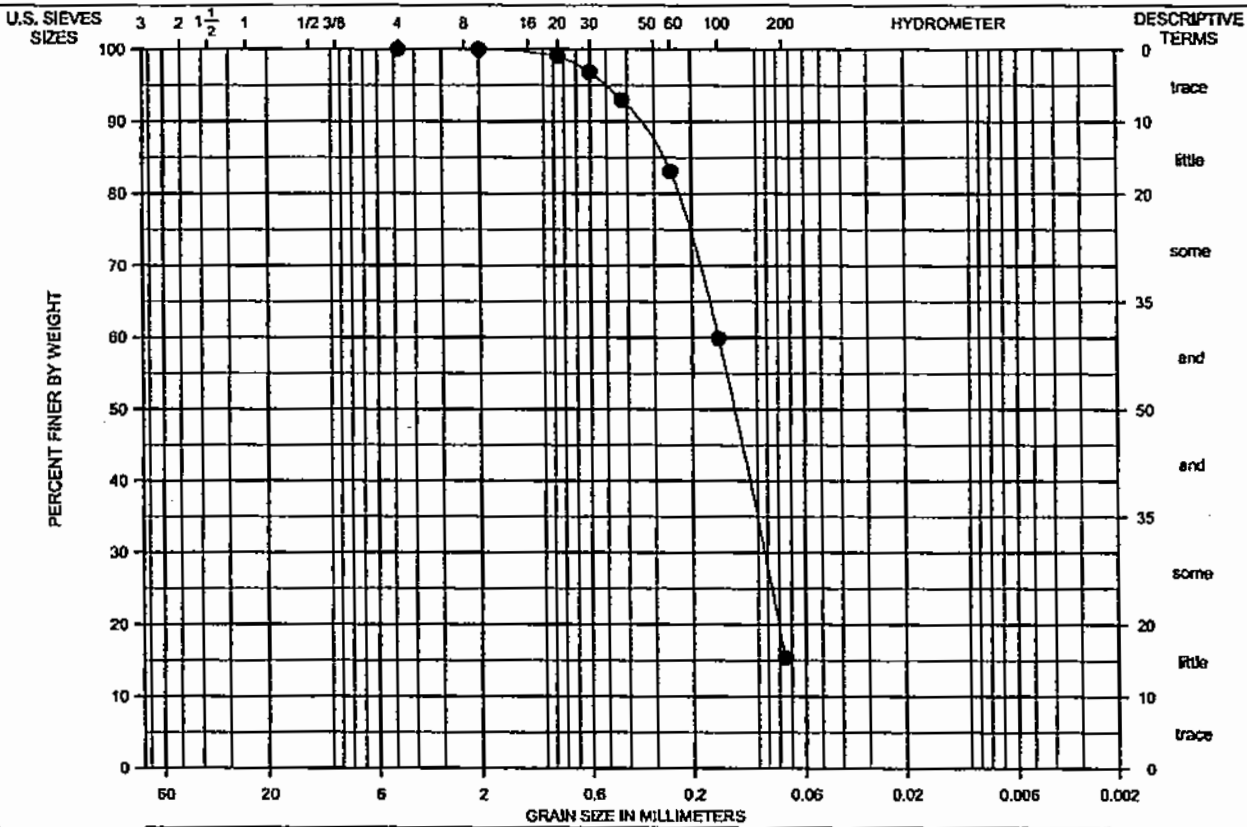
SOIL & ROCK DESCIP.

REG. GEOTECH. ENGINEER

CHIEF INSPECTOR

YAW DANSOSHEET 1 OF 1HOLE TB-15TRACTOR _____ CONTRACTOR QUINLAN WELL DRILLING

SPECIMEN ID: TB-1 S-2 2'-4'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		4.75	0.15	0.094		0.0	84.6		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#4	100.0
#10	100.0
#20	99.0
#30	96.8
#40	93.0
#60	83.1
#100	59.9
#200	15.4

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit: NP
 Plastic Limit: NP
 Plasticity Index: NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

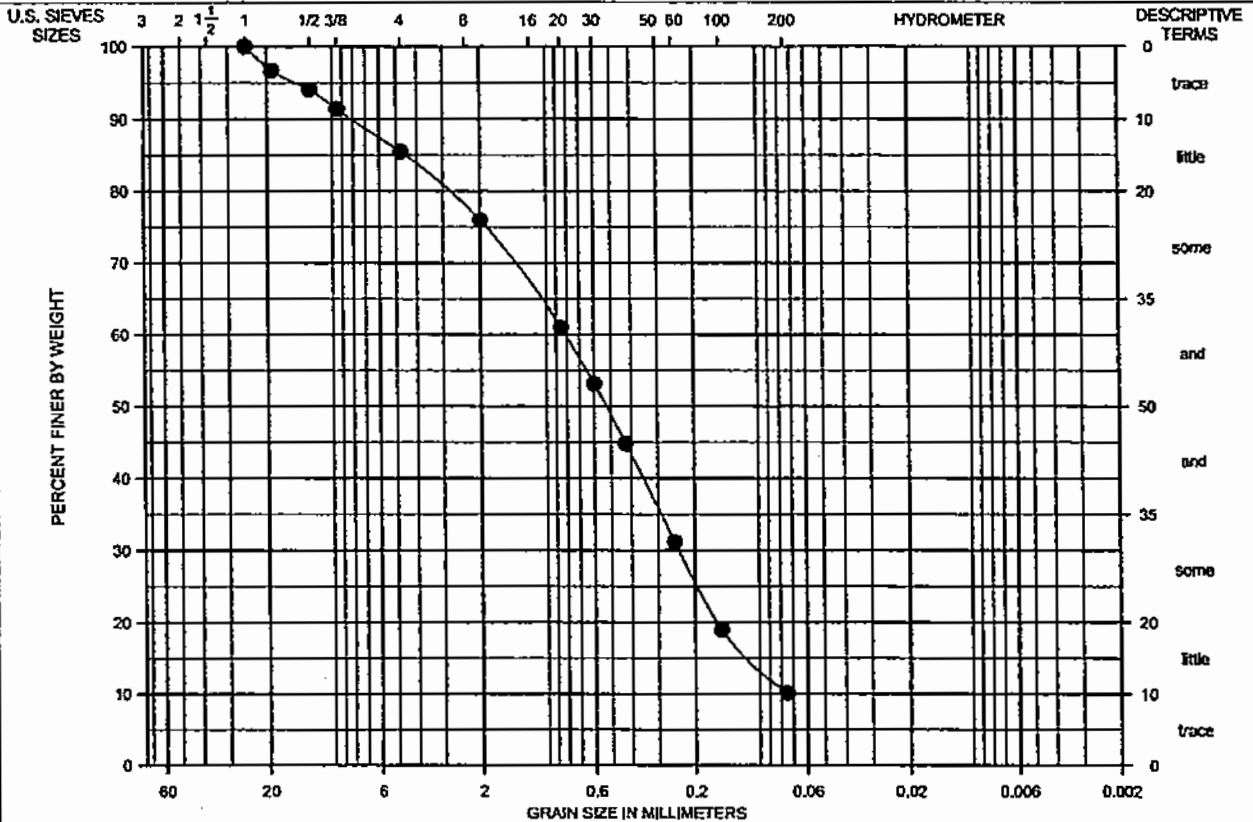


JERSEY ENERGY LABS, INC.
 150 WIGHT ST. NEWARK, NJ 07114
 PH: 973-242-2800 FAX: (973)-802-1373
 AASHTO ACCREDITED
 NYO BUILDING CORP. LICENSE #51

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

LAB NO.: 10S-053

SPECIMEN ID: TB-1 S-5 8'-10'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	
3 in	3/4 in	4	10	40	200	
						OPENING SIZE (mm)
						U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.94	10.98	25	0.815	0.238		14.5	75.3		

CLASSIFICATION: POORLY GRADED SAND with SILT (SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
1"	100.0
3/4"	96.7
1/2"	94.1
3/8"	91.4
#4	85.5
#10	75.9
#20	60.9
#30	53.1
#40	44.8
#60	31.1
#100	19.0
#200	10.1

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

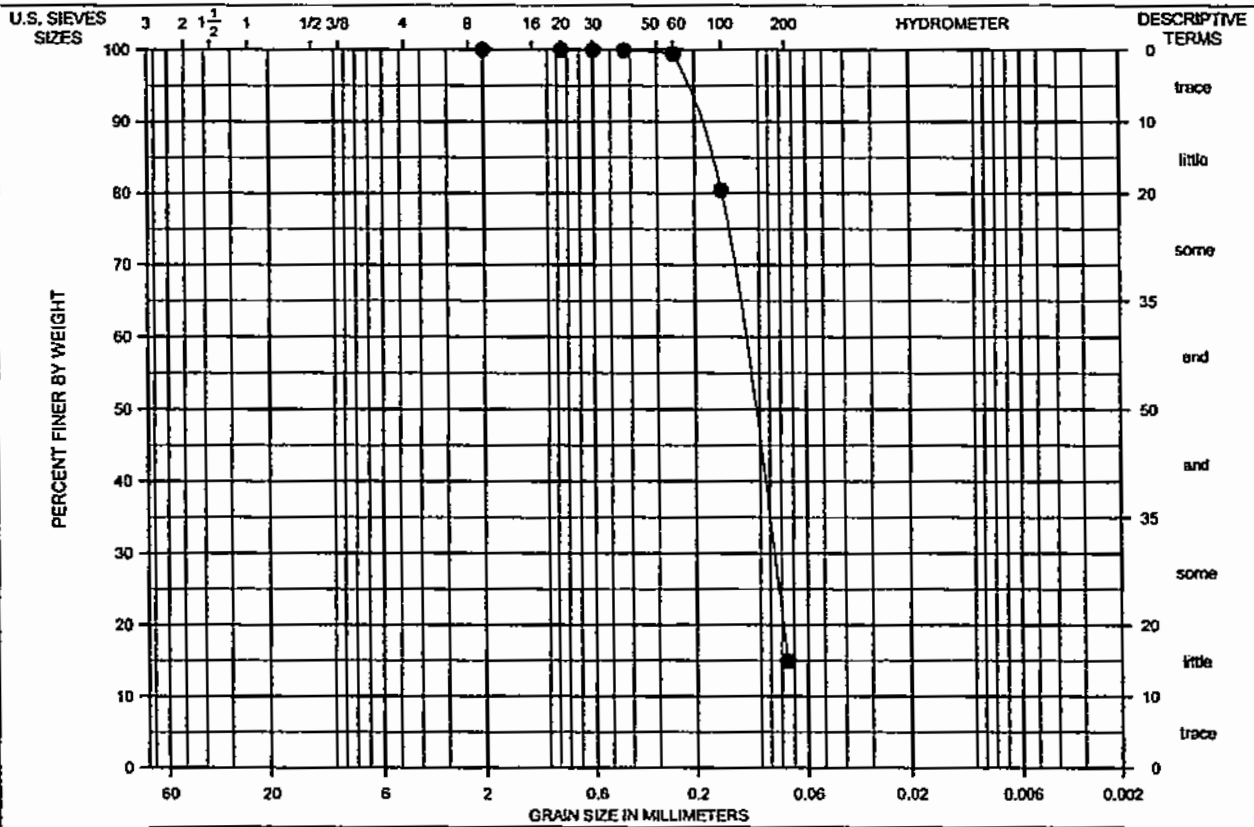
LAB NO.: 105-094



JERRY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-9800 FAX: (973)-902-1272
 AASHTO ACCREDITED
 NYC BUILDING DEPT. LICENSE #51

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-1 S-7 15'-17'



GRAVEL		SAND		SILT - CLAY SOIL	
C	F	C	M	F	
75.0	19.0	4.75	2.0	0.425	0.075
3 in	3/4 in	4	10	40	200
OPENING SIZE(mm) U.S. SIEVE SIZES					

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		2	0.121	0.088		0.0	85.1		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#10	100.0
#20	100.0
#30	99.9
#40	99.9
#60	99.4
#100	80.4
#200	14.9

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

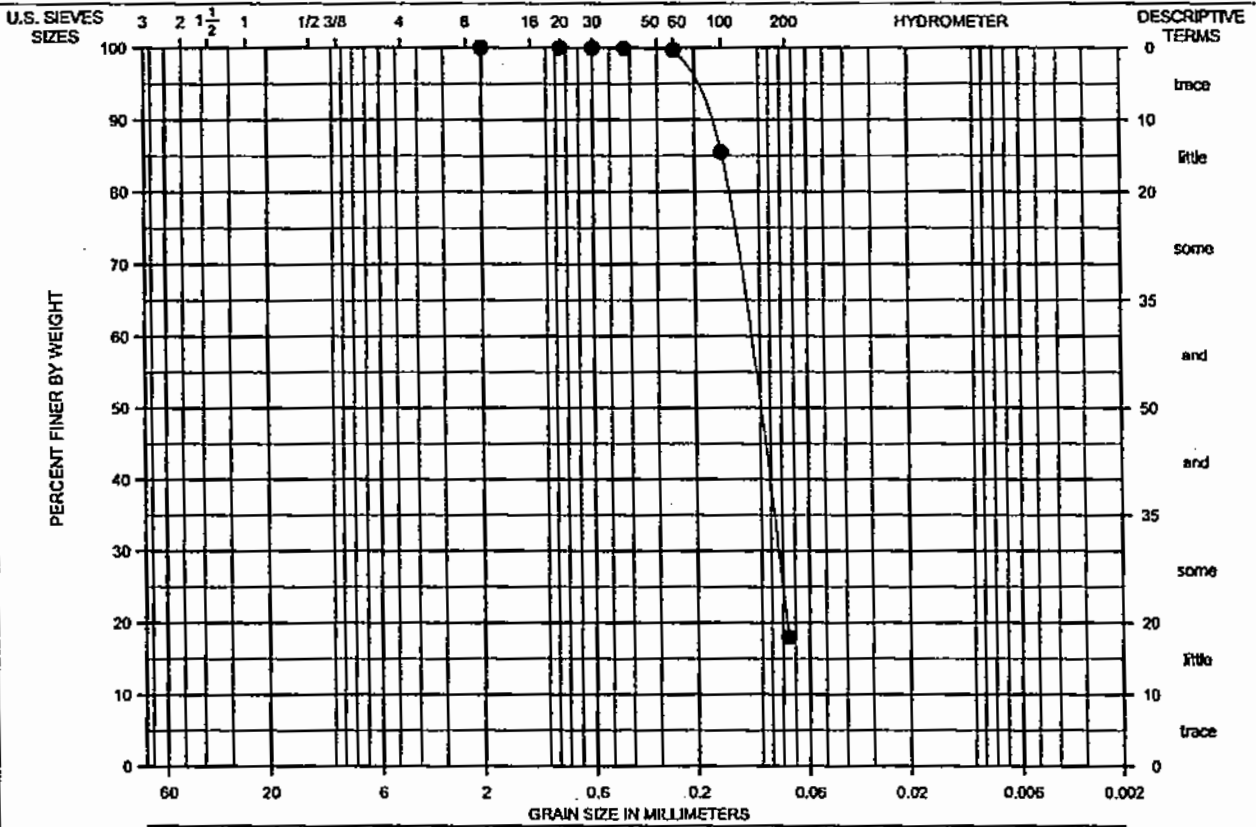
LAB NO: 105-095



JERREY EMMY LABS, INC.
150 WRIGHT ST. NEWARK, NJ 07114
PH: 973-242-9800 FAX: 973-203-1272
AASHTO ACCREDITED
NYC BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
Project: Camden County College Science Building
Location: Camden County
Date: 2/24/10

SPECIMEN ID: TB-1 S-9 23'-25'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	OPENING SIZE(mm)
3 in	3/4 in	4	10	40	200	U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		2	0.115	0.085		0.0	82.0		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#10	100.0
#20	100.0
#30	100.0
#40	99.9
#60	99.7
#100	85.5
#200	18.0

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

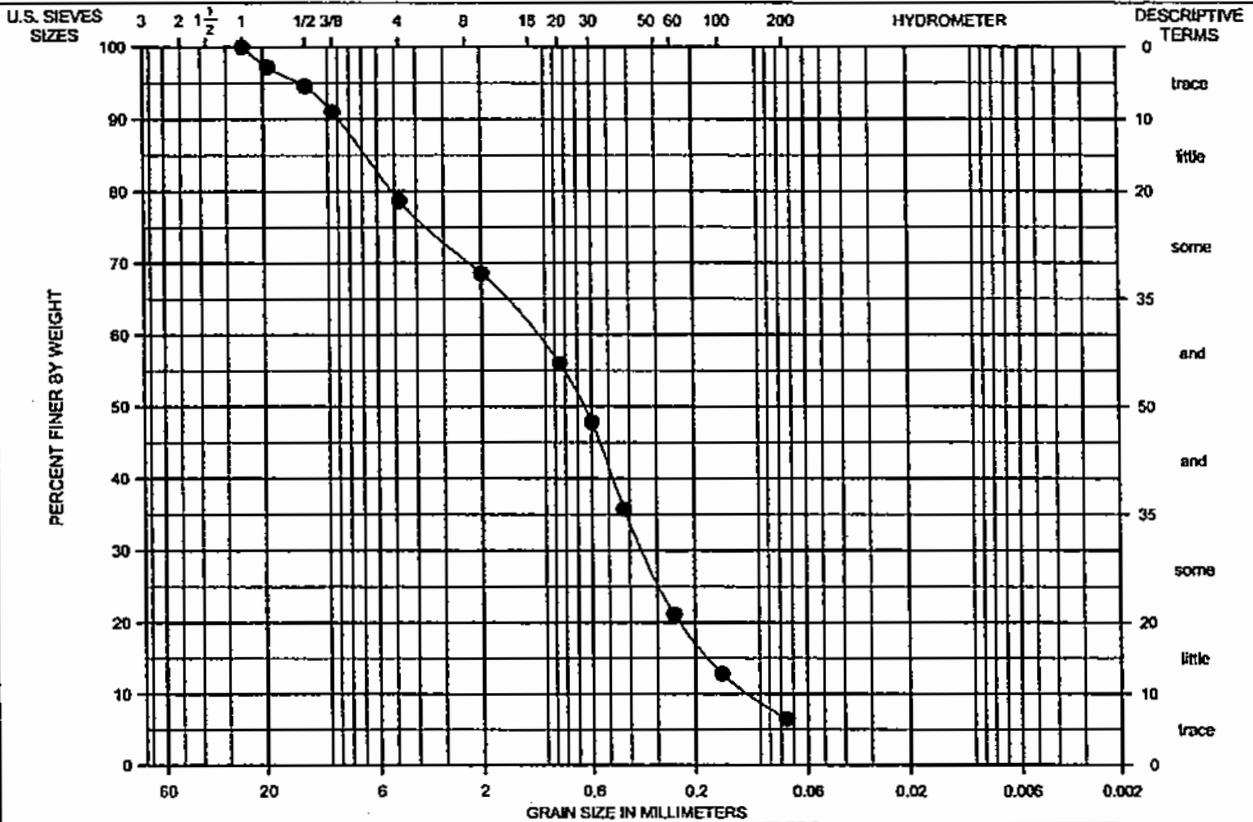
LAB NO.: 105-058



JERSEY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 972-242-8800 FAX (972)-802-1272
 AASHTO ACCREDITED
 NYD BUILDING DEPT. LICENSE #81

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-2 S-6 10'-12'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	
3 in	3/4 in	4	10	40	200	
						OPENING SIZE(mm) U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.96	10.12	25	1.12	0.345	0.111	21.3	72.3		

CLASSIFICATION: POORLY GRADED SAND with SILT and GRAVEL(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
1"	100.0
3/4"	97.2
1/2"	94.6
3/8"	91.0
#4	78.7
#10	68.5
#20	56.0
#30	47.8
#40	35.7
#60	21.1
#100	12.8
#200	6.4

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM G29]

HYDROMETER ANALYSIS [ASTM D422]

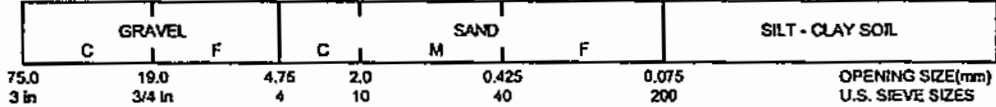
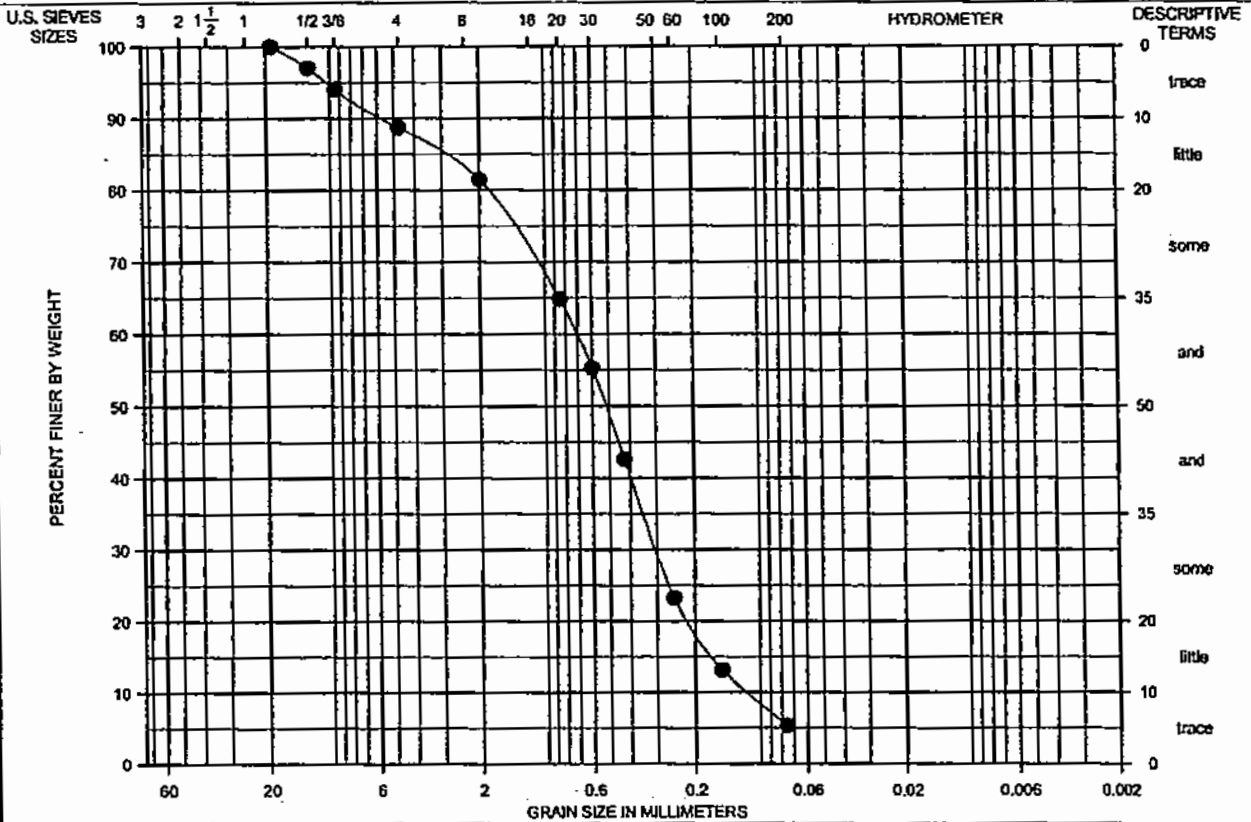
LAB NO.: 10S-097



JERSEY ESSAY LABS, INC.
150 WRIGHT ST. NEWARK, NJ 07114
PHI 973-242-8800 FAX (973)-803-1273
AASHTO ACCREDITED
NYC BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
Project: Camden County College Science Building
Location: Camden County
Date: 2/24/10

SPECIMEN ID: TB-3 S-5 8'-10'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
1.12	6.26	19	0.713	0.301	0.114	11.3	83.4		

CLASSIFICATION: WELL-GRADED SAND with SILT(SW-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/4"	100.0
1/2"	97.0
3/8"	94.1
#4	88.7
#10	81.4
#20	64.9
#30	55.3
#40	42.6
#60	23.2
#100	13.1
#200	5.3

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

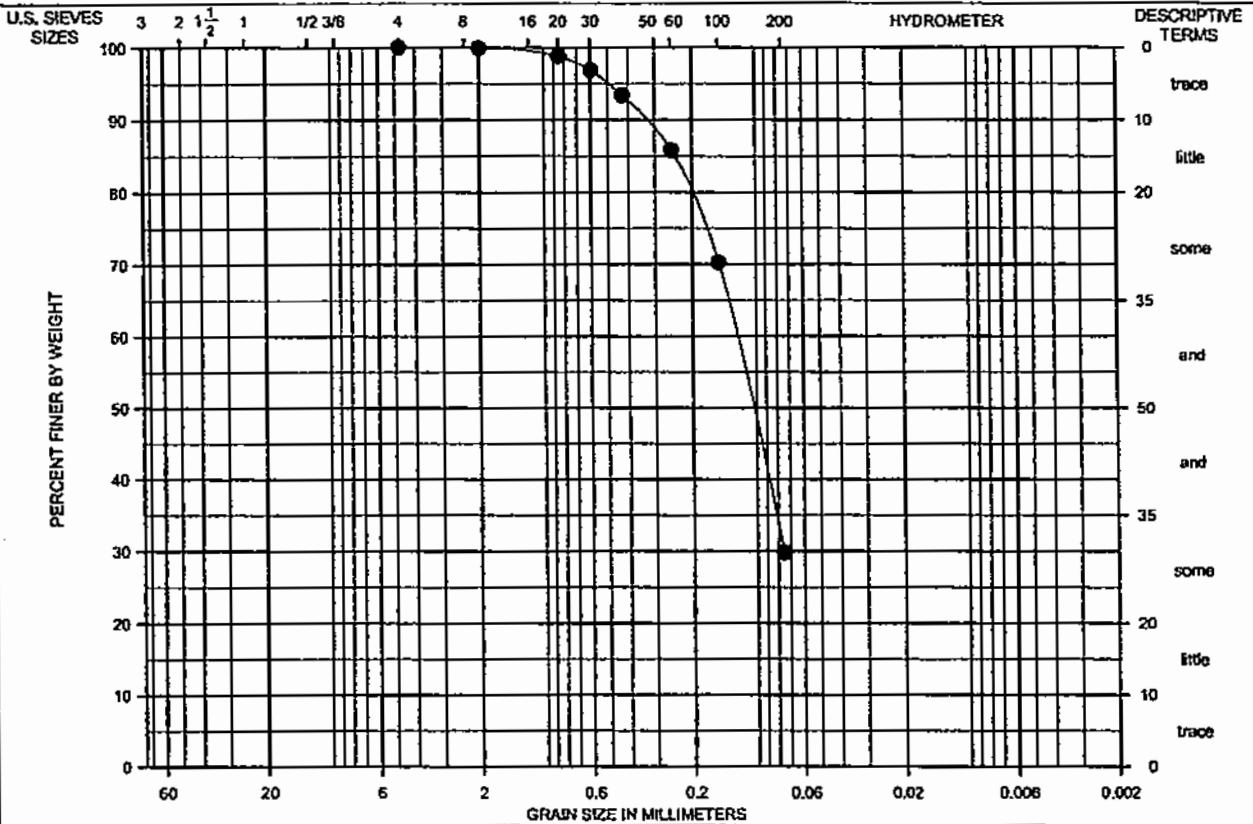
LAB NO.: 105-088



JERSEY EBBAY LABS, INC.
150 WRIGHT ST. NEWARK, NJ 07114
PHI 973-242-8800 FAX (973)-802-1378
AASHTO ACCREDITED
NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
Project: Camden County College Science Building
Location: Camden County
Date: 2/24/10

SPECIMEN ID: TB-4 S-1 0'-2'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	
3 in	3/4 in	4	10	40	200	
						OPENING SIZE (mm)
						U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		4.75	0.126	0.075		0.0	70.2		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#4	100.0
#10	99.9
#20	98.8
#30	96.9
#40	93.4
#60	85.8
#100	70.3
#200	29.8

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

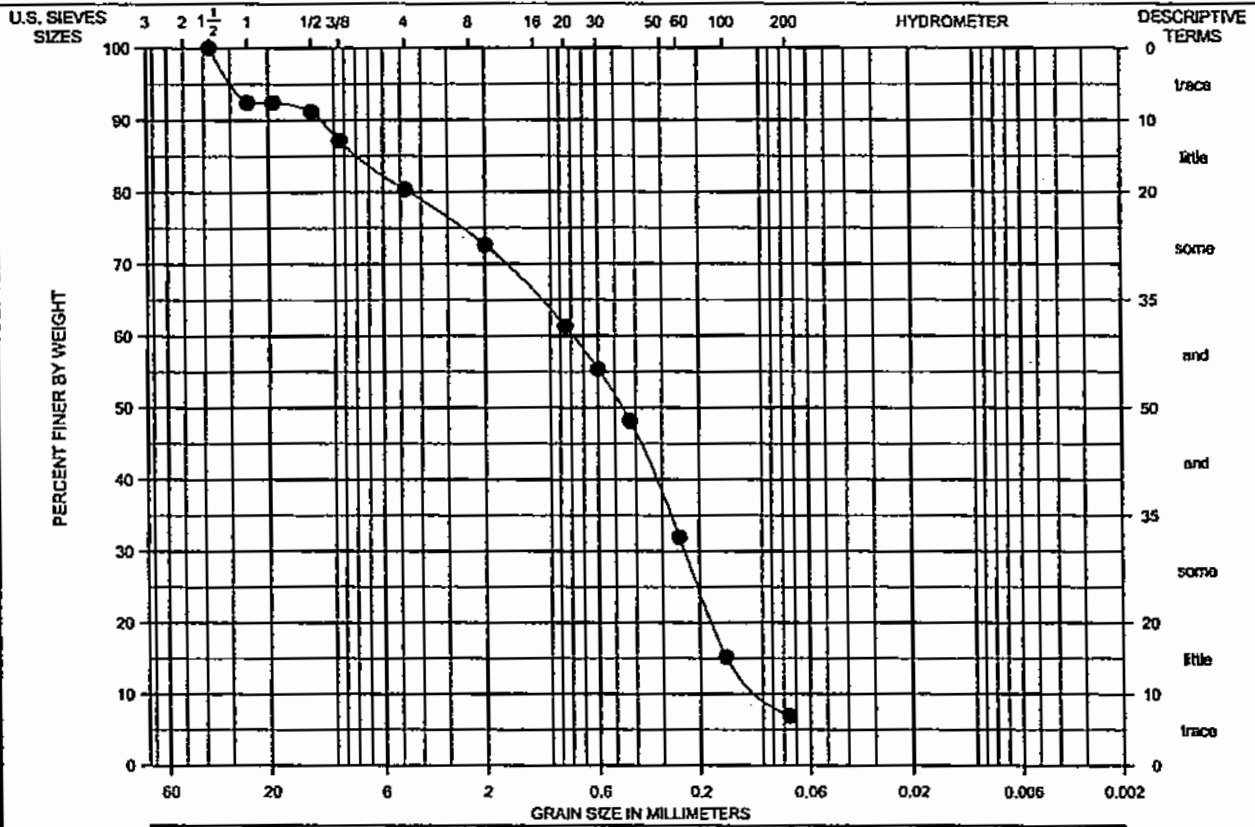
LAB NO.: 105-100



JERREY EMMY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-9800 FAX: (973)-802-1372
 AASHTO ACCREDITED
 NYD BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-4 S-3 4'-6'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	OPENING SIZE(mm)
3 in	3/4 in	4	10	40	200	U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.73	8.10	37.5	0.787	0.236	0.097	19.7	73.4		

CLASSIFICATION: POORLY GRADED SAND with SILT and GRAVEL(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
1 1/2"	100.0
1"	92.4
3/4"	92.4
1/2"	91.2
3/8"	87.2
#4	80.3
#10	72.6
#20	61.3
#30	55.3
#40	48.2
#60	32.0
#100	15.2
#200	6.9

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

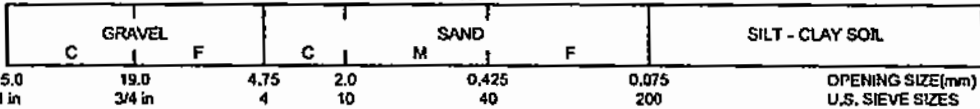
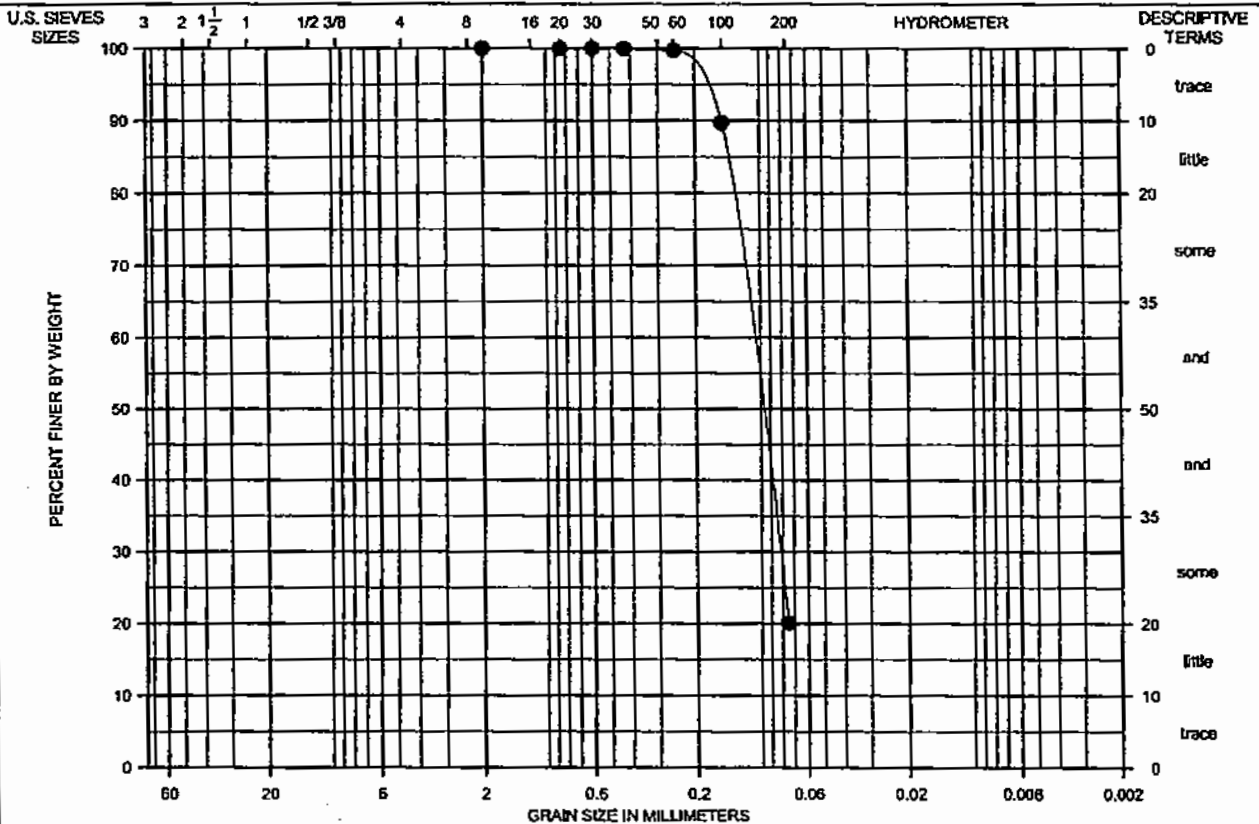
LAB NO.: 105-101



JERSEY ENERGY LABS, INC.
 150 WILSON ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-802-1273
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-4 S-9 25'-27'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		2	0.112	0.083		0.0	79.9		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#10	100.0
#20	100.0
#30	100.0
#40	100.0
#60	99.7
#100	89.7
#200	20.1

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

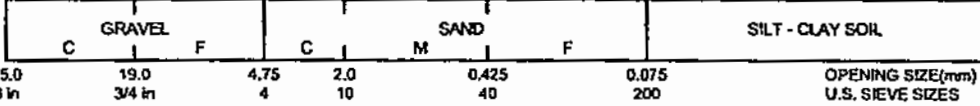
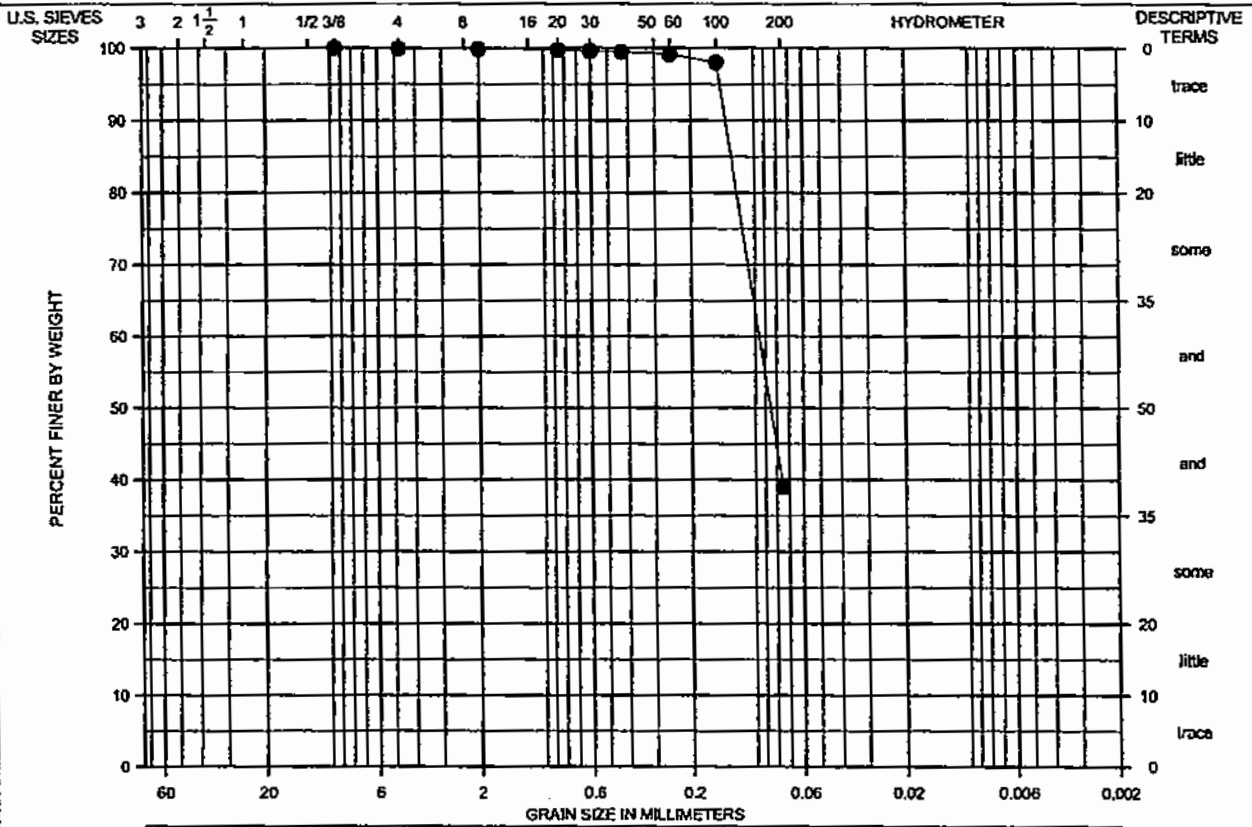
LAB NO.: 105-102



JEREMY ESBAY LABS, INC.
 150 WASHY ST. NEWARK, NJ 07114
 PH: 973-249-8900 FAX: (973)-802-1273
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-4 S-14 47'-49'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		9.5	0.096			0.1	61.0		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/8"	100.0
#4	99.9
#10	99.8
#20	99.7
#30	99.6
#40	99.4
#60	99.1
#100	98.0
#200	38.9

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

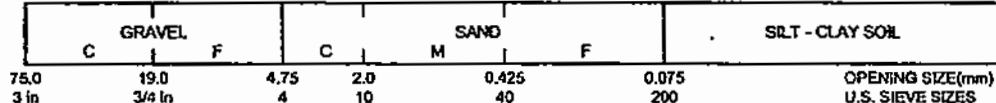
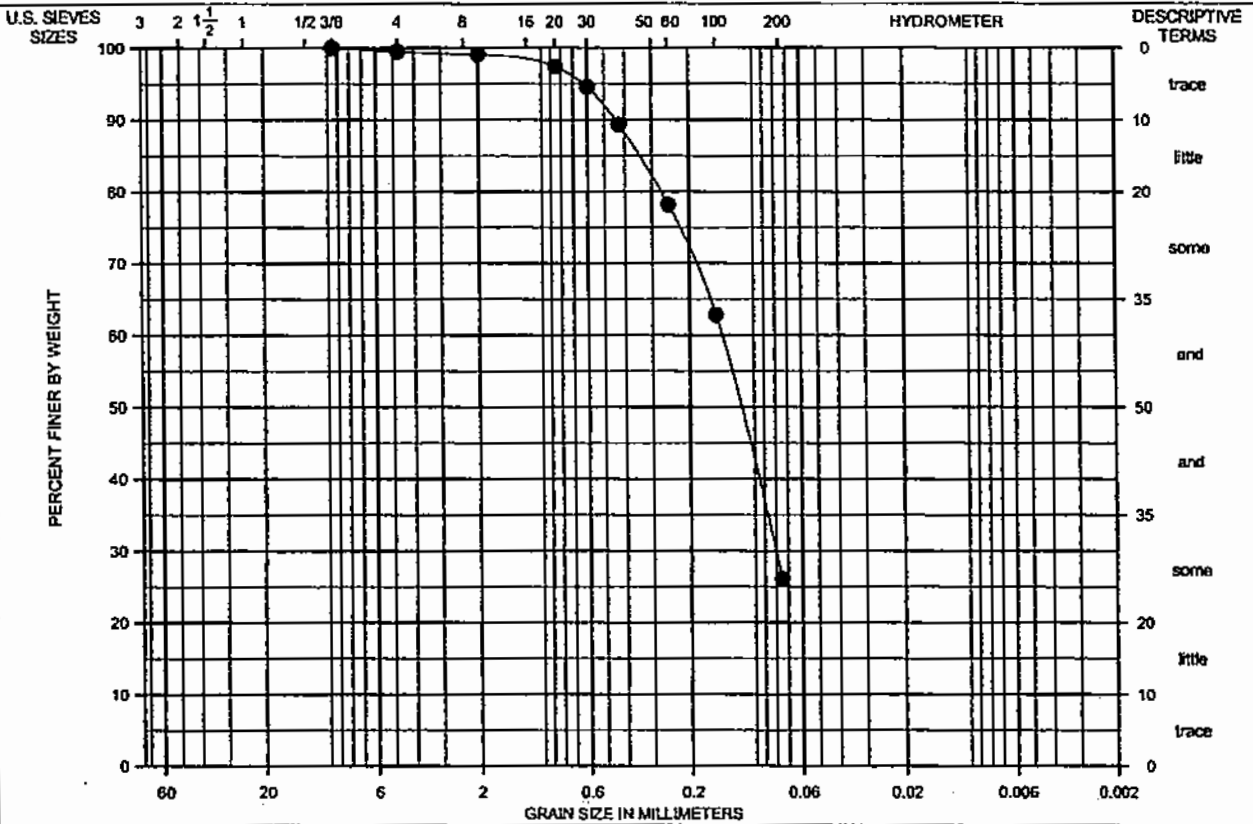
LAB NO.: 105-103



JERRY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-803-1272
 AASHTO ACCREDITED
 NYD BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-5 S-1 0'-2'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		9.5	0.142	0.081		0.5	73.3		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/8"	100.0
#4	99.5
#10	99.0
#20	97.4
#30	94.6
#40	89.3
#60	78.2
#100	62.8
#200	26.1

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

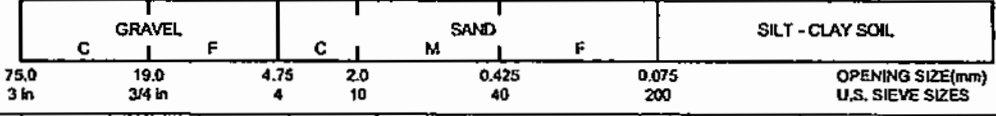
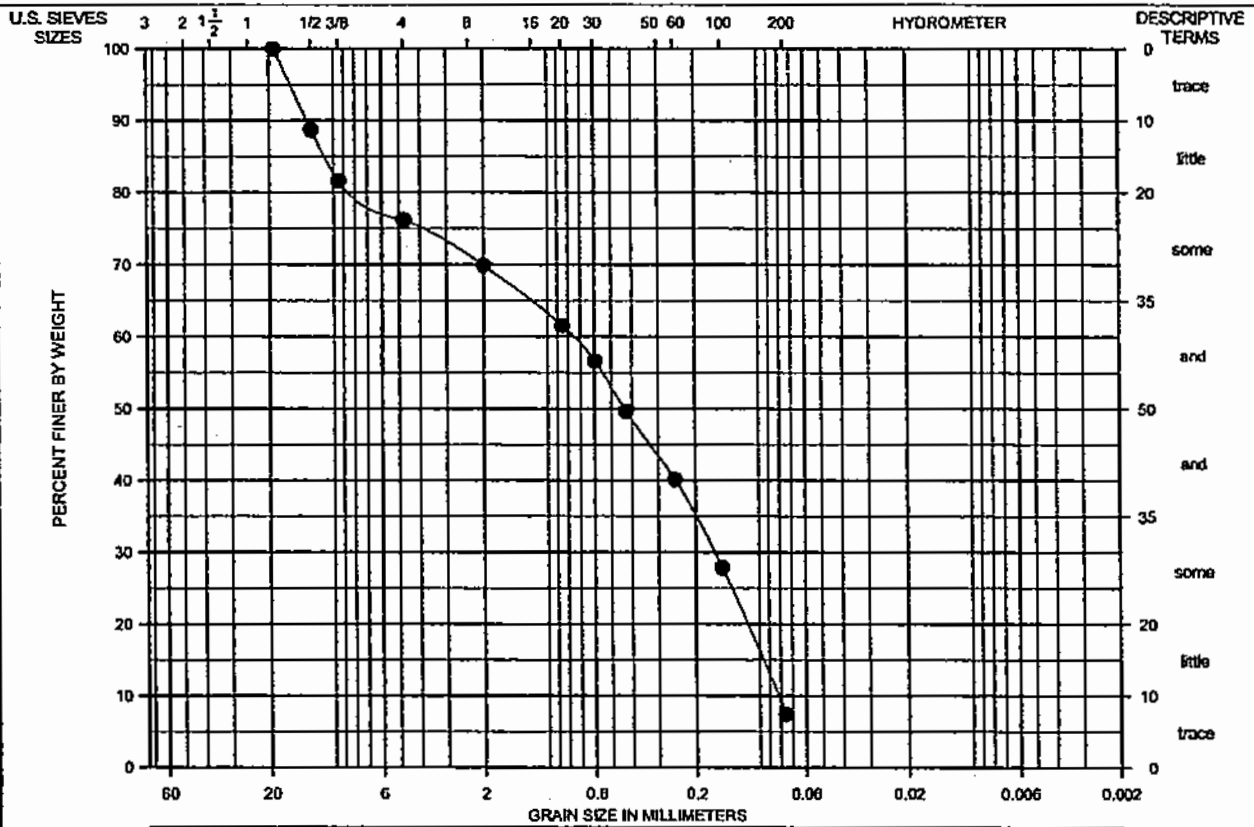
LAB NO.: 105-104



JERSEY ENERGY LABS, INC.
 150 WIGHT ST., NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-802-1373
 AASHTO ACCREDITED
 NYD BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-5 S-6 10'-12'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.43	9.32	19	0.763	0.164	0.082	23.9	68.7		

CLASSIFICATION: POORLY GRADED SAND with SILT and GRAVEL(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/4"	100.0
1/2"	88.7
3/8"	81.6
#4	76.1
#10	69.9
#20	61.5
#30	56.6
#40	49.6
#60	40.1
#100	27.9
#200	7.4

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit: NP
 Plastic Limit: NP
 Plasticity Index: NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

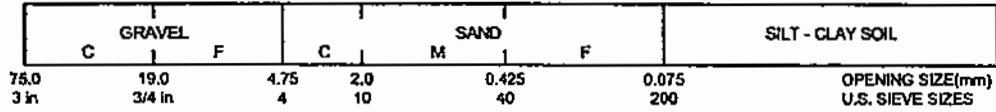
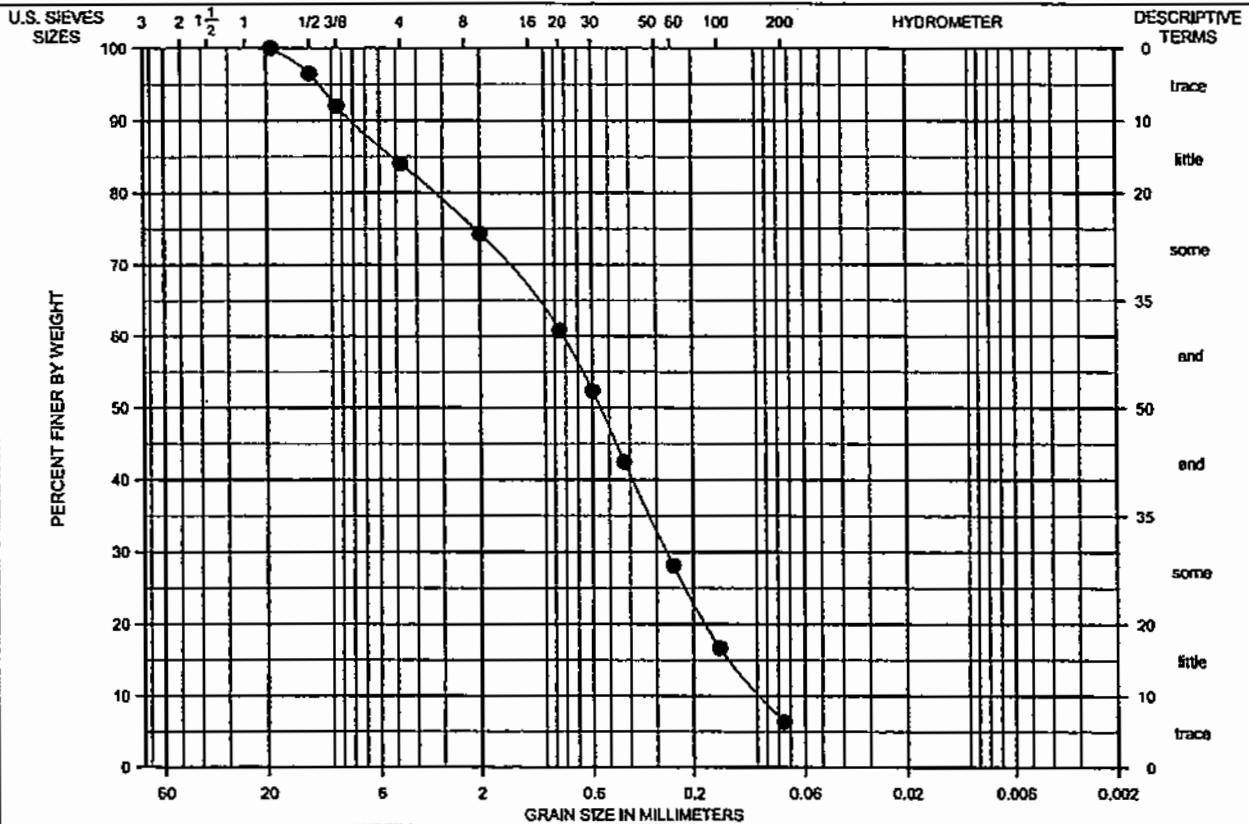
LAB NO.: 105-105



JERRY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-343-8800 FAX: (973)-802-1872
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-6 S-4 6'-8'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.91	8.58	19	0.822	0.268	0.096	15.9	77.7		

CLASSIFICATION: POORLY GRADED SAND with SILT and GRAVEL(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/4"	100.0
1/2"	96.5
3/8"	92.0
#4	84.1
#10	74.3
#20	60.8
#30	52.3
#40	42.5
#60	28.1
#100	16.7
#200	6.4

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit: NP
 Plastic Limit: NP
 Plasticity Index: NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

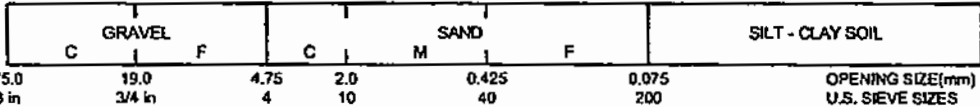
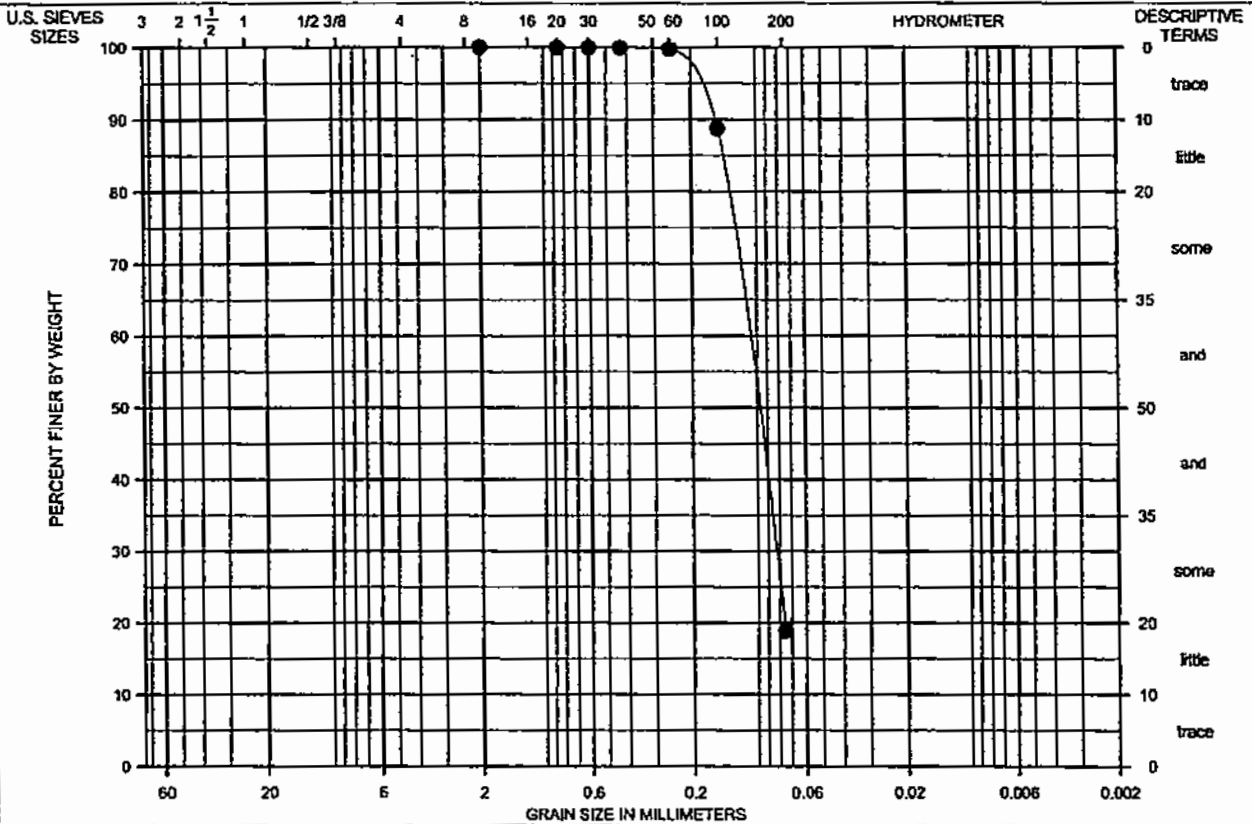


JERREY EBBY LABS, INC.
 160 WRIGHT ST. NEWARK, NJ 07114
 PH 973-342-8800 FAX (973)-802-1378
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

LAB NO.: 10S-103

SPECIMEN ID: TB-7 S-9 25'-27'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		2	0.113	0.084		0.0	81.2		

CLASSIFICATION: SILTY SAND (SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#10	100.0
#20	100.0
#30	100.0
#40	99.9
#60	99.7
#100	88.7
#200	18.8

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

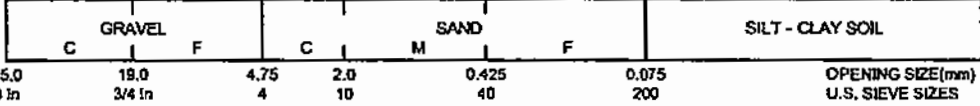
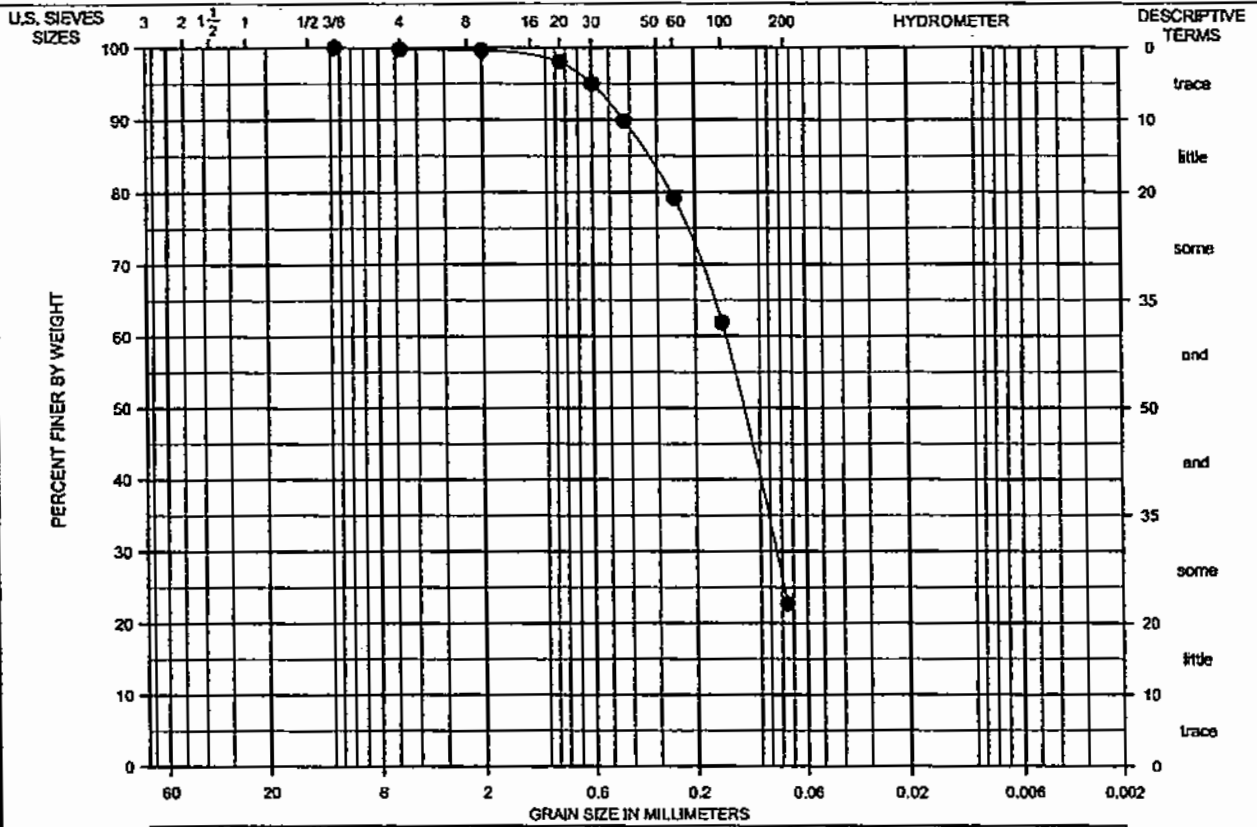
LAB NO.: 105-108



JERSEY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-803-1373
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-8 S-1 0'-2'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		9.5	0.145	0.085		0.2	77.1		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/8"	100.0
#4	99.8
#10	99.7
#20	98.1
#30	95.0
#40	89.9
#60	79.2
#100	61.9
#200	22.7

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

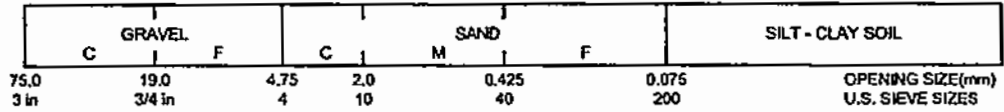
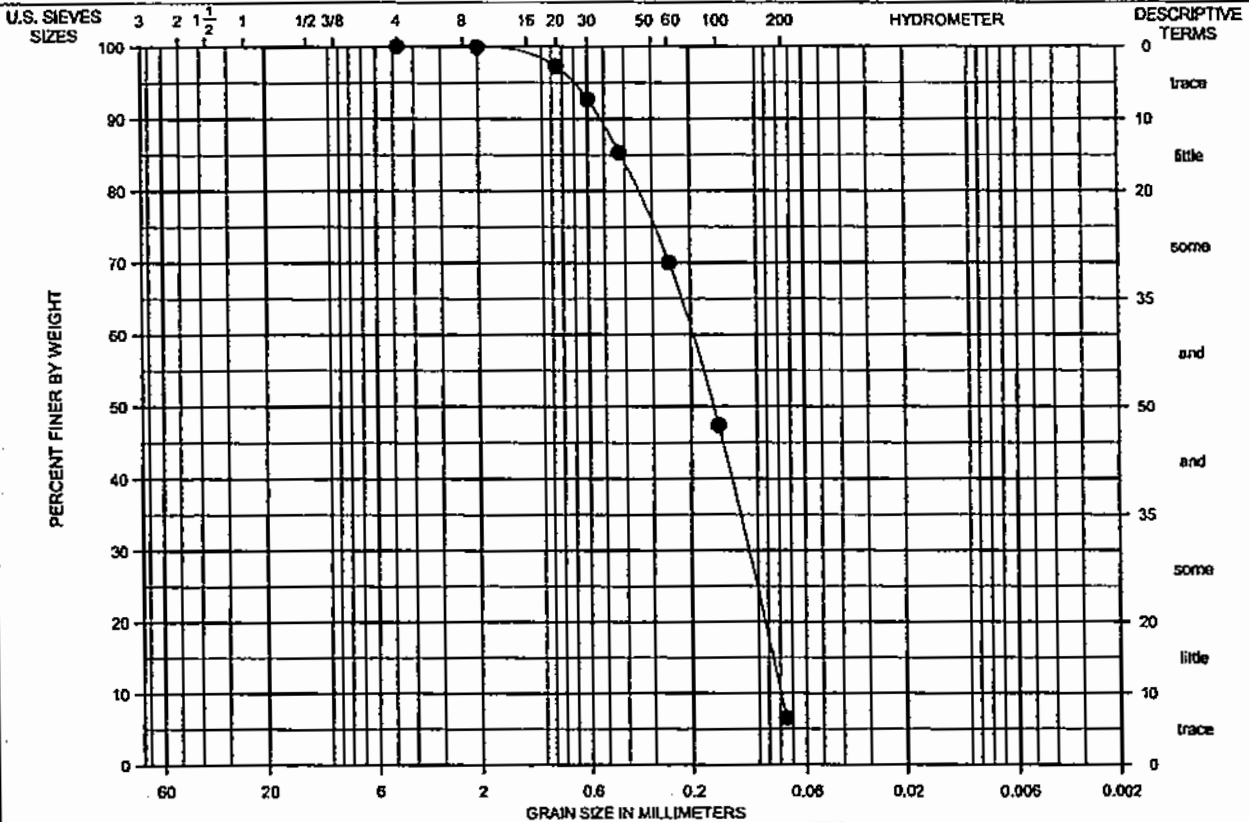
LAB NO.: 105-109



JERSEY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-343-8800 FAX: (973) 303-1379
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-8 S-3 4'-6'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.79	2.51	4.75	0.199	0.112	0.08	0.0	93.5		

CLASSIFICATION: POORLY GRADED SAND with SILT(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#4	100.0
#10	99.9
#20	97.3
#30	92.7
#40	85.4
#60	70.0
#100	47.4
#200	5.0

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

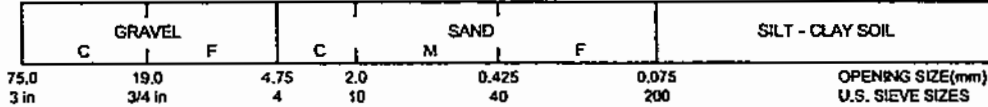
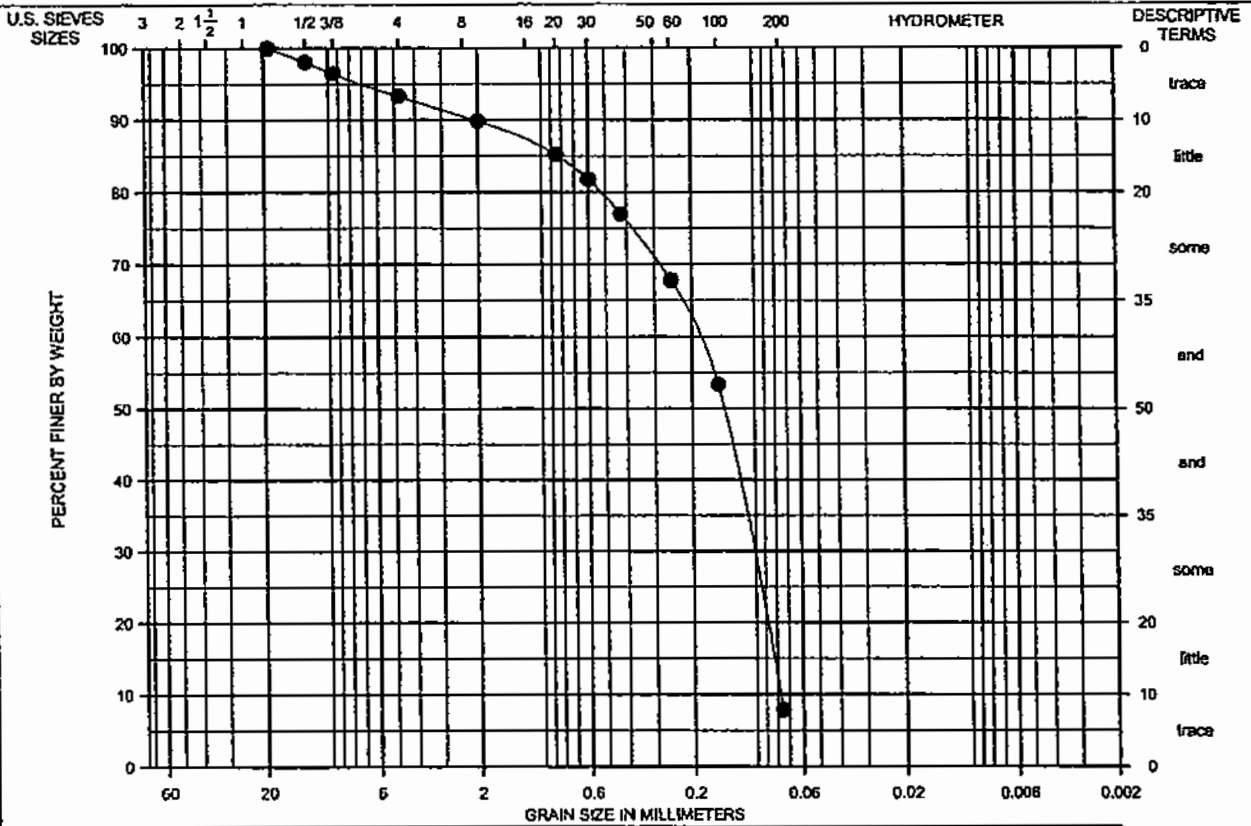
LAB NO.: 10S-110



JERRY EBY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-343-8800 FAX: (973)-809-1373
 AASHTO ACCREDITED
 NYD BUILDING DEPT. LICENSE #81

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-8 S-6 10'-12'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.75	2.45	19	0.19	0.105	0.078	6.7	85.5		

CLASSIFICATION: POORLY GRADED SAND with SILT(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/4"	100.0
1/2"	98.1
3/8"	96.5
#4	93.3
#10	89.9
#20	85.2
#30	81.8
#40	77.0
#60	67.8
#100	53.3
#200	7.8

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

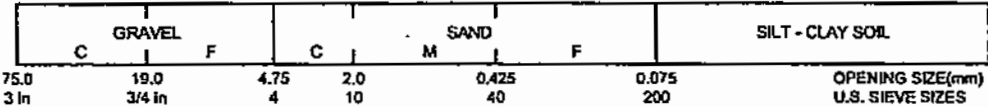
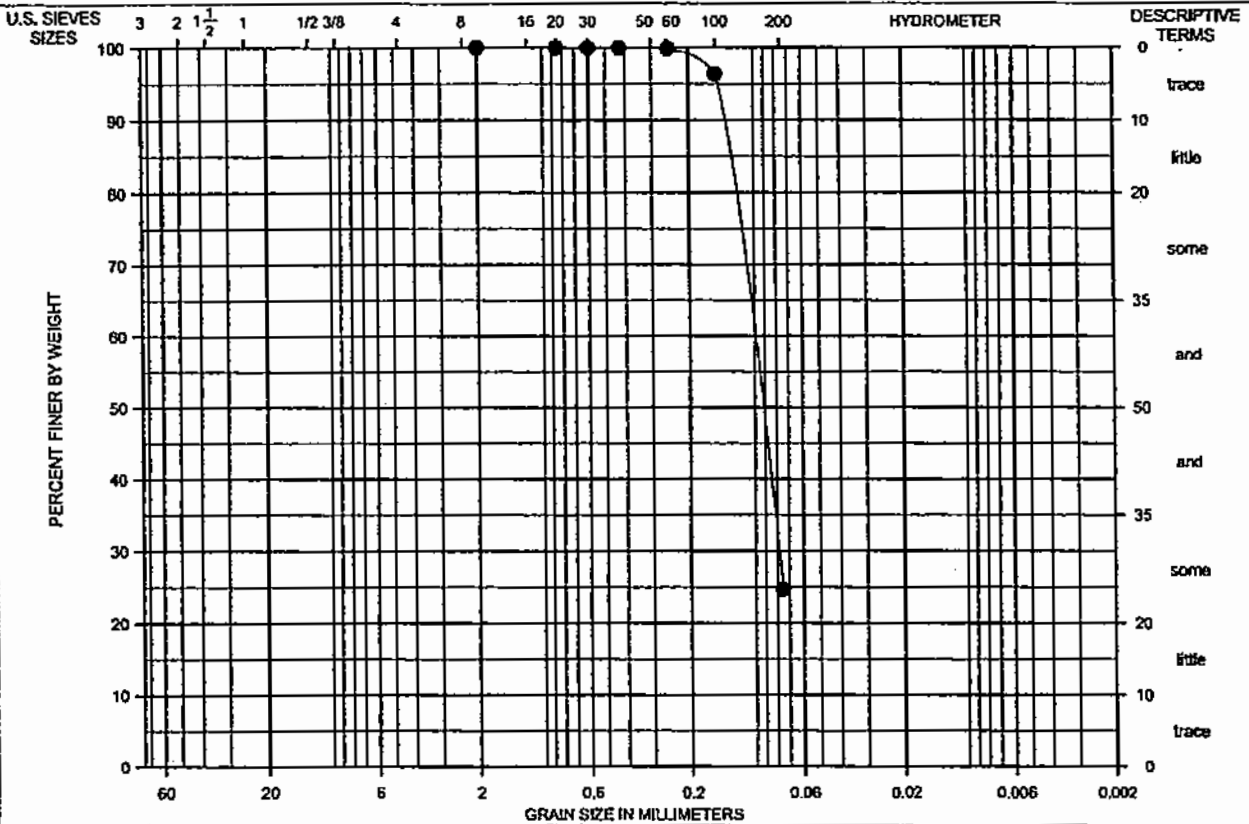


JERSEY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: 973-242-1272
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE # 61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

LAB NO.: 105-111

SPECIMEN ID: TB-8 S-9 25'-27'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		2	0.106	0.079		0.0	75.3		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#10	100.0
#20	100.0
#30	100.0
#40	100.0
#60	99.9
#100	96.4
#200	24.7

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

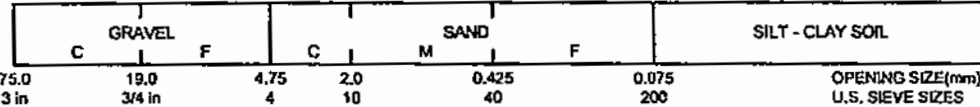
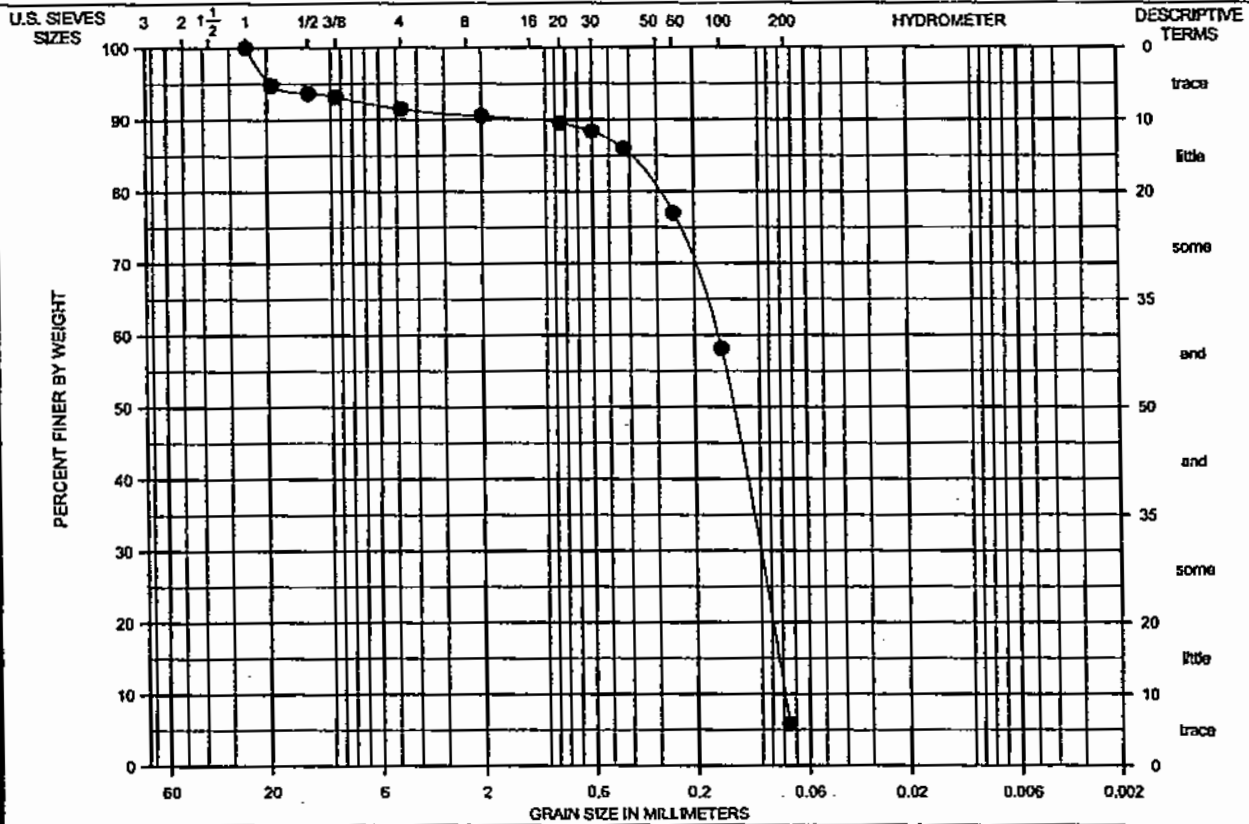
LAB NO.: 105-112



JERSEY ENERGY LABS, INC.
 180 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-902-1278
 AASHTO ACCREDITED
 NYC BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-9 S-6 10'-12'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.85	1.99	25	0.158	0.103	0.079	8.5	85.7		

CLASSIFICATION: POORLY GRADED SAND with SILT(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
1"	100.0
3/4"	94.8
1/2"	93.7
3/8"	93.2
#4	91.5
#10	90.5
#20	89.5
#30	88.4
#40	86.0
#60	77.0
#100	58.1
#200	5.8

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

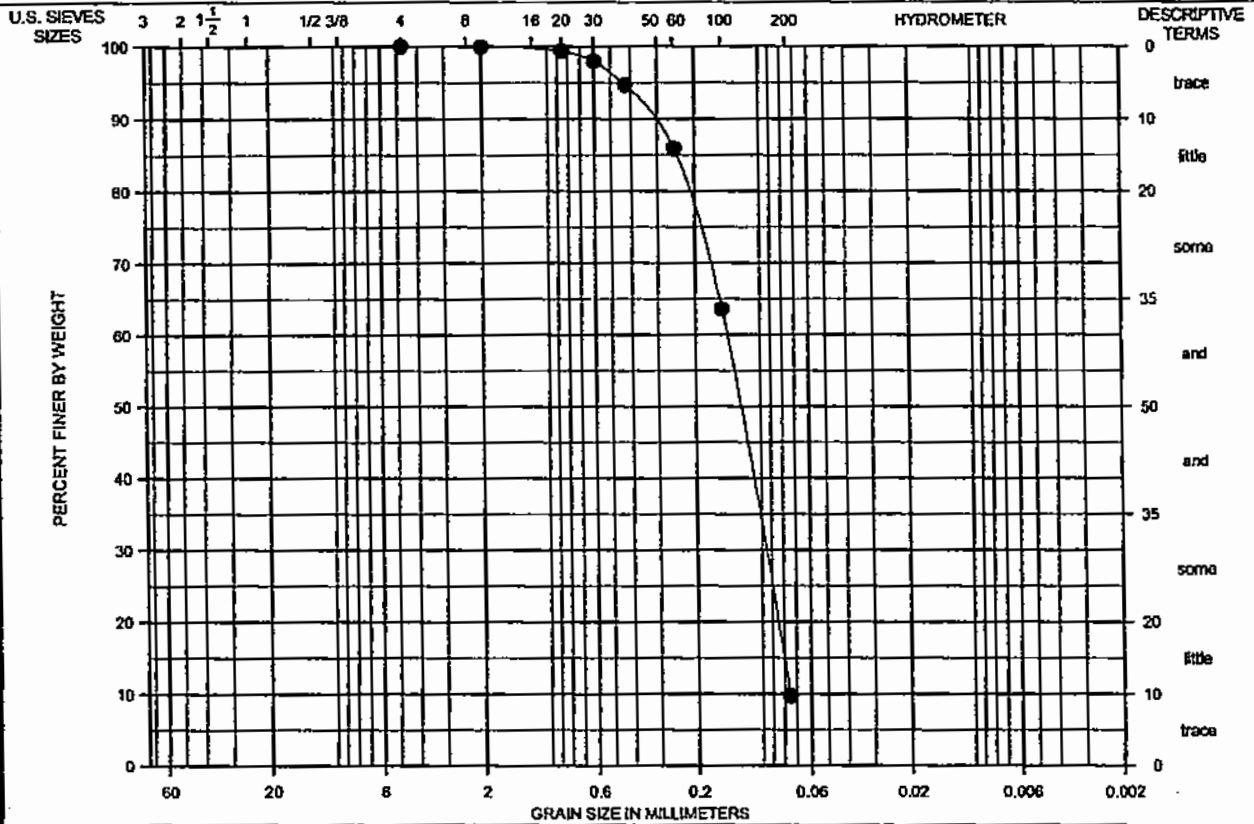
LAB NO.: 105-113



JERSEY ENERGY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-3800 FAX: (973)-802-1272
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-11 S-3 4'-6'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	
3 in	3/4 in	4	10	40	200	
OPENING SIZE (mm)						U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.88	1.90	4.75	0.143	0.097	0.075	0.0	90.3		

CLASSIFICATION: POORLY GRADED SAND with SILT(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#4	100.0
#10	100.0
#20	99.4
#30	98.0
#40	94.7
#60	85.9
#100	63.6
#200	9.7

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

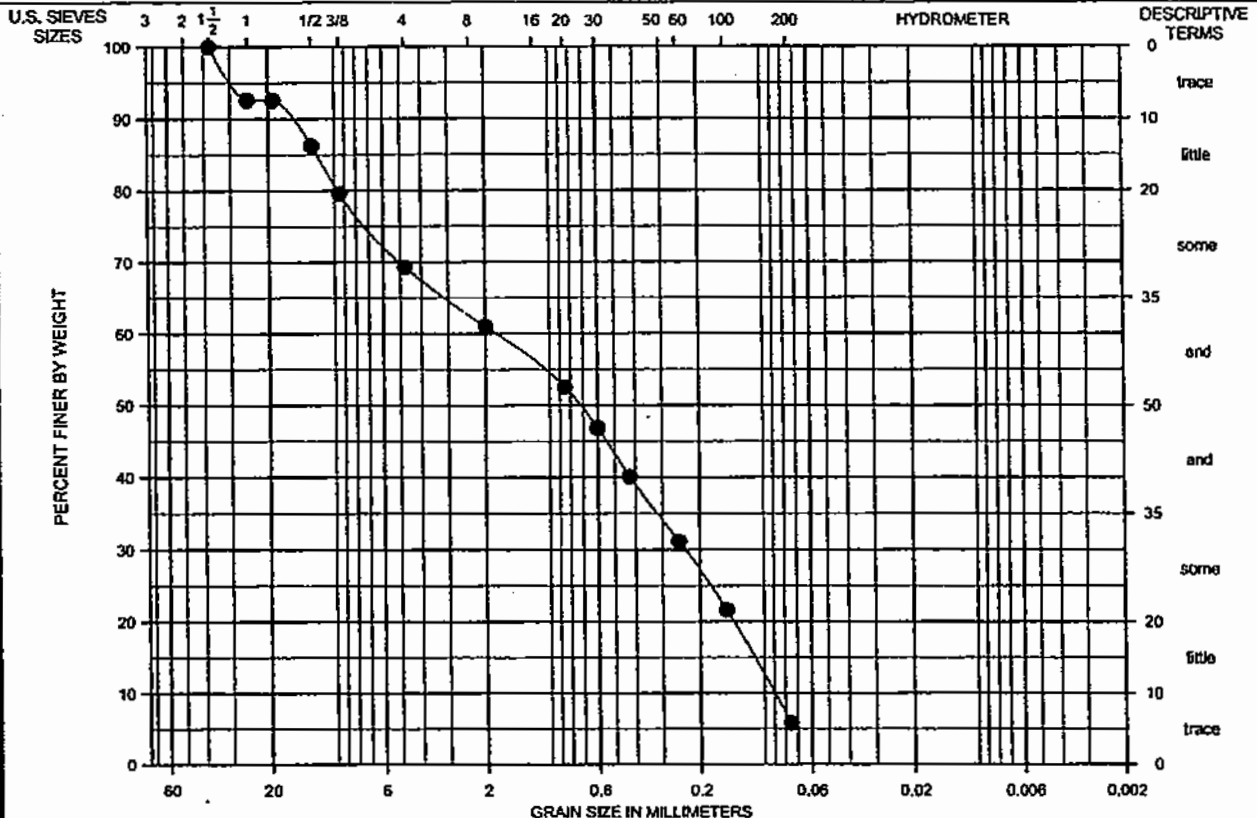
LAB NO.: 105-115



JERSEY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-802-1272
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-12 S-5 8'-10'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	
3 in	3/4 in	4	10	40	200	
						OPENING SIZE(mm) U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₅₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.34	20.05	37.5	1.81	0.235	0.09	30.7	63.5		

CLASSIFICATION: POORLY GRADED SAND with SILT and GRAVEL(SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
1 1/2"	100.0
1"	92.6
3/4"	92.6
1/2"	86.2
3/8"	79.6
#4	69.3
#10	61.0
#20	52.5
#30	46.8
#40	40.1
#60	31.1
#100	21.6
#200	5.8

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

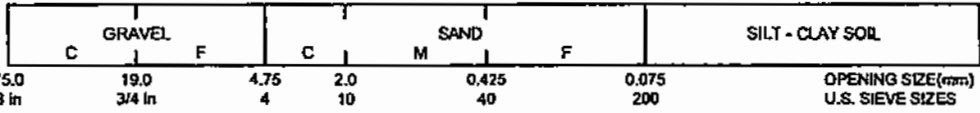
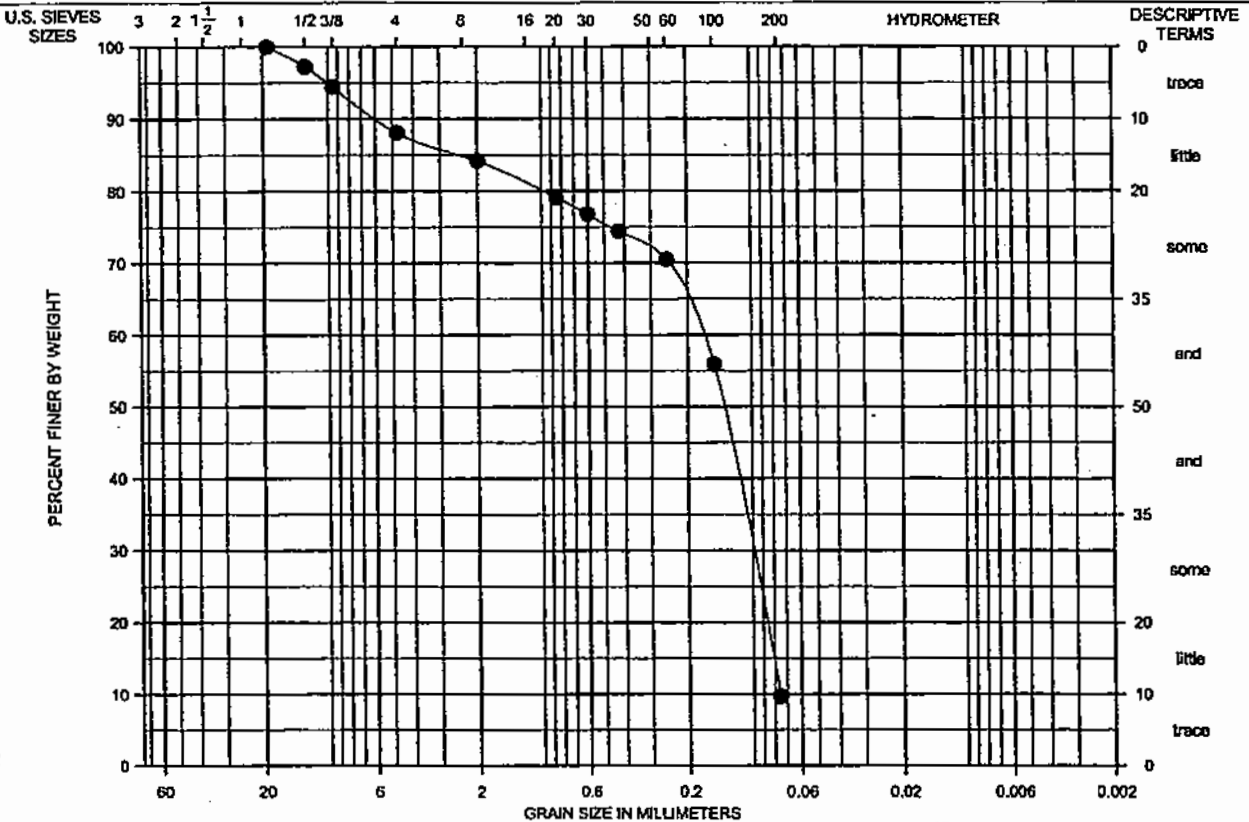
LAB NO: 10S-11B



JERSEY ENERGY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-243-8800 FAX: (973)-802-1372
 AASHTO ACCREDITED
 NYC BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-13 S-7 15'-17'



Cc	Cu	D ₁₀₀	D ₅₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.79	2.29	19	0.173	0.102	0.075	11.9	78.4		

CLASSIFICATION: POORLY GRADED SAND with SILT (SP-SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/4"	100.0
1/2"	97.2
3/8"	94.4
#4	88.1
#10	84.2
#20	79.1
#30	76.8
#40	74.4
#60	70.5
#100	55.9
#200	9.6

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

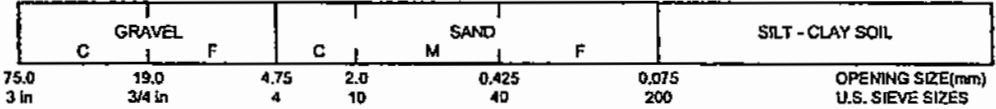
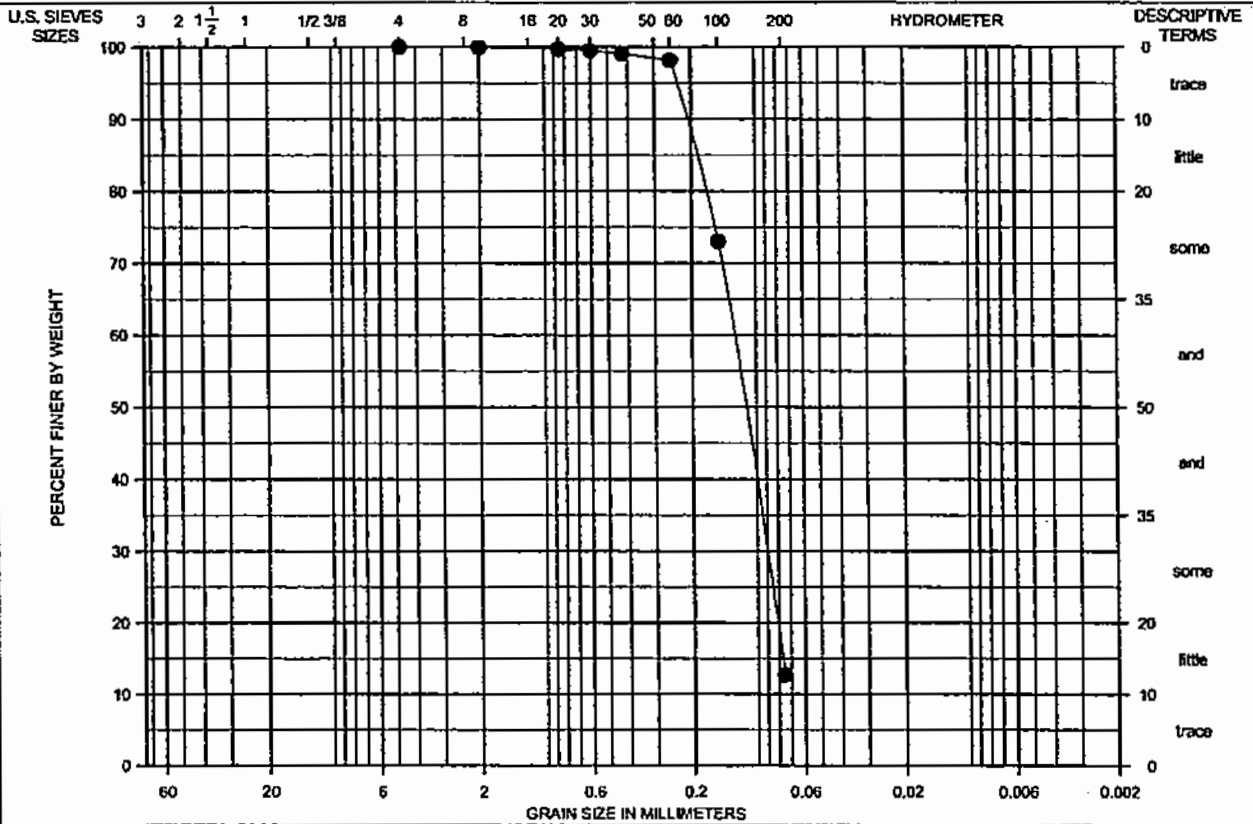
LAB NO.: 10S-118



JERRY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-3800 FAX: (973)-802-1273
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-14 S-7 15'-17'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		4.75	0.129	0.092		0.0	87.3		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#4	100.0
#10	99.9
#20	99.7
#30	99.5
#40	99.1
#60	98.2
#100	73.0
#200	12.7

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

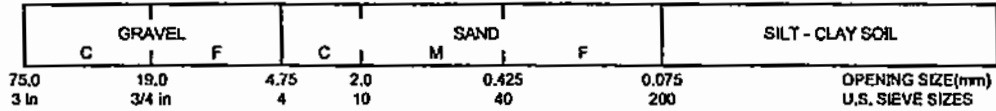
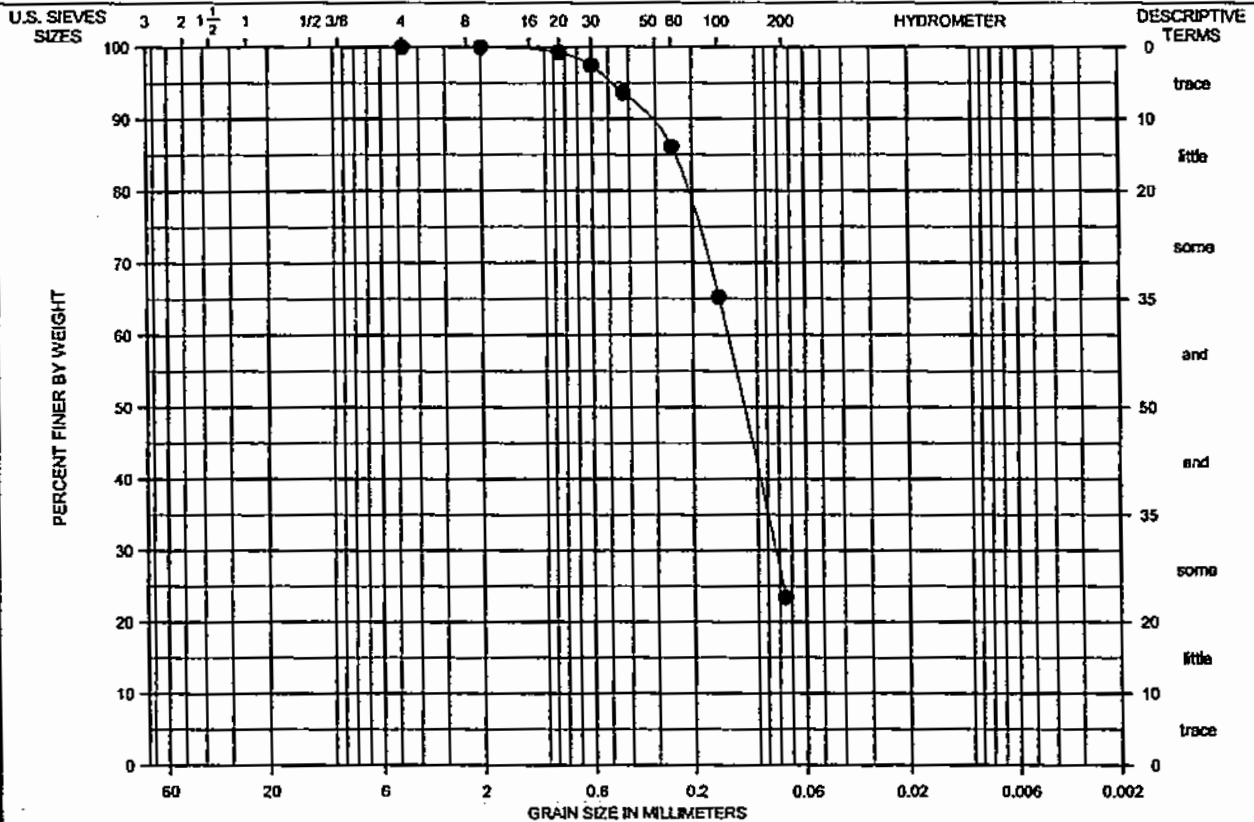
LAB NO.: 105-119



JERSEY ENERGY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-243-8800 FAX: (973)-802-1272
 AASHTO ACCREDITED
 NYD BUILDING DEPT. LICENSE #81

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-15 S-2 4'-6'



Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		4.75	0.138	0.084		0.0	76.6		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#4	100.0
#10	100.0
#20	99.3
#30	97.5
#40	93.6
#60	86.1
#100	65.2
#200	23.4

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

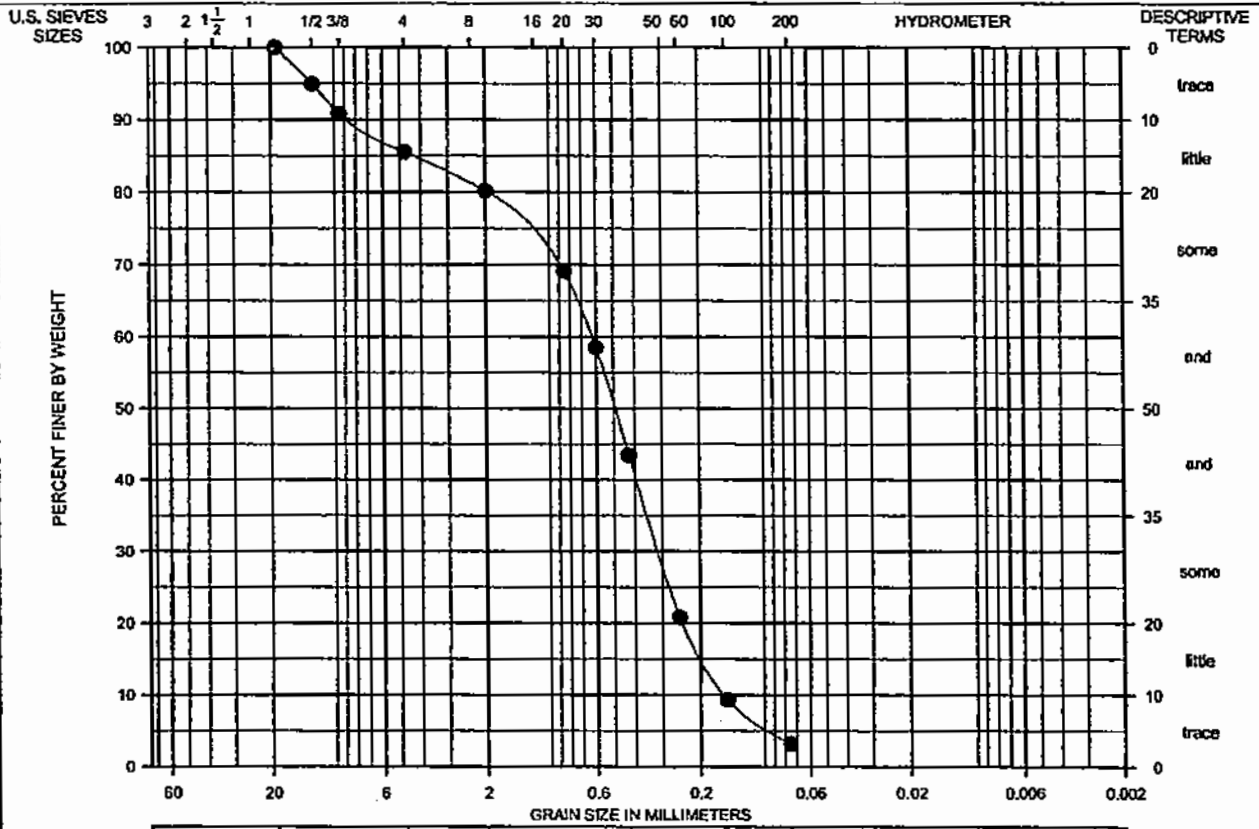
LAB NO.: 105-120



JEREMY EBBY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-802-1372
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #81

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-15 S-6 10'-12'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	OPENING SIZE(mm)
3 in	3/4 in	4	10	40	200	U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
0.99	4.07	19	0.631	0.31	0.155	14.5	82.4		

CLASSIFICATION: POORLY GRADED SAND(SP)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
3/4"	100.0
1/2"	94.9
3/8"	90.8
#4	85.5
#10	80.2
#20	69.1
#30	58.5
#40	43.4
#60	20.8
#100	9.3
#200	3.2

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

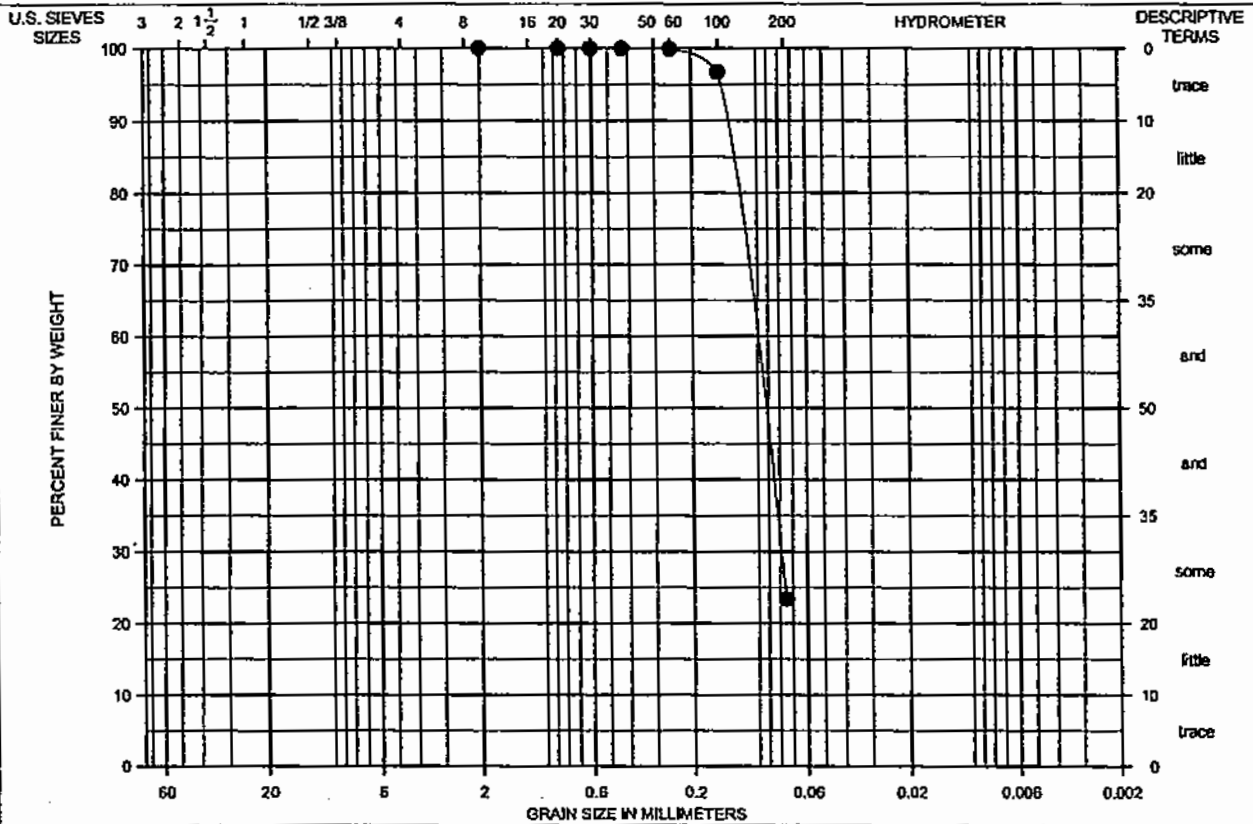
LAB NO: 105-121



JERSEY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-243-8800 FAX: 973-803-1373
 AASHTO ACCREDITED
 NYD BUILDING DEPT. LICENSE #61

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

SPECIMEN ID: TB-15 S-9 25'-27'



GRAVEL		SAND			SILT - CLAY SOIL	
C	F	C	M	F		
75.0	19.0	4.75	2.0	0.425	0.075	OPENING SIZE(mm)
3 in	3/4 in	4	10	40	200	U.S. SIEVE SIZES

Cc	Cu	D ₁₀₀	D ₆₀	D ₃₀	D ₁₀	% Gravel	% Sand	% Silt	% Clay
		2	0.106	0.08		0.0	76.6		

CLASSIFICATION: SILTY SAND(SM)

PARTICLE-SIZE ANALYSIS [ASTM D422]

Sieve No. / Size	Passing (%)
#10	100.0
#20	100.0
#30	100.0
#40	100.0
#60	99.9
#100	96.7
#200	23.4

PLASTICITY OF SOIL [ASTM D4381]

Liquid Limit:	NP
Plastic Limit:	NP
Plasticity Index:	NP

MOISTURE CONTENT [ASTM D2216]

ORGANIC CONTENT [ASTM D2974]

SPECIFIC GRAVITY [ASTM C29]

HYDROMETER ANALYSIS [ASTM D422]

LAB NO.: 105-122



JERRY ESSAY LABS, INC.
 150 WRIGHT ST. NEWARK, NJ 07114
 PH: 973-242-8800 FAX: (973)-802-1272
 AASHTO ACCREDITED
 NYO BUILDING DEPT. LICENSE #51

Client: KS Engineers, P.C.
 Project: Camden County College Science Building
 Location: Camden County
 Date: 2/24/10

APPENDIX II

APPENDIX

Limitations

A. Subsurface Information

Locations: The locations of the explorations were approximately determined by tape measurement from existing surface features shown on the plans provided to us. Elevations of the explorations were approximately determined by interpolation between contours shown on topographic plans provided to us. The locations and elevations of the explorations should be considered accurate only to the degree implied by the method used.

Interface of Strata: The stratification lines shown on the individual logs of the subsurface explorations represent the approximate boundaries between soil types, and the transitions may be gradual.

Field Logs/Final Logs: A field log was prepared for each exploration by a member of our staff. The field log contains factual information and interpretation of the soil conditions between samples. Our recommendations are based on the final logs as shown in this report and the information contained therein, and not on the field logs. The final logs represent our interpretation of the contents of the field logs, and the results of the laboratory observations and/or tests of the field samples.

Water Levels: Water level readings have been made in the explorations at times and under conditions stated on the individual logs. These data have been reviewed and interpretations made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater will occur due to variations in rainfall, temperature, and other factors.

Pollution/Contamination: Unless specifically indicated to the contrary in this report, the scope of our services was limited only to investigation and evaluation of the geotechnical engineering aspects of the site conditions, and did not include any consideration of potential site pollution or contamination resulting from the presence of chemicals, metals, radioactive elements, etc. This report offers no facts or opinions related to potential pollution/contamination of the site.

Environmental Considerations: Unless specifically indicated to the contrary in this report, this report does not address environmental considerations which may affect the site development, e.g., wetlands determinations, flora and fauna, wildlife, etc. The conclusions and recommendations of this report are not intended to supersede any environmental conditions which should be reflected in the site planning.

B. Applicability of Report

This report has been prepared in accordance with generally accepted soils and foundation engineering practices for the exclusive use of Camden County College for specific application to the design of the proposed Science Building. No other warranty, expressed or implied, is made.

This report may be referred to in the project specifications for general information purposes only, but should not be used as the technical specifications for the work, as it was prepared for design purposes exclusively.

C. Reinterpretation of Recommendations

Change in Location or Nature of Facilities: In the event that any changes in the nature, design or location of the building are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

Changed Conditions During Construction: The analyses and recommendations submitted in this report are based in part upon the data obtained from five widely-spaced test borings performed for this study, as well as 15 borings performed by others which were provided to us. The nature and extent of variations between the explorations may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the recommendations of this report.

Changes in State-of-the-Art: The conclusions and recommendations contained in this report are based upon the applicable standards of our profession at the time this report was prepared.

D. Use of Report by Prospective Bidders

This soil and foundation engineering report was prepared for the project by Melick-Tully and Associates, P.C. for design purposes and may not be sufficient to prepare an accurate bid. Contractors utilizing the information in the report should do so with the express understanding that its scope was developed to address design considerations. Prospective bidders should obtain the owner's permission to perform whatever additional explorations or data gathering they deem necessary to prepare their bid accurately.

E. Construction Observation

We recommend that Melick-Tully and Associates, P.C. be retained to provide on-site soils engineering services during the earthwork construction and foundation phases of the work. This is to observe compliance with the design concepts and to allow changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.