CDM
5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
tel: 919 787-5620
fax: 919 781-5730

Permit No.	Date	Document ID No.
28-03	**February 16, 2011**	**12971**

RECEIVED
February 15, 2011 via a mail
Solid Waste Section
Raleigh Central Office

February 14, 2011

Mr. Ming-Tai Chao
North Carolina Department of Environment and Natural Resources
Solid Waste Section
401 Oberlin Road, Ste. 150
Raleigh, North Carolina 27605

Subject: Dare County, North Carolina
Dare County C&DLF
Phase 4 Construction Quality Assurance Report
Permit No. 28-03

Dear Mr. Mussler:

On behalf of Dare County (County), Camp Dresser & McKee (CDM) is submitting the attached two (2) copies of the Construction Quality Assurance (CQA) report documentation for Phase 4 of the Dare County C&DLF for your review. Also attached are two (2) PDF digital copies on compact disk.

Please accept this letter as the certification statement required by Rule .15A NCAC 13B .0541(d)(4). The testing results and other documentation presented in the attached CQA document have been either reviewed by me or under my direct supervision, and generally reflect the installation and testing observed during construction. To the best of my knowledge, information, and belief, the construction of Phase 4 was completed in general accordance with:

- The approved CQA Plan;
- The conditions of the Permit to Construct;
- The requirements of Rule .0541; and
- Acceptable engineering practices.

CDM
5400 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
tel: 919 787-5620
fax: 919 781-5730

On March 10, 2010, the Solid Waste Section approved the Permit to Construct for Phase 4. The intent of this submittal is to receive a Permit to Operate for Phase 4.

In addition to this document, there were two conditions of the Permit to Construct that were not complete, which include:

- Alternate tire disposal other than landfilling and
- A new white goods area.

As of January 1, 2011 Dare County has contract for tire disposal and the County is currently working on relocating the white goods disposal area adjacent to the transfer station.

If you have any comments or need additional information for your review, please do not hesitate to contact me at (919) 325-3500.

Very truly yours,

W. Michael Brinchek, P.E.
Camp Dresser & McKee

NORTH CAROLINA PROFESSIONAL SEAL 028426 ENGINEER W. MICHAEL BRINCHEK

02/14/2011

cc: E. Mann, Dare County
File

Dare County Construction and Demolition Landfill
Dare County, North Carolina

Cell No. 4 Construction and Demolition Debris Landfill
Construction Quality Assurance Report

NORTH CAROLINA PROFESSIONAL SEAL 026428 ENGINEER W. MICHAEL BRINCKER

02/11/2011

February 2011

Firm Licensure: F-0412

CDM

Raleigh, North Carolina

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Section 2 Compacted Fill – Base Pad

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Appendices

***Appendix A* Compacted Fill – Base Pad**

A-1 Daily CQC Reports
A-2 CQA Summary Report
A-3 Project Meeting Minutes
A-4 Topographic Surveys
A-5 QAL Conformance Testing
A-6 QCL Conformance Testing
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Section 1
Introduction

The Dare County Construction and Demolition Debris Landfill (C&DLF) site is located west of US Highway 264 approximately 2.4 miles south of the intersection of US Highway 64/264 in Dare County, North Carolina. The site was issued a Permit to Construct (Permit No. 28-03) by the North Carolina Department of Environment and Natural Resources Solid Waste Section on March 10, 2010. Primary access to the landfill is the existing landfill entrance road and the perimeter access road located off Cub Road.

This report summarizes Construction Quality Assurance (CQA) services performed and provides complete CQA documentation for the Dare County C&DLF – Phase 4 Construction Project (Phase 4). This report contains daily field reports, test results, and discussions of the test results and procedures used during Phase 4 construction of the compacted base pad.

Phase 4 was constructed in accordance with North Carolina Solid Waste Rules, 15A NCAC 13B .0541; the Construction Contract Documents and the approved Dare County C&DLF Permit to Construct Application. The components of Phase 4 are addressed within this report as follows:

- Section 2 – Compacted Base Pad (all earthwork performed associated with the Phase 4 area)

Documentation compiled throughout the construction of the C&DLF, which append the above sections, including the Record Drawings, is provided in Appendix A of this report.

The parties involved in the construction, testing, and construction observation services and their respective roles are summarized in the following table.

Party	Role
Camp Dresser & McKee (CDM)	Engineer and Engineer Field Representative (EFR)—provided general services during construction such as coordination of project meetings, clarification of design issues, troubleshooting of field problems, review of pay requests and shop drawings, issuance of change orders, closing out of the project, and other administrative tasks.

Glover Construction Company, Inc. (Glover)	General construction contractor.
GET Solutions, Inc. (GET)	Quality Assurance Laboratory - CQA independent testing laboratory retained by CDM to conduct CQA testing of soils materials and provide additional on-site observation required to fulfill the responsibilities of the EFR.
Geotechnics, Inc	Construction Quality Control Laboratory - CQC independent testing laboratory retained by Glover to conduct conformance tests for soils.

Section 2
Compacted Fill – Base Pad

2.1 General

Glover Construction Company, Inc. (Contractor) was the general contractor responsible for all aspects of the C&DLF construction. Geotechnics, Inc. was retained by Glover Construction Company, Inc. as the Quality Control Laboratory (QCL) for the geotechnical construction aspects of the project. Camp Dresser & McKee (CDM) retained GET Solutions, Inc. (GET) to conduct Construction Quality Assurance (CQA) observation and field testing for the owner, Dare County.

Earthwork conducted for Phase 4 construction included those work activities required to provide a structurally stable foundation for the 10.3-acre Phase 4 area for both the lower three feet and upper two feet of the C&DLF base pad. Construction activities consisted of site preparation and fill placement.

Based on observations, testing, and review of the certified subgrade elevation surveys provided by the Contractor, the fill for the C&DLF base pad for Phase 4 have been completed in general accordance with the approved CQA Plan and Contract Plans and Specifications. Documentation of the general concurrence of the CQA Plan and Contract Plans is included in the CQC Daily Field Reports and Photos (**Appendix A-1**); CQA Summary Report (**Appendix A-2**) and project meeting minutes (**Appendix A-3**).

2.2 Site Preparation

2.2.1 Overview

Preparation of the site consisted of clearing and grubbing, topsoil removal, soil excavation and proof-rolling.

2.2.2 Clearing, Grubbing, and Topsoil Removal

Periodic observation of site clearing and grubbing was made and the subgrade was observed prior to fill placement to assure that the soil surfaces were generally free of organic matter and other objectionable materials.

2.2.3 Proof-rolling

Proof-rolling using a fully loaded dump truck was performed following clearing, grubbing, and topsoil removal and prior to fill placement. All subgrade areas appeared firm during proofrolling.

2.2.4 Bridge Lift Installation

Since grade following clearing and grubbing was generally at groundwater elevation, a two-foot bridge lift of relatively free draining sandy soil was placed to allow equipment to operate across the entire base pad. The upper portion of the bridge lift

was compacted and tested to allow subsequent placement of compacted fill in accordance with the Specifications.

2.3 Filling – Base Pad Construction

2.3.1 Fill Materials

The C&DLF base pad construction required approximately 101,791 cy of material – 67,093 for the lower three feet and 34,698 for the upper two feet. All fill materials were obtained from the County's borrow pit located to the south of the C&DLF.

Based on the results of the testing and surveying performed on the base bad, the constructed base pad conforms to the requirements identified in Section 6.1, Subparagraph (A) of the approved CQA Plan, which include:

- A minimum 35 degree friction angle tested in accordance with ASTM D4767;
- A soil classification of SM, SC, ML, CL, MH and CH for the upper two feet of the base pad in accordance with ASTM D2487; and
- A 5-foot-thick constructed pad as verified by topographic survey.

Topographic surveys certified project quantities are provided in **Appendix A-4**.

2.3.2 Conformance Testing

Initial QAL conformance samples for the compacted fill materials were obtained by GET. The initial QAL samples were taken and tested in accordance with Section 6.2, Subparagraph (A) of the approved CQA Plan using the following methods: Soil Classification (ASTM D2487); Sieve Analysis (ASTM D422); Atterberg Limits (ASTM 4318); Moisture-Density (ASTM D698 and D1557); and Natural Moisture (ASTM D2216) and Shear Test (ASTM D4767). A minimum of two QAL conformance test were required – one for the lower three feet of fill and one for the upper two feet of fill. The results of the QAL testing indicated that soil materials generally met the requirements for the compacted fill materials. The results of the initial conformance tests are provided in **Appendix A-5**.

Periodic conformance samples for compacted fill materials were collected by the QCL and tested in accordance with Section 6.2, Subparagraph (B) of the approved CQA plan using the following methods: Grain Size (ASTM D422); Atterberg Limits (ASTM D4318); moisture-density relationship determinations (ASTM D698); Natural Moisture (ASTM D2216); and Soil Classification (ASTM D2487). A minimum of 51 Grain Size, Atterberg Limits, Natural Moisture tests and Soil Classification and 21 Moisture/Density were required. The QCL conducted 51 Grain Size, Atterberg Limits, Natural Moisture tests and Soil Classification and 24 Moisture/Density. The results of the QCL testing indicated that soil materials generally met the requirements

for the compacted fill material. The results of the periodic conformance testing conducted by the QCL are provided in **Appendix A-6**.

2.3.3 CQC and CQA Testing

As noted above, approximately 101,791 cy of fill material were required for Phase 4 construction. In addition to the conformance samples collected and tested by the CQC and CQA tests were performed on the in-place compacted fill materials by the QAL and QCL in accordance with Section 6.4, subparagraph A of the approved CQA plan and as modified below.

The approved CQA Plan identified the QAL as the responsible entity to perform field CQA testing on the in-place compacted fill material at a frequency four tests per acre per lift. When the contract specifications were developed for the construction project, the earthwork specification required the Contractor's QCL perform CQC testing at four tests per acre per lift, which is the same frequency as required by the CQA Plan. Since this was provided in the Contractors bid, a variance request to the CQA plan was submitted to NCDENR SWS on May 7, 2010 to allow the Contractor's QCL to perform the required CQA testing as provided in Section 6.4 of the approved CQA plan provided the QAL agent monitored testing and fill placement and performed a minimum of one test per acre per lift.

Compacted fill material was monitored such that:

- In-Place Density - Compacted to a minimum of 95% of the maximum dry density of the soil as determined by ASTM D698
- Loose Lift Thickness - 8 inches maximum

Based on observations, compacted fill materials were generally placed in 8-inch-thick loose lifts; spread with CAT D6H and D8H bulldozers and compacted with a roller pulled by a farm tractor. Compacted fill placement was continuously monitored by the QCL and observed periodically by GET technicians. The materials were also checked to verify the absence of topsoil, roots, ice, and other deleterious materials. Lift thicknesses were monitored to verify that maximum thickness requirement was not exceeded.

Both QAL and QCL personnel performed CQA and CQC density and moisture content tests to evaluate the compaction (percent of maximum dry density) of the base pad soils. 450 CQC and 81 CQA Field density tests were performed at the top of the bridge lift and on every subsequent lift of fill to meet the minimum frequency of one test per 10,000 square feet of fill placed. The results of the field density/moisture tests for the QCL and QAL are included in **Appendix A-7** and **A-8** respectively.

2.3.4 Base Pad Construction – Upper Two Feet

Materials for the upper two feet of the base pad must possess the following characteristics:

- A soil classification of SM, SC, ML, CL, MH and CH in accordance with ASTM D2487; and

All QAL and QCL material testing identified herein show that base pad materials were classified as either SP or SM in accordance with ASTM D2487. Materials were segregated as encountered in the stockpile and borrow pit to ensure that no material classified as SP was placed in the upper two feet of the base pad.

Appendix A-1

Day:	**Mon.**
Date:	**4.5.10**
Log No.:	**01**
Page:	**1 of 1**

Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 12:30pm **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title
CDM	Dan Forbes

Weather Conditions:	Sunny	**Temperature:**	70 - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Forman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site and made contact with Glover and CDM reps.
- Glover continued mobilization activities.
- Glover began stripping and grubbing of vegetation within the Phase 4 limits.
- F & R began abandonment of existing monitoring wells.
- Glover began hauling Common Fill to repair and re-grade the existing haul road adjacent to inactive Cells 1 and 2.
- Custom Carolina Contractors began installation of the perimeter silt fence.
- Geotechnics Rep. departed the site.

Prepared By:	JRB	**Date:**	4.5.10	**Checked By:**	[illegible]	**Date:**	4-14-10

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Day:	**Tues.**
Date:	**4.6.10**
Log No.:	**02**
Page:	**1 of 1**

Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:45am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny	**Temperature:**	70 - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Forman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued mobilization activities.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- F & R continued abandonment of existing monitoring wells.
- Custom Carolina Contractors began installation of the perimeter silt fence.
- Glover continued placement of Common Fill inside the Phase 4 limits. Glover will place a two foot bridge lift across the entire Phase 4 footprint per Addendum No.1.
- Geotechnics Rep. performed CQC Moisture / Density testing by Nuclear and Sandcone methods on placed and compacted Common Fill Bridge Lift material (see CMFDR-01 for results).
- Geotechnics Rep. departed the site.

Prepared By:	JRB	**Date:**	4.6.10	**Checked By:**	MM	**Date:**	4-14-10

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Day:	**Wed.**
Date:	**4.7.10**
Log No.:	**03**
Page:	**1 of 1**

Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:45am **Departed:** 6:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny, Windy	**Temperature:**	70 - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Forman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued mobilization activities.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- F & R completed abandonment of existing monitoring wells.
- Custom Carolina Contractors completed installation of the perimeter silt fence.
- Glover continued placement of Common Fill Bridge Lift inside the Phase 4 limits.
- Geotechnics Rep. performed CQC Moisture / Density testing by Nuclear and Sandcone methods on placed and compacted Common Fill Bridge Lift material (see CMFDR-01 for results).
- A change in Common Fill Maximum Dry Density was noticed during one-point proctor testing and a Bulk sample of Common Fill (CF-04) was obtained.
- Geotechnics Rep. departed the site.

Prepared By:	JRB	**Date:**	4.7.10	**Checked By:**	[illegible]	**Date:**	4-14-10

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Day:	**Thurs.**
Date:	**4.8.10**
Log No.:	**04**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 7:00am **Departed:** 6:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny, Windy	**Temperature:**	60 - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Forman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued mobilization activities.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover continued placement of Common Fill inside the Phase 4 limits.
- Geotechnics Rep. performed CQC Moisture / Density testing by Nuclear and Sandcone methods on placed and compacted Common Fill Bridge Lift material (see CMFDR-01 for results).
- Geotechnics Rep. departed the site.

Prepared By:	JRB	**Date:**	4.8.10	**Checked By:**	MWS	**Date:**	4-15-10

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Day:	**Fri.**
Date:	**4.9.10**
Log No.:	**05**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 8:30am
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Overcast, Rain	**Temperature:**	60 - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Forman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover continued placement of Common Fill inside the Phase 4 limits.
- Glover terminated work at approx. 8:00am due to wet site conditions from adverse weather (rain). Approximately .8" of rain accumulated in the onsite rain gauge.
- Geotechnics Rep. departed the site.

Prepared By:	JRB	**Date:**	4.9.10	**Checked By:**	MM	**Date:**	4-15-10

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Day:	**Sat.**
Date:	**4.10.10**
Log No.:	**06**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** NA **Departed:** NA
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny, Windy **Temperature:** 70 - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 2 Operators / Laborers

Description of Daily Activities & Events

- Glover continued stripping and grubbing operations.
- Geotechnics Rep. was not on site today.

Prepared By: JRB **Date:** 4.10.10 **Checked By:** MMS **Date:** 4-15-10

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Day:	**Mon.**
Date:	**4.12.10**
Log No.:	**07**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 10:00am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 70 - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.12.10 **Checked By:** [illegible] **Date:** 4-26-10

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Day:	**Tues.**
Date:	**4.13.10**
Log No.:	**08**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny	**Temperature:**	70 - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-01 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.13.10 **Checked By:** MMT **Date:** 4-26-10

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Day:	**Wed.**
Date:	**4.14.10**
Log No.:	**09**
Page:	**1 of 1**

geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Overcast, AM Rain **Temperature:** 50's - 60's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover resumed placement and compaction of Common Fill material at approx. 12:30pm. Common Fill placement was delayed due to wet site conditions from AM adverse weather (~ .3" of rain).
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-01 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.14.10 **Checked By:** MPS **Date:** 4-26-10

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Day:	**Thurs.**
Date:	**4.15.10**
Log No.:	**10**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 7:00am **Departed:** 5:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny	**Temperature:**	60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-01 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.15.10 **Checked By:** MMB **Date:** 4-26-10

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Day:	**Fri.**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 7:00am **Departed:** 10:00am
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny	**Temperature:**	60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 Dozers, 5 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 8 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-01 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.16.10 **Checked By:** MPS **Date:** 4-26-10

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Day:	**Mon.**
Date:	**4.19.10**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 10:00am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Partly Cloudy **Temperature:** 60 - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued stripping and grubbing of vegetation within the Phase 4 limits.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.19.10 **Checked By:** [illegible] **Date:** 5-6-10

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Day:	**Tues.**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 7:00am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Partly Cloudy **Temperature:** 60 - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-02 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.20.10 **Checked By:** RWS **Date:** 5-6-10

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Day:	**Wed.**
Date:	**4.21.10**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:45am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Overcast, Light Rain **Temperature:** 60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-02 for results).
- Dare Co. Subcontractor for crushing and stockpiling concrete debris from Phase 4 limits mobilized
- Glover has completed grubbing / stripping operations and bridge lift placement up to the concrete debris area.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.21.10 **Checked By:** MPS **Date:** 5-6-10

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Day:	**Thurs.**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-02 for results).
- Glover began fine grading the subgrade of the southern half of Phase 4.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.22.10 **Checked By:** MM **Date:** 5-6-10

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Day:	**Fri.**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 12:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title
CDM	Mike Brinchek, P.E.

Weather Conditions:	Sunny	**Temperature:**	60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement and compaction of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-02 for results).
- Glover continued fine grading the subgrade of the southern half of Phase 4.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.23.10 **Checked By:** MMS **Date:** 5-6-10

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Day:	**Mon.**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** NA **Departed:** NA
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Partly Cloudy, Windy **Temperature:** 60 - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Glover continued fine grading operations.
- Dare Co. subcontractor began crushing operations of existing concrete debris pile.
- Geotechnics Rep. was not on site today.

Prepared By: JRB **Date:** 4.26.10 **Checked By:** [illegible] **Date:** 5-14-2010

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Day:	**Tues.**
Date:	**4.27.10**
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INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 9:30am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny, Windy **Temperature:** 60 - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-03 for results).
- Survey Solutions was on site to perform survey of graded subgrade.
- Glover began placement of upper two feet of Phase 4 subgrade. Subgrade material has a high moisture content and is highly silty. Further borrow source evaluation is needed as the remaining soil material could create workability issues.
- Dare Co. subcontractor continued crushing operations of existing concrete debris pile.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.27.10 **Checked By:** MPS **Date:** 5-14-2010

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Day:	**Wed.**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:45am **Departed:** 6:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title
CDM	Mike Brinchek, P.E.

Weather Conditions: Sunny, Windy **Temperature:** 60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-03 for results).
- Glover began installation of 36" Corrugated HDPE Canal Crossing Pipes.
- Dare Co. subcontractor continued crushing operations of existing concrete debris pile.
- Glover began backfilling of canal crossing pipes.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.28.10 **Checked By:** MAPS **Date:** 5-14-2010

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Day:	**Thurs.**
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INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-03 for results).
- Glover began grading the south entrance road and canal crossing.
- Dare Co. subcontractor continued crushing operations of existing concrete debris pile.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.29.10 **Checked By:** MBPS **Date:** 5-14-2010

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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 8:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued grading the south entrance road and canal crossing.
- Dare Co. subcontractor continued crushing operations of existing concrete debris pile.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 4.30.10 **Checked By:** RMB **Date:** 5-14-2010

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Day:	**Wed.**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 1:00pm **Departed:** 5:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title
CDM	Mike Brinchek. P.E.

Weather Conditions: Sunny **Temperature:** 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent

Description of Daily Activities & Events

- Geotechnics Rep. arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing on the previously placed and compacted Common Fill for the South Access Road (see CFFDR-04 for results).
- CDM, Dare. Co., Glover and Geotechnics Reps. met at the Dare Co. C&D Landfill to discuss options for expanding the existing Borrow Pit in order to obtain enough common fill material to complete construction of Phase No. 4.
- Samples were obtained for the proposed expansion area for Laboratory Classification testing to determine if material is suitable for the upper two feet of the Phase No. 4 pad.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 5.19.10 **Checked By:** MMS **Date:** 6-7-2010

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Day:	**Thurs.**
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INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** NA **Departed:** NA
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 60 - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Glover Construction resumed placement of the upper two feet of the Phase 4 C&D Disposal Area.
- Geotechnics Rep. was not on site today.

Prepared By: JRB **Date:** 5.20.10 **Checked By:** MJM **Date:** 6-2-2010

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Day:	**Fri.**
Date:	**5.21.10**
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INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 9:00am **Departed:** 7:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny, Windy **Temperature:** 60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement of upper Common Fill materail for the Phase 4 C&D Disposal Area.
- Geotechncis Rep. observed that Common Fill materail was to wet of optimum to obtain compaction requirments. Glover was instructed to dry materail by discing before compaction.
- Geotechncis Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill materail (see CFFDR-04 for results).
- Geotechncis Rep. obtained bulk samples for Laboratory Proctor and Classification testing.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 5.21.10 **Checked By:** MMS **Date:** 6-2-2010

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Day:	**Sat.**
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INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:00am **Departed:** 1:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny	**Temperature:**	60's - 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement of upper Common Fill materail for the Phase 4 C&D Disposal Area.
- Glover continued drying operations of Common Fill materail.
- Geotechncis Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill materail (see CFFDR-04 for results).
- Geotechncis Rep. obtained bulk samples for Laboratory Proctor and Classification testing.
- Geotechnics Rep. departed the site.

Prepared By:	JRB	**Date:**	5.22.10	**Checked By:**	MCS	**Date:**	6-7-2010

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Day:	**Mon.**
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INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** NA **Departed:** NA
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Overcast **Temperature:** 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent

Description of Daily Activities & Events

- Glover continued drying operations of previously placed Common Fill material.
- Glover began hauling and placement of ABC base course for the canal crossing entrance road.
- Glover resumed upper Common Fill placement.
- Geotechnics Rep. was not on site today.

Prepared By: JRB **Date:** 5.24.10 **Checked By:** MBS **Date:** 6-9-2010

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Day:	**Tues.**
Date:	**5.25.10**
Log No.:	**27**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 9:30am **Departed:** 6:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Overcast **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement of upper Common Fill material for the Phase 4 C&D Disposal Area.
- Glover continued drying operations of Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-05 for results).
- Geotechnics Rep. obtained bulk samples for Laboratory Proctor and Classification testing.
- GET Rep. was onsite to perform CQA Moisture / Density on previously placed Common Fill material.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 5.25.10 **Checked By:** MAS **Date:** 6-9-2010

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Day:	**Wed.**
Date:	**5.26.10**
Log No.:	**28**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 6:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny, Windy **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover resumed placement of the Common Fill Bridge Lift in acres 15 and 16.
- Glover continued drying operations of previously placed upper Common Fill material.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 5.26.10 **Checked By:** RMB **Date:** 6-9-2010

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Day:	**Thurs.**
Date:	**5.27.10**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 6:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement of the Common Fill Bridge Lift in acres 15 and 16.
- Glover continued drying operations of previously placed upper Common Fill material.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 5.27.10 **Checked By:** MMS **Date:** 6-9-2010

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Day:	**Fri.**
Date:	**5.28.10**
Log No.:	**30**
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Geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 9:00am
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued placement of the Common Fill Bridge Lift in acres 15 and 16.
- Geotechncis Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-05 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 5.28.10 **Checked By:** MMS **Date:** 6-9-2010

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Day:	**Tues.**
Date:	**6.1.10**
Log No.:	**31**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 9:30am **Departed:** 6:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent

Description of Daily Activities & Events

- Geotechnics Rep. arrived on site.
- Glover continued placement of Common Fill in acres 15 and 16.
- Glover performed drying operations of previously placed upper Common Fill.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.1.10 **Checked By:** MMS **Date:** 6-25-10

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Day:	**Wed.**
Date:	**6.2.10**
Log No.:	**32**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 6:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny, PM Rain **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued drying operations of previously placed upper Common Fill material.
- Geotechnics Rep. performed CQC Moisture / Density testing of Common Fill in acres 15 and 16 (see CFFDR-06 for results).
- Glover fine graded the remaining acres of the Phase 4 subgrade.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.2.10 **Checked By:** MMS **Date:** 6-28-10

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Day:	**Thurs.**
Date:	**6.3.10**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Overcast **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued drying operations of previously placed upper Common Fill material.
- Glover placed upper Common Fill in acres 15 and 16.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.3.10 **Checked By:** MOJ **Date:** 6-28-10

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Day:	**Fri.**
Date:	**6.4.10**
Log No.:	**34**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 1:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 70's - 80's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Glover continued drying operations of previously placed upper Common Fill material.
- Geotechnics Rep. performed CQC testing of previously placed upper Common Fill material (see CFFDR-06 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.4.10 **Checked By:** MBJ **Date:** 6-28-10

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Day:	**Mon.**
Date:	**6.7.10**
Log No.:	**35**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** NA **Departed:** NA
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Overcast **Temperature:** 70's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent

Description of Daily Activities & Events

- Geotechnics Rep. arrived on site.
- Glover made no progress due to wet site conditions from adverse weather over the weekend. Approximately 2.5" of rain has accumulated.
- Glover performed drying operations of previously placed upper Common Fill material.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.7.10 **Checked By:** MBS **Date:** 6-29-10

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Day:	**Thurs.**
Date:	**6.10.10**
Log No.:	**36**
Page:	**1 of 1**

geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 9:30am **Departed:** 6:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 80's - 90's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-07 for results).
- Glover resumed upper Common Fill material placement.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.10.10 **Checked By:** RPS **Date:** 6-29-10

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Day:	**Fri.**
Date:	**6.11.10**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 6:00pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny, Windy **Temperature:** 80's - 90's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-07 for results).
- Glover continued upper Common Fill material placement.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.11.10 **Checked By:** MMS **Date:** 6-29-10

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Day:	**Sat.**
Date:	**6.12.10**
Log No.:	**38**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 9:30am
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny	**Temperature:**	80's - 90's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-07 for results).
- Glover began fine grading the Phase 4 pad.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.12.10 **Checked By:** MPS **Date:** 6-29-10

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Day:	**Mon.**
Date:	**6.14.10**
Log No.:	**39**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 12:00pm **Departed:** 5:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 80's - 90's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent

Description of Daily Activities & Events

- Geotechnics Rep. arrived on site.
- Glover continued fine grading operations.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-08 for results).
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.14.10 **Checked By:** [illegible] **Date:** 6-24-30

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Day:	**Tues.**
Date:	**6.15.10**
Log No.:	**40**
Page:	**1 of 1**

geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 7:30pm
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions: Sunny **Temperature:** 80's - 90's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. arrived on site.
- Glover continued fine grading operations.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted Common Fill material (see CFFDR-08 for results).
- Survey Solutions was on site to survey final grade.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.15.10 **Checked By:** MMB **Date:** 6-29-10

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Day:	**Wed.**
Date:	**6.16.10**
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geotechnics
INTEGRITY IN TESTING

Daily Field Report

Project Name:	Dare Co. C&D LF - Phase No. 4	**Project No.:**	2010-652
Client Name:	Glover Construction	**Client Contact:**	Ruben Williams
Site Location:	Manteo, NC	**Time on Site:**	**Arrived:** 6:30am **Departed:** 7:30am
General Contractor:	Glover Construction	**Superintendent:**	Ruben Williams

Other Firms / Sub-Contractor Represented On Site

Firm / Sub-Contractor	Representative's Name and Title

Weather Conditions:	Sunny	**Temperature:**	80's - 90's

Contractor's Equipment: 1 CAT 345 Trackhoe, 1 CAT 325 Trackhoe, 2 CAT D6 & 1 D5 Dozers, 7 Volvo Articulated Dump trucks, 1 CAT 683E Vibratory Smoothdrum Roller, 1 CAT 938G Frontend Loader, 1 New Holland TJ 450 Farm Tractor with Smoothdrum Roller and 1 Water Truck

Contractor's Personnel: 1 Superintendent, 1 Foreman, 9 Operators / Laborers and 1 Mechanic

Description of Daily Activities & Events

- Geotechnics Rep. Jacob R. Buda arrived on site.
- Geotechnics Rep. performed CQC Moisture / Density testing of placed and compacted ABC Base Course material.
- Geotechnics Rep. departed the site.

Prepared By: JRB **Date:** 6.16.10 **Checked By:** MBS **Date:** 6-29-10

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Appendix A-2

July 2, 2010

TO: **CDM**
400 Glenwood Avenue
Suite 300
Raleigh, NC 27612

Attn: Mr. Michael Brinchek, P.E.

RE: Report of Quality Assurance Construction Materials Testing Services
Dare County Landfill – Phase (Cell) 4
Dare County, North Carolina
GET Project No: EC10-166T

Dear Mr. Brinchek:

As requested and as coordinated by the on-site representative of Glover Construction, a representative of **GET Solutions, Inc.** visited the above stated site between the dates of April 27, 2010 and June 21, 2010. The purpose of our site visits was to perform construction materials testing services in accordance with the Quality Assurance (QA) testing program outlined in the project specifications for the proposed expansion of the existing facility. These evaluations were performed by completing the following tasks:

- Specifications Section 6.2.A: Collected bulk soil samples and returned them to our laboratory for Standard Proctor (ASTM D 698), Classification testing (including moisture content, sieve/gradation, and Atterberg Limits testing), and three (3) point Triaxial Shear testing. These samples included on-site excavated soils for use as select fill for the construction areas.

- Specifications Section 6.2.B: Collected bulk soil samples and returning them to our laboratory for Standard Proctor (ASTM D 698) and Classification testing (including moisture content, sieve/gradation, and Atterberg Limits testing). These samples included on-site excavated soils for use as select fill for the construction areas.

- Specifications Section 6.4.1A: Performed field density tests in accordance with (ASTM D 6938) to verify degree of compaction for the fill soils used for establishing the design grades for the project site. As required by the project specifications, the field compaction testing services were to be performed at a frequency of at least four (4) tests per acre for each lift of fill, which would have resulted in at least 53 tests per lift of fill. Subsequently, as indicated by CDM, it was approved to decrease this frequency to one (1) test per acre for each lift of fill.

- Specifications Section 6.4.1.A: Obtained bulk soil samples from each compaction test location and performed laboratory moisture content testing (ASTM D2216). As required by the project specifications, the laboratory moisture content testing was to be performed at a frequency of at least four (4) tests per acre for each lift of fill, which would have resulted in at least 53 tests per lift of fill. Subsequently, as indicated by CDM, it was approved to decrease this frequency to one (1) test per acre for each lift of fill.

Bulk Soil Samples

During our site visits between the dates of April 27 and May 25, 2010, a total of six (6) bulk soil samples were collected by the **G E T Solutions, Inc.** representative from the project site and returned to our laboratory for Standard Proctor, Natural Moisture, and –#200 Sieve Wash testing and analysis. Additionally, a total of four (4) of the bulk soil samples were subjected to 3-point Triaxial Shear testing procedures. Each of the samples were collected from the in-place on-site excavated soils utilized as select fill to establish the design grade elevations for the landfill expansion. Based on our laboratory test results from Proctor No. 1 through Proctor No. 6, the on-site excavated soils were classified to consist of Tan or Gray poorly graded fine to medium SAND (SP) or Silty fine to medium SAND (SM) with varying amounts of silt and/or clay.

Additionally, a total of eighty one (81) bulk soil samples were collected by the **G E T Solutions, Inc.** representative from the compaction test locations (1 per compaction test location) of the in place select fill and returned to our laboratory for Natural Moisture content testing. These laboratory test results indicated an in-place moisture content generally ranging from 6.7% to 24.6%. As necessary to provide stable conditions and to prepare the filled areas for compaction, the contractor scarified each lift of in place fill materials and allowed the materials to air dry.

The results of these laboratory tests as well as the laboratory test results discussed above are summarized on the “Comprehensive Laboratory Test Results” sheets, included with this report. Additionally, information regarding the laboratory testing procedures is also provided on the attached “Moisture Density Relationship (Proctor Curve)” sheets, “Particle Size Distribution Report” sheets, and the “Triaxial Shear Test Report” sheets.

Field Density (Compaction) Testing:

During our site visits between the dates of April 29, 2010 and June 17, 2010, field density (compaction) testing was performed on the in-place select fill materials utilized to establish the design grade elevations for the proposed landfill expansion (Cell 4). This was accomplished by performing field density testing at the established grade elevations during our site visits throughout the proposed cell area. Periodically, it was indicated by the contractor that fill materials placed prior to our arrival ranged in thickness from 1 to 3 feet. Therefore, in order to observe the compaction of the deeper select fill soils, compaction testing procedures were also performed within the base of test pit excavations ranging from 1 to 3 feet deep, which were excavated at approximate 12-inch intervals.

As indicated in the project specifications, the select fill materials placed within the cell area were required to be compacted to at least 95% of the Standard Proctor maximum dry density (ASTM D 698). The results of our field and laboratory testing procedures indicated that the in place materials were compacted to at least 95% of the Standard Proctor (ASTM D698) maximum dry density. The results and locations of our field testing procedures are identified on the attached "Compaction Test Report" sheets.

We appreciate the opportunity to offer our services to you, and trust that you will call our Elizabeth City office with any questions that you may have.

Respectfully Submitted,
G E T Solutions, Inc.

Joshua E. Treakle
Project Manager

Gerald W. Stalls Jr., P.E.
Senior Project Engineer
NC Lic. #034336

Attachments: Comprehensive Laboratory Test Results
Moisture Density Relationship (Proctor Curve)
Particle Size Distribution Report(s)
Triaxial Shear Test Report(s)
Compaction Test Report(s)

NORTH CAROLINA PROFESSIONAL SEAL 034336 ENGINEER GERALD W. STALLS, JR.

Appendix A-3

DARE COUNTY
C&D LANDFILL
CELL 4 CONSTRUCTION PROJECT
PROJECT NO. 17952-56960

CONSTRUCTION PROGRESS MEETING NO. 1
TUESDAY, APRIL 27
MINUTES

1. Minutes of Previous Meeting (Pre-construction Meeting):
   - Pre-construction meeting minutes have been distributed.

2. Report on Work Performed Since Last Meeting:
   - Mobilized equipment.
   - Began removing vegetative cover.
   - Began placement and compaction of fill material.
   - Subcontractor for concrete rubble mobilized.

3. Forecast of Work to be Performed in the Next 30 Days:
   - Complete removing vegetative cover.
   - Complete bridge lift installation and continue base pad construction.

4. Field Observations, Problems, and Conflicts:
   - Glover needs concrete material crushed and removed from Cell 4 limits.

5. Submittals:
   - Submittals are up-to-date.

6. Schedule:
   - Base pad construction scheduled for completion by end of June

7. Change Order Status:
   - No Change Orders have been submitted.

8. Complaint Resolution Status:
   - There have been no complaints received.

9. Other Business
   - No other business

DARE COUNTY
C&D LANDFILL
CELL 4 CONSTRUCTION PROJECT
PROJECT NO. 17952-56960

CONSTRUCTION PROGRESS MEETING NO. 2
WEDNESDAY, MAY 19
NOTES

1. Minutes of Previous Meeting:
   - No comments

2. Report on Work Performed Since Last Meeting:
   - Lower 3 feet of the southern area of the base pad constructed and surveyed.
   - Entrance road and canal crossing completed.
   - Construction of upper two feet of base pad started.

3. Forecast of Work to be Performed in the Next 30 Days:
   - Complete base pad.

4. Field Observations, Problems, and Conflicts:
   - Acceptable borrow material is limited. Sufficient material is left for the remaining lower three feet of base pad and roads, but there is not enough material to complete the upper two feet of base pad construction.
   - Project team identified additional material in the stockpile area to be used for the upper two feet of the base pad.

5. Submittals:
   - Submittals are up-to-date.

6. Schedule:
   - Base pad construction on schedule for completion by end of June

7. Change Order Status:
   - Glover to provide CDM with Change Order for additional base pad material.

8. Complaint Resolution Status:
   - There have been no complaints received.

9. Other Business
   - No other business

Appendix A-4

Dare County Construction and Demolition Landfill
Dare County, North Carolina

Cell No. 4 Construction and Demolition Debris Landfill
Construction Quality Assurance Report

NORTH CAROLINA PROFESSIONAL SEAL 026428 ENGINEER W. MICHAEL BRINCKER

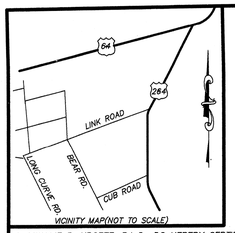
02/11/2011

February 2011

Firm Licensure: F-0412

CDM

Raleigh, North Carolina



VICINITY MAP(NOT TO SCALE)

I, DWAYNE R. KROEZE, P.L.S., DO HEREBY CERTIFY THAT THE AS-BUILT ELEVATIONS SHOWN ON THIS MAP WERE OBTAINED BY FIELD SURVEYS CONDUCTED UNDER MY SUPERVISION AND ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

6/28/2010

DWAYNE R. KROEZE, P.L.S. L-3911 DATE

NORTH CAROLINA PROFESSIONAL SEAL L-3911 LAND SURVEYOR DWAYNE R. KROEZE

SURVEY CONTROL REFERENCE

THE FOLLOWING N.C. GRID MONUMENT WERE USED TO ESTABLISH SURVEY CONTROL ON THE SITE. THE COORDINATES ARE BASED ON NAD 83 AND THE VERTICAL DATUM IS NAVD 88.

TWO PINES
(BENCHMARK FOR THE SITE)
N=780987.91
E=2947699.81
ELEV.=1.35

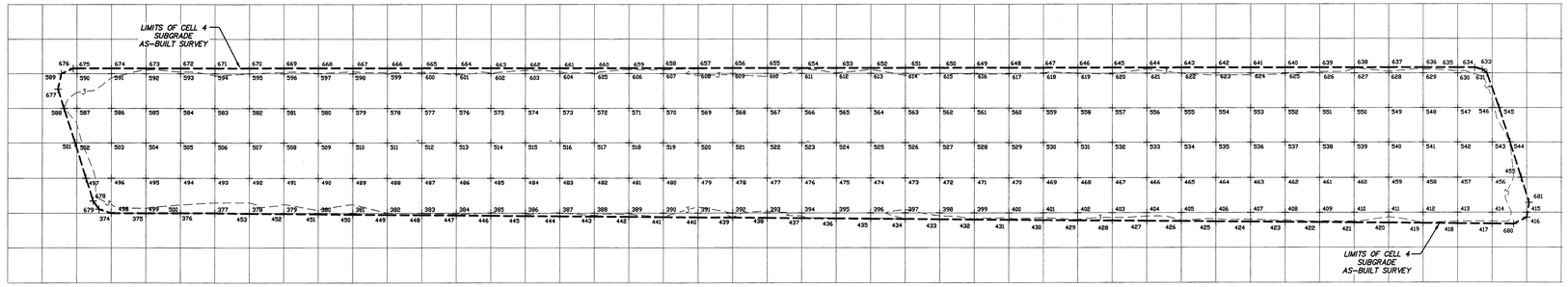
TELEPHONE
N=784290.29
E=2950250.55

CONSTRUCTION PLAN REFERENCE

PLANS TITLED "DARE COUNTY-CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL CELL NO 4", PREPARED BY CDM, DATED DECEMBER 2009.

NOTES

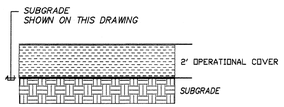
1. SEE SHEET 2 FOR GRID REFERENCE POINT COORDINATES AND ELEVATIONS.



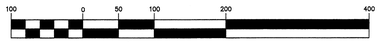
LEGEND

1378 GRID REFERENCE NUMBER
—100— INDEX CONTOUR
— — INTERMEDIATE CONTOUR

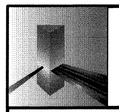
CELL CROSS SECTION DETAIL



GRAPHIC SCALE



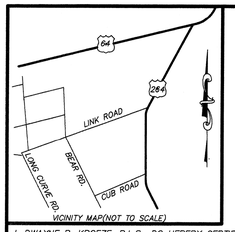
(IN FEET)
1 inch = 100 ft.



SURVEYING SOLUTIONS, P.C. C-1948
5401 HILLSBOROUGH ST. P.O. BOX 33324
RALEIGH, NC 27636
(919)-854-4833

AS-BUILT SURVEY OF THE
SUBGRADE
DARE COUNTY CONSTRUCTION AND DEMOLITION LANDFILL
CELL 4

DRAWN BY: DK	CHECKED BY: JT	SURVEYED BY: DK, JT	CROATAN TOWNSHIP	DARE COUNTY	NORTH CAROLINA
SHEET 1 OF 2			SCALE 1"=100'	SURVEY DATE: JUNE 2, 2010	PROJECT 10-020



I, DWAYNE R. KROEZE, P.L.S., DO HEREBY CERTIFY THAT THE AS-BUILT ELEVATIONS SHOWN ON THIS MAP WERE OBTAINED BY FIELD SURVEYS CONDUCTED UNDER MY SUPERVISION AND ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DWAYNE R. KROEZE, P.L.S. L-3911 — DATE 6/08/2010

NORTH CAROLINA PROFESSIONAL SEAL L-3911 LAND SURVEYOR DWAYNE R. KROEZE

SURVEY CONTROL REFERENCE

THE FOLLOWING N.C. GRID MONUMENT WERE USED TO ESTABLISH SURVEY CONTROL ON THE SITE. THE COORDINATES ARE BASED ON NAD 83 AND THE VERTICAL DATUM IS NAVD 88.

TWO PINES
(BENCHMARK FOR THE SITE)
N=780587.91
E=2947699.81
ELEV.=1.35

TELEPHONE
N=784290.29
E=2950250.55

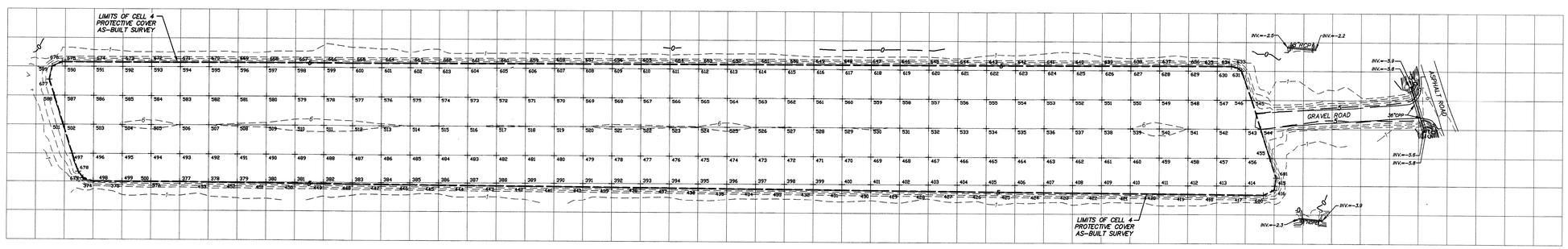
CONSTRUCTION PLAN REFERENCE

PLANS TITLED "DARE COUNTY-CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL CELL NO 4", PREPARED BY CDM, DATED DECEMBER 2009.

GRID REFERENCE NUMBER	NORTHING	EASTING	DESIGN ELEVATION	AS-BUILT SUBGRADE ELEVATION	DIFFERENCE FROM DESIGN ELEVATION	AS-BUILT PROTECTIVE COVER ELEVATION	DIFFERENCE FROM DESIGN ELEVATION
382	774474.79	2942532.98	5.02	3.00	-2.02	5.03	0.01
383	774425.40	2942540.77	5.03	3.01	-2.01	5.08	0.05
384	774376.01	2942548.56	5.03	3.02	-2.02	5.06	0.03
385	774326.62	2942556.36	5.03	2.99	-2.04	5.08	0.04
386	774277.23	2942564.15	5.04	3.01	-2.03	5.07	0.03
387	774227.84	2942571.94	5.04	3.00	-2.05	5.08	0.04
388	774178.45	2942579.74	5.05	3.02	-2.02	5.10	0.05
389	774129.06	2942587.53	5.05	3.04	-2.00	5.12	0.07
390	774079.68	2942595.32	5.05	3.05	-2.01	5.15	0.10
391	774030.29	2942603.12	5.06	2.91	-2.16	5.09	0.04
392	773980.90	2942610.91	5.06	3.01	-2.05	5.10	0.04
393	773931.51	2942618.71	5.06	2.98	-2.09	5.16	0.09
394	773882.12	2942626.50	5.07	3.01	-2.06	5.12	0.05
395	773832.73	2942634.29	5.07	3.06	-2.01	5.20	0.13
396	773783.34	2942642.09	5.07	3.04	-2.03	5.18	0.11
397	773733.95	2942649.88	5.08	2.95	-2.13	5.18	0.10
398	773684.56	2942657.67	5.08	3.06	-2.02	5.12	0.04
399	773635.18	2942665.47	5.08	3.08	-2.00	5.15	0.07
400	773585.79	2942673.26	5.09	3.03	-2.06	5.12	0.03
401	773536.40	2942681.06	5.09	3.09	-2.00	5.16	0.07
402	773487.01	2942688.85	5.10	3.07	-2.02	5.13	0.03
403	773437.62	2942696.64	5.10	3.07	-2.02	5.12	0.02
404	773388.23	2942704.44	5.10	3.07	-2.03	5.12	0.02
405	773338.84	2942712.23	5.10	3.07	-2.03	5.12	0.02
406	773289.45	2942720.02	5.11	3.07	-2.03	5.12	0.01
407	773240.07	2942727.82	5.11	3.11	-2.00	5.11	0.00
408	773190.68	2942735.61	5.11	3.08	-2.03	5.16	0.05
409	773141.29	2942743.40	5.12	3.10	-2.02	5.17	0.05
410	773091.90	2942751.20	5.12	3.06	-2.06	5.16	0.03
411	773042.51	2942758.99	5.12	3.07	-2.06	5.19	0.06
412	772993.12	2942766.79	5.13	3.13	-2.00	5.16	0.03
413	772943.73	2942774.58	5.13	3.13	-2.00	5.14	0.00
414	772894.34	2942782.37	5.13	3.11	-2.02	5.25	0.12
415	772844.95	2942790.17	5.01	2.91	-2.10	5.06	0.05
416	772843.89	2942783.43	5.00	2.87	-2.13	5.01	0.01
417	772891.89	2942768.81	5.00	2.97	-2.03	5.05	0.05
418	772941.34	2942759.42	5.00	2.97	-2.03	5.00	0.00
419	772990.79	2942752.05	5.00	2.99	-2.01	5.01	0.01
420	773040.25	2942744.67	5.00	2.91	-2.09	5.03	0.03
421	773089.71	2942737.31	5.00	2.99	-2.01	5.00	0.00
422	773139.17	2942729.91	5.00	2.99	-2.01	5.00	0.00
423	773188.61	2942722.55	5.00	2.98	-2.02	5.00	0.00
424	773238.07	2942715.17	5.00	2.96	-2.04	5.01	0.01
425	773287.53	2942707.77	5.00	2.97	-2.03	5.02	0.02
426	773336.96	2942700.39	5.00	2.99	-2.01	5.00	0.00
427	773386.43	2942693.04	5.00	2.90	-2.10	5.00	0.00
428	773435.96	2942685.62	5.00	2.95	-2.05	5.00	0.00
429	773485.34	2942678.25	5.00	2.99	-2.01	5.01	0.01
430	773534.79	2942670.87	5.00	2.95	-2.05	5.00	0.00
431	773584.25	2942663.53	5.00	2.99	-2.01	5.02	0.02
432	773633.71	2942656.16	5.00	2.99	-2.01	5.02	0.02
433	773683.11	2942648.74	5.00	2.93	-2.07	5.01	0.01
434	773732.62	2942641.43	5.00	3.00	-2.00	5.03	0.03
435	773782.09	2942633.97	5.00	2.99	-2.01	5.08	0.08
436	773831.61	2942626.60	5.00	3.00	-2.00	5.05	0.05
437	773880.97	2942618.21	5.00	2.99	-2.01	5.04	0.04
438	773930.42	2942611.83	5.00	2.98	-2.02	5.02	0.02
439	773979.88	2942604.45	5.00	3.00	-2.00	5.03	0.03
440	774029.33	2942597.07	5.00	2.97	-2.03	5.08	0.08
441	774078.79	2942589.69	5.00	2.99	-2.01	5.11	0.11
442	774128.24	2942582.31	5.00	2.91	-2.09	5.05	0.05
443	774177.69	2942574.93	5.00	2.99	-2.01	5.08	0.08
444	774227.15	2942567.55	5.00	2.97	-2.03	5.03	0.03
445	774276.60	2942560.17	5.00	2.99	-2.01	5.09	0.09
446	774326.06	2942552.79	5.00	2.85	-2.15	5.09	0.09
447	774375.51	2942545.41	5.00	2.99	-2.02	5.09	0.09
448	774424.97	2942538.03	5.00	2.96	-2.04	5.06	0.06
449	774474.42	2942530.65	5.00	2.89	-2.11	5.01	0.01
455	772860.59	2942838.32	5.00	2.86	-2.14	5.00	0.00
456	772902.14	2942831.76	5.40	3.38	-2.02	5.43	0.03
457	772951.53	2942823.97	5.56	3.54	-2.01	5.58	0.02
458	773000.91	2942816.17	5.55	3.53	-2.02	5.60	0.05
459	773050.30	2942808.38	5.55	3.55	-2.00	5.56	0.01
460	773099.69	2942800.59	5.55	3.54	-2.01	5.60	0.05
461	773149.08	2942792.79	5.55	3.51	-2.04	5.61	0.06
462	773198.47	2942786.00	5.55	3.45	-2.10	5.57	0.03
463	773247.86	2942777.21	5.55	3.53	-2.01	5.56	0.01
464	773297.25	2942769.41	5.54	3.53	-2.01	5.57	0.02
465	773346.64	2942761.62	5.54	3.48	-2.06	5.56	0.01
466	773396.03	2942753.83	5.54	3.53	-2.01	5.54	0.00
467	773445.41	2942746.03	5.54	3.53	-2.01	5.54	0.00
468	773494.80	2942738.24	5.54	3.49	-2.05	5.55	0.01
469	773544.19	2942730.44	5.54	3.52	-2.02	5.55	0.01
470	773593.58	2942722.65	5.53	3.53	-2.00	5.54	0.01
471	773642.97	2942714.86	5.53	3.52	-2.02	5.54	0.01
472	773692.36	2942707.06	5.53	3.52	-2.01	5.56	0.03
473	773741.75	2942699.27	5.53	3.53	-2.00	5.55	0.02
474	773791.14	2942691.48	5.53	3.44	-2.09	5.54	0.01
475	773840.52	2942683.68	5.53	3.39	-2.13	5.53	0.00
476	773889.91	2942675.89	5.52	3.51	-2.02	5.53	0.01
477	773939.30	2942668.09	5.52	3.50	-2.02	5.54	0.02
478	773988.69	2942660.30	5.52	3.43	-2.09	5.62	0.10
479	774038.08	2942652.51	5.52	3.46	-2.06	5.62	0.10
480	774087.47	2942644.71	5.52	3.49	-2.03	5.57	0.06
481	774136.86	2942636.92	5.51	3.40	-2.11	5.63	0.11
482	774186.25	2942629.13	5.51	3.48	-2.03	5.51	0.00
483	774235.64	2942621.33	5.51	3.45	-2.06	5.58	0.06
484	774285.02	2942613.54	5.51	3.51	-2.00	5.61	0.10
485	774334.41	2942605.75	5.51	3.37	-2.14	5.61	0.10
486	774383.80	2942597.95	5.51	3.49	-2.02	5.54	0.03
487	774433.19	2942590.16	5.50	3.45	-2.06	5.59	0.09
488	774482.58	2942582.36	5.50	3.49	-2.02	5.62	0.12
511	774490.37	2942631.75	5.98	3.90	-2.08	6.10	0.12

GRID REFERENCE NUMBER	NORTHING	EASTING	DESIGN ELEVATION	AS-BUILT SUBGRADE ELEVATION	DIFFERENCE FROM DESIGN ELEVATION	AS-BUILT PROTECTIVE COVER ELEVATION	DIFFERENCE FROM DESIGN ELEVATION
512	774440.98	2942639.55	5.98	3.97	-2.01	6.09	0.11
513	774391.60	2942647.34	5.98	3.98	-2.00	6.03	0.05
514	774342.21	2942655.13	5.98	3.97	-2.01	5.99	0.01
515	774292.82	2942662.93	5.98	3.97	-2.01	6.00	0.02
516	774243.43	2942670.72	5.98	3.97	-2.01	5.98	0.00
517	774194.04	2942678.52	5.98	3.96	-2.02	6.01	0.03
518	774144.65	2942686.31	5.98	3.92	-2.06	6.00	0.02
519	774095.26	2942694.10	5.98	3.90	-2.08	5.99	0.01
520	774045.87	2942701.90	5.98	3.96	-2.02	5.99	0.01
521	773996.49	2942709.69	5.98	3.91	-2.07	6.03	0.05
522	773947.10	2942717.48	5.98	3.95	-2.03	6.03	0.05
523	773897.71	2942725.28	5.98	3.96	-2.02	6.01	0.03
524	773848.32	2942733.07	5.98	3.90	-2.08	6.01	0.03
525	773798.93	2942740.86	5.98	3.98	-2.00	6.07	0.09
526	773749.54	2942748.66	5.98	3.87	-2.11	5.99	0.01
527	773700.16	2942756.45	5.98	3.96	-2.02	6.01	0.03
528	773650.76	2942764.25	5.98	3.89	-2.09	5.98	0.00
529	773601.37	2942772.04	5.98	3.97	-2.01	5.99	0.01
530	773551.99	2942779.83	5.98	3.91	-2.07	6.03	0.05
531	773502.60	2942787.63	5.98	3.95	-2.03	5.98	0.00
532	773453.21	2942795.42	5.98	3.95	-2.03	5.99	0.01
533	773403.82	2942803.21	5.98	3.95	-2.03	5.99	0.01
534	773354.43	2942811.01	5.98	3.94	-2.04	5.99	0.01
535	773305.04	2942818.80	5.98	3.95	-2.03	5.99	0.01
536	773255.65	2942826.60	5.98	3.92	-2.06	5.99	0.01
537	773206.26	2942834.39	5.98	3.94	-2.04	5.98	0.00
538	773156.87	2942842.18	5.98	3.91	-2.07	5.99	0.01
539	773107.49	2942849.98	5.98	3.92	-2.06	6.00	0.02
540	773058.10	2942857.77	5.98	3.95	-2.03	6.12	0.14
541	773008.71	2942865.56	5.98	3.93	-2.05	5.99	0.01
542	772959.32	2942873.36	5.72	3.70	-2.02	5.74	0.02
543	772909.93	2942881.15	5.35	3.22	-2.03	5.35	0.00
544	772884.26	2942885.20	5.00	3.00	-2.00	5.03	0.03
545	772907.77	2942932.11	5.00	2.90	-2.10	5.02	0.02
546	772917.72	2942930.54	5.10	3.05	-2.05	5.15	0.07
547	772967.11	2942922.75	5.62	3.51	-2.00	5.54	0.02
548	773016.50	2942914.95	5.63	3.51	-2.02	5.54	0.01
549	773065.89	2942907.16	5.63	3.45	-2.08	5.53	0.00
550	773115.28	2942899.36	5.63	3.50	-2.03	5.58	0.05
551	773164.67	2942891.57	5.63	3.39	-2.14	5.54	0.01
552	773214.06	2942883.78	5.63	3.40	-2.13	5.53	0.00
553	773263.45	2942875.98	5.63	3.60	-2.03	5.54	0.01
554	773312.84	2942868.19	5.63	3.45	-2.08	5.59	0.06
555	773362.22	2942860.40	5.63	3.44	-2.09	5.53	0.01
556	773411.61	2942852.60	5.63	3.47	-2.06	5.58	0.05
557	773461.00	2942844.81	5.63	3.52	-2.01	5.54	0.01
558	773510.39	2942837.02	5.63	3.52	-2.01	5.53	0.00
559	773559.78	2942829.22	5.63	3.48	-2.05	5.53	0.01
560	773609.17	2942821.43	5.63	3.48	-2.05	5.54	0.02
561	773658.56	2942813.63	5.63	3.49	-2.03	5.53	0.00
562	773707.95	2942805.84	5.63	3.51	-2.02	5.57	0.05
563	773757.33	2942798.05	5.63	3.52	-2.01	5.57	0.04
564	773806.72	2942790.25	5.63	3.50	-2.02	5.56	0.04
565	773856.11	2942782.46	5.63	3.51	-2.02	5.57	0.04
566	773905.50	2942774.67	5.63	3.52	-2.00	5.54	0.01
567	773954.89	2942766.87	5.63	3.50	-2.02	5.57	0.05
568	774004.28	2942759.08	5.63	3.47	-2.06	5.53	0.11
569	774053.67	2942751.28	5.63	3.41	-2.11	5.58	0.06
570	774103.06	2942743.49	5.63	3.48	-2.05	5.56	0.03
571	774152.45	2942735.70	5.63	3.40	-2.13	5.58	0.05
572	774201.83	2942727.90	5.63	3.39	-2.14	5.58	0.06
573	774251.22	2942720.11	5.63	3.49	-2.03	5.56	0.04
574	774300.61	2942712.32	5.63	3.43	-2.09	5.54	0.01
575	774350.00	2942704.52	5.63	3.52	-2.00	5.56	0.03
576	774399.39	2942696.73	5.63	3.48	-2.05	5.54	0.01
577	774448.78	2942688.94	5.63	3.39	-2.14	5.57	0.05
578	774498.17	2942681.14	5.63	3.51	-2.01	5.60	0.07
579	774505.96	2942730.53	5.07	3.04	-2.03	5.10	0.03
580	774456.57	2942738.32	5.07	3.03	-2.04	5.08	0.01
581	774407.18	2942746.12	5.07	2.98	-2.09	5.08	0.01
582	774357.79	2942753.91	5.07	3.02	-2.05	5.18	0.11
583	774308.41	2942761.71	5.07	3.07	-2.00	5.12	0.04
584	774259.02	2942769.50	5.07	3.02	-2.05	5.19	0.11
585	774209.63	2942777.29	5.07	3.02	-2.05	5.20	0.12
586	774160.24	2942785.09	5.07	3.05	-2.02	5.11	0.04
587	774110.85	2942792.88	5.07	3.04	-2.03	5.11	0.04
588	774061.46	2942800.67	5.07	2.98	-2.10	5.12	0.05
589	774012.07	2942808.47	5.07	2.98	-2.09	5.08	0.01
610	773962.68	2942816.26	5.07	2.95	-2.12	5.10	0.03
611	773913.29	2942824.05	5.07	3.04	-2.03	5.15	0.07
612	773863.91	2942831.85	5.07	3.02	-2.05	5.09	0.02
613	773814.52	2942839.64	5.07	3.07	-2.01	5.17	0.09
614	773765.13	2942847.44	5.07	2.97	-2.10	5.08	0.01
615	773715.74	2942855.23	5.07	3.00	-2.07	5.12	0.05
616	773666.35	2942863.02	5.07	2.99	-2.08	5.17	0.10
617	773616.96	2942870.82	5.07	2.99	-2.08	5.07	0.00
618	773567.57	2942878.61	5.07	3.01	-2.06	5.07	0.00
619	773518.18	2942886.40	5.07	3.00	-2.07	5.09	0.02
620	773468.80	2942894.20	5.07	2.99	-2.09	5.07	0.00
621	773419.41	2942901.99	5.07	3.06	-2.02	5.09	0.02
622	773370.02	2942909.79	5.07	3.00	-2.08	5.12	0.04
623	773320.63	2942917.58	5.07	2.97	-2.10	5.08	0.01
624	773271.24	2942925.37	5.07	2.97	-2.10	5.09	0.01
625	773221.86	2942933.17	5.07	2.99	-2.08	5.15	0.08
626	773172.46	2942940.96	5.07	3.05	-2.02	5.07	0.00
627	773123.07	2942948.76	5.07	3.06	-2.02	5.09	0.02
628	773073.68	2942956.55	5.07	3.07	-2.01	5.12	0.04
629	773024.30	2942964.34	5.07	3.06	-2.02	5.08	0.01
630	772974.91	2942972.13	5.07	3.06	-2.01	5.08	0.01
631	772933.19	2942976.70	5.00	2.93	-2.07	5.00	0.00
633	772940.65	2942982.98	5.00	2.98	-2.02	5.00	0.01
634	772951.80	2942983.97	5.00	2.90	-2.10	5.02	0.02
635	772976.17	2942980.12	5.00	2.89	-2.11	5.01	0.01

GRID REFERENCE NUMBER	NORTHING	EASTING	DESIGN ELEVATION	AS-BUILT SUBGRADE ELEVATION	DIFFERENCE FROM DESIGN ELEVATION	AS-BUILT PROTECTIVE COVER ELEVATION	DIFFERENCE FROM DESIGN ELEVATION
636	773025.55	2942972.31	5.00	2.97	-2.03	5.03	0.03
637	773074.94	2942964.51	5.00	2.85	-2.15	5.03	0.03
638	773124.33	2942956.70	5.00	2.99	-2.01	5.06	0.06
639	773173.71	2942948.90	5.00	2.86	-2.14	5.00	0.00
640	773223.10	2942941.09	5.00	2.97	-2.03	5.01	0.01
641	773272.49	2942933.29	5.00	2.87	-2.13	5.04	0.04
642	773321.88	2942925.48	5.00	3.00	-2.00	5.01	0.01
643	773371.26	2942917.68	5.00	2.93	-2.07	5.00	0.00
644	773420.65	2942909.88	5.00	2.98	-2.02	5.05	0.05
645	773470.04	2942902.07	5.00	3.00	-2.00	5.03	0.03
646	773519.42	2942894.27	5.00	2.96	-2.04	5.01	0.01
647	773568.81	2942886.46	5.00	2.88	-2.12	5.02	0.02
648	773618.20	2942878.66	5.00	2.85	-2.15	5.00	0.00
649	773667.59	2942870.85	5.00	2.93	-2.07	5.14	0.14
650	773716.97	2942863.05	5.00	2.87	-2.13	5.05	0.05
651	773766.36	2942855.24	5.00	2.91	-2.09	5.02	0.02
652	773815.75	2942847.44	5.00	2.97	-2.03	5.03	0.03
653	773865.13	2942839.64	5.00	2.91	-2.09	5.06	0.06
654	773914.62	2942831.83	5.00	2.99	-2.01	5.02	0.02
655	773963.91	2942824.03	5.00	2.97	-2.03	5.09	0.09
656	774013.30	2942816.22	5.00	2.88	-2.12	5.02	0.02
657	774062.68	2942808.42	5.00	3.00	-2.00	5.07	0.07
658	774112.07	2942800.61	5.00	2.98	-2.02	5.05	0.05
659	774161.46	2942792.81	5.00	2.98	-2.02	5.04	0.04
660	774210.84	2942785.00	5.00	2.88	-2.12	5.01	0.01
661	774260.23	2942777.20	5.00	2.95	-2.05	5.04	0.04
662	774309.62	2942769.39	5.00	2.96	-2.04	5.02	0.02
663	774359.01	2942761.59	5.00	2.89	-2.11	5.02	0.02
664	774408.39	2942753.79	5.00	2.96	-2.04	5.11	0.11
665	774457.78	2942745.98	5.00	2.93	-2.07	5.04	0.04
666	774507.17	2942738.18	5.00	2.86	-2.14	5.04	0.04
680	772861.01	2942771.42	5.00	2.96	-2.04	5.00	0.00
681	772843.68	2942804.63	5.00	2.87	-2.13	5.00	0.00



NC GRID(NAD 83)

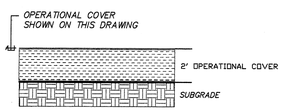
LEGEND

+1378 GRID REFERENCE NUMBER

—100— INDEX CONTOUR

— — — INTERMEDIATE CONTOUR

CELL CROSS SECTION DETAIL



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

SURVEYING SOLUTIONS, P.C. C-1948
5401 HILLSBOROUGH ST. P.O. BOX 33324
RALEIGH, NC 27636
(919)-854-4833

AS-BUILT SURVEY OF THE
OPERATIONAL COVER
DARE COUNTY CONSTRUCTION AND DEMOLITION LANDFILL
CELL 4

DRAWN BY: DK	CHECKED BY: JT	SURVEYED BY: DK, JT	CROATAN TOWNSHIP	DARE COUNTY	NORTH CAROLINA
SHEET 2 OF 2			SCALE 1"=100'	SURVEY DATE: JUNE 15, 2010	PROJECT 10-020

Surveying Solutions, PC
License C-1948
5401 Hillsborough St
P.O. Box 33324
Raleigh, NC 27636
Phone: 919-854-4833
Fax: 919-854-4834

June 28, 2010

Glover Construction Company, Inc.
Attn: Ed Marks
P.O. Box 40
Highway 301 N.
Pleasant Hill, NC 27866

Re: Quantities, Dare County – Construction and Demolition Debris Landfill, Cell 4

Mr. Marks,

Per your request, listed below are the computed fill quantities for the above listed site for the month of June and final quantity summaries for the project:

Cell 4 area

Total amount of fill to date	107,429 Cubic yards
Amount of fill for April (letter dated May 10, 2010)	53,809 Cubic yards
Amount of fill for May (letter dated June 10, 2010)	37,751 Cubic yards
Amount of fill for June	15,869 Cubic yards

Breakdown of June fill, Cell 4 area:

Amount of fill to subgrade (up to 2' below final grade and including road)	5,638 Cubic yards
Amount of fill for final grade (2' minimum final lift)	10,231 Cubic yards

Cell 4 area final quantity summary:

Total amount of fill to subgrade	67,093 Cubic yards
Total amount of fill for final grade (2' minimum final lift)	34,698 Cubic yards

Note: Quantity calculations for Cell 4 are computed using topographic information provided by the contractor for the following:
Topographic information of the cell area after stripping

Borrow area fill:

Total amount of fill	43,035 Cubic yards

Note: Quantity calculations for the borrow area fill are computed using topographic information provided by the contractor for the following:
Topographic information of the additional borrow area after excavation
Topographic information of the additional borrow area after filling

All information shown was computed from field information obtained under my direct supervision except as noted. The date of the final survey for the site was June 15, 2010. All quantity information provided is true and correct to the best of my knowledge and belief.

_____
Dwayne R, Kroeze, P.L.S. L-3911

Appendix A-5

COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
Northwest Quadrant	Bulk	Proctor No. 1	3' BFG	4/27/2010	SM	A-2-4(0)	12.2	NP/NL	16.0	103.4	16.6
Northeast Quadrant	Bulk	Proctor No. 2	3' BFG	4/27/2010	SP	A-3	11.8	NP/NL	3.5	98.7	17.8
Southeast Quadrant	Bulk	Proctor No. 3	3' BFG	4/27/2010	SM	A-2-4(0)	15.2	NP/NL	12.1	105.3	14.3
Southwest Quadrant	Bulk	Proctor No. 4	3' BFG	4/27/2010	SM	A-2-4(0)	12.2	NP/NL	12.5	103.7	13.2
35º 49.944' N / 75º 49.098' W	Hand Auger	D-1	3' BFG	4/30/2010	NT	NT	13.6	NT	NT	NT	NT
35º 49.944' N / 75º 49.098' W	Hand Auger	D-2	4' BFG	4/30/2010	NT	NT	12.7	NT	NT	NT	NT
35º 49.944' N / 75º 49.098' W	Hand Auger	D-3	5' BFG	4/30/2010	NT	NT	15.9	NT	NT	NT	NT
35º 50.001' N / 75º 49.107' W	Hand Auger	D-4	3' BFG	4/30/2010	NT	NT	9.8	NT	NT	NT	NT
35º 50.001' N / 75º 49.107' W	Hand Auger	D-5	4' BFG	4/30/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.042' N / 75º 49.113' W	Hand Auger	D-6	3' BFG	4/30/2010	NT	NT	13.0	NT	NT	NT	NT
35º 50.042' N / 75º 49.113' W	Hand Auger	D-7	4' BFG	4/30/2010	NT	NT	13.2	NT	NT	NT	NT
35º 50.100' N / 75º 49.122' W	Hand Auger	D-8	3' BFG	4/30/2010	NT	NT	15.1	NT	NT	NT	NT
35º 50.100' N / 75º 49.122' W	Hand Auger	D-9	4' BFG	4/30/2010	NT	NT	14.7	NT	NT	NT	NT
35º 50.100' N / 75º 49.122' W	Hand Auger	D-10	5' BFG	4/30/2010	NT	NT	14.5	NT	NT	NT	NT
35º 50.142' N / 75º 49.127' W	Hand Auger	D-11	3' BFG	4/30/2010	NT	NT	10.6	NT	NT	NT	NT
35º 50.142' N / 75º 49.127' W	Hand Auger	D-12	4' BFG	4/30/2010	NT	NT	13.2	NT	NT	NT	NT
35º 50.188' N / 75º 49.134' W	Hand Auger	D-13	3' BFG	4/30/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.188' N / 75º 49.134' W	Hand Auger	D-14	4' BFG	4/30/2010	NT	NT	11.3	NT	NT	NT	NT
35º 50.188' N / 75º 49.134' W	Hand Auger	D-15	5' BFG	4/30/2010	NT	NT	14.1	NT	NT	NT	NT
35º 50.177' N / 75º 49.162' W	Hand Auger	D-16	3' BFG	4/30/2010	NT	NT	15.6	NT	NT	NT	NT

NT = Not Tested

BFG = Below Finished Grade

NP/NL = Non Plastic/Non Liquid

GET Solutions, Inc.
Geotechnical • Environmental • Testing

106 Capital Trace; Unit E
Elizabeth City, NC 27909
Tel: 252-335-9765 Fax: 252-335-9766

COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4 **Project Location:** Dare County, North Carolina

Client: CDM **GET Project Number:** EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.177' N / 75º 49.162' W	Hand Auger	D-17	4' BFG	4/30/2010	NT	NT	12.7	NT	NT	NT	NT
35º 50.131' N / 75º 49.157' W	Hand Auger	D-18	3' BFG	4/30/2010	NT	NT	13.1	NT	NT	NT	NT
35º 50.131' N / 75º 49.157' W	Hand Auger	D-19	4' BFG	4/30/2010	NT	NT	14.4	NT	NT	NT	NT
35º 50.131' N / 75º 49.157' W	Hand Auger	D-20	5' BFG	4/30/2010	NT	NT	11.3	NT	NT	NT	NT
35º 50.086' N / 75º 49.153' W	Hand Auger	D-21	3' BFG	4/30/2010	NT	NT	18.2	NT	NT	NT	NT
35º 50.086' N / 75º 49.153' W	Hand Auger	D-22	4' BFG	4/30/2010	NT	NT	14.3	NT	NT	NT	NT
35º 50.031' N / 75º 49.145' W	Hand Auger	D-23	3' BFG	4/30/2010	NT	NT	12.9	NT	NT	NT	NT
35º 50.031' N / 75º 49.145' W	Hand Auger	D-24	4' BFG	4/30/2010	NT	NT	12.9	NT	NT	NT	NT
35º 50.044' N / 75º 49.125' W	Hand Auger	D-25	3' BFG	4/30/2010	NT	NT	11.4	NT	NT	NT	NT
35º 50.044' N / 75º 49.125' W	Hand Auger	D-26	4' BFG	4/30/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.095' N / 75º 49.134' W	Hand Auger	D-27	3' BFG	4/30/2010	NT	NT	14.7	NT	NT	NT	NT
35º 50.095' N / 75º 49.134' W	Hand Auger	D-28	4' BFG	4/30/2010	NT	NT	15.6	NT	NT	NT	NT
35º 50.182' N / 75º 49.134' W	Hand Auger	D-29	2' BFG	4/29/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.182' N / 75º 49.149' W	Hand Auger	D-30	2' BFG	4/29/2010	NT	NT	6.9	NT	NT	NT	NT
35º 50.181' N / 75º 49.160' W	Hand Auger	D-31	2' BFG	4/29/2010	NT	NT	6.7	NT	NT	NT	NT
35º 50.148' N / 75º 49.129' W	Hand Auger	D-32	2' BFG	4/29/2010	NT	NT	11.9	NT	NT	NT	NT
35º 50.146' N / 75º 49.142' W	Hand Auger	D-33	2' BFG	4/29/2010	NT	NT	12.0	NT	NT	NT	NT
35º 50.146' N / 75º 49.155' W	Hand Auger	D-34	2' BFG	4/29/2010	NT	NT	11.7	NT	NT	NT	NT
35º 50.094' N / 75º 49.123' W	Hand Auger	D-35	2' BFG	4/29/2010	NT	NT	10.3	NT	NT	NT	NT
35º 50.094' N / 75º 49.137' W	Hand Auger	D-36	2' BFG	4/29/2010	NT	NT	12.2	NT	NT	NT	NT

NT = Not Tested

BFG = Below Finished Grade

GET Solutions, Inc.
Geotechnical • Environmental • Testing
106 Capital Trace; Unit E
Elizabeth City, NC 27909
Tel: 252-335-9765 Fax: 252-335-9766

COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.094' N / 75º 49.137' W	Hand Auger	D-37	2' BFG	4/29/2010	NT	NT	11.0	NT	NT	NT	NT
35º 50.055' N / 75º 49.115' W	Hand Auger	D-38	2' BFG	4/29/2010	NT	NT	9.1	NT	NT	NT	NT
35º 50.052' N / 75º 49.127' W	Hand Auger	D-39	2' BFG	4/29/2010	NT	NT	7.2	NT	NT	NT	NT
35º 49.946' N / 75º 49.096' W	Hand Auger	D-40	2' BFG	4/29/2010	NT	NT	7.7	NT	NT	NT	NT
35º 50.022' N / 75º 49.141' W	Hand Auger	D-41	2' BFG	4/29/2010	NT	NT	11.4	NT	NT	NT	NT
35º 49.950' N / 75º 49.125' W	Hand Auger	D-42	1' BFG	5/25/2010	NT	NT	19.4	NT	33.9	NT	NT
35º 49.950' N / 75º 49.125' W	Hand Auger	D-43	2' BFG	5/25/2010	NT	NT	24.6	NT	32.0	NT	NT
35º 49.996' N / 75º 49.132' W	Hand Auger	D-44	1' BFG	5/25/2010	NT	NT	20.0	NT	30.4	NT	NT
35º 49.996' N / 75º 49.132' W	Hand Auger	D-45	2' BFG	5/25/2010	NT	NT	22.4	NT	45.9	NT	NT
35º 50.040' N / 75º 49.138' W	Hand Auger	D-46	1' BFG	5/25/2010	NT	NT	18.0	NT	36.2	NT	NT
35º 50.040' N / 75º 49.138' W	Hand Auger	D-47	2' BFG	5/25/2010	NT	NT	10.2	NT	14.3	NT	NT
35º 50.084' N / 75º 49.145' W	Hand Auger	D-48	1' BFG	5/25/2010	NT	NT	22.8	NT	32.9	NT	NT
35º 50.084' N / 75º 49.145' W	Hand Auger	D-49	2' BFG	5/25/2010	NT	NT	23.0	NT	15.6	NT	NT
35º 50.128' N / 75º 49.151' W	Hand Auger	D-50	1' BFG	5/25/2010	NT	NT	20.8	NT	25.5	NT	NT
35º 50.128' N / 75º 49.151' W	Hand Auger	D-51	2' BFG	5/25/2010	NT	NT	18.4	NT	28.6	NT	NT
35º 50.173' N / 75º 49.157' W	Hand Auger	D-52	1' BFG	5/25/2010	NT	NT	19.6	NT	19.0	NT	NT
35º 50.173' N / 75º 49.157' W	Hand Auger	D-53	2' BFG	5/25/2010	NT	NT	18.9	NT	28.0	NT	NT
35º 50.216' N / 75º 49.164' W	Hand Auger	D-54	1' BFG	5/25/2010	NT	NT	22.0	NT	28.3	NT	NT
35º 50.216' N / 75º 49.164' W	Hand Auger	D-55	2' BFG	5/25/2010	NT	NT	18.4	NT	27.2	NT	NT
35º 50.027' N / 75º 49.115' W	Hand Auger	D-56	FG	6/11/2010	NT	NT	16.6	NT	NT	NT	NT

NT = Not Tested
BFG = Below Finished Grade
FG = Finished Grade

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Elizabeth City, NC 27909
Tel: 252-335-9765 Fax: 252-335-9766

COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.027' N / 75º 49.137' W	Hand Auger	D-57	FG	6/11/2010	NT	NT	12.5	NT	NT	NT	NT
35º 50.070' N / 75º 49.117' W	Hand Auger	D-58	FG	6/11/2010	NT	NT	16.2	NT	NT	NT	NT
35º 50.068' N / 75º 49.140' W	Hand Auger	D-59	FG	6/11/2010	NT	NT	12.7	NT	NT	NT	NT
35º 50.121' N / 75º 49.122' W	Hand Auger	D-60	FG	6/11/2010	NT	NT	16.9	NT	NT	NT	NT
35º 50.119' N / 75º 49.147' W	Hand Auger	D-61	FG	6/11/2010	NT	NT	11.3	NT	NT	NT	NT
35º 49.969' N / 75º 49.101' W	Hand Auger	D-62	FG	6/14/2010	NT	NT	18.4	NT	NT	NT	NT
35º 49.969' N / 75º 49.101' W	Hand Auger	D-63	1' BFG	6/14/2010	NT	NT	18.8	NT	NT	NT	NT
35º 50.000' N / 75º 49.110' W	Hand Auger	D-64	FG	6/14/2010	NT	NT	14.5	NT	NT	NT	NT
35º 50.000' N / 75º 49.110' W	Hand Auger	D-65	1' BFG	6/14/2010	NT	NT	19.9	NT	NT	NT	NT
35º 50.053' N / 75º 49.115' W	Hand Auger	D-66	FG	6/14/2010	NT	NT	13.4	NT	NT	NT	NT
35º 50.053' N / 75º 49.115' W	Hand Auger	D-67	1' BFG	6/14/2010	NT	NT	16.8	NT	NT	NT	NT
35º 50.084' N / 75º 49.123' W	Hand Auger	D-68	FG	6/14/2010	NT	NT	14.3	NT	NT	NT	NT
35º 50.084' N / 75º 49.123' W	Hand Auger	D-69	1' BFG	6/14/2010	NT	NT	19.5	NT	NT	NT	NT
35º 50.137' N / 75º 49.127' W	Hand Auger	D-70	FG	6/14/2010	NT	NT	11.0	NT	NT	NT	NT
35º 50.137' N / 75º 49.127' W	Hand Auger	D-71	1' BFG	6/14/2010	NT	NT	15.2	NT	NT	NT	NT
35º 50.166' N / 75º 49.158' W	Hand Auger	D-72	FG	6/17/2010	NT	NT	14.2	NT	NT	NT	NT
35º 50.211' N / 75º 49.164' W	Hand Auger	D-73	FG	6/17/2010	NT	NT	14.8	NT	NT	NT	NT
35º 50.258' N / 75º 49.146' W	Hand Auger	D-74	FG	6/17/2010	NT	NT	12.5	NT	NT	NT	NT
35º 50.258' N / 75º 49.146' W	Hand Auger	D-75	1' BFG	6/17/2010	NT	NT	14.8	NT	NT	NT	NT
35º 50.258' N / 75º 49.146' W	Hand Auger	D-76	2' BFG	6/17/2010	NT	NT	14.6	NT	NT	NT	NT

NT = Not Tested

BFG = Below Finished Grade

FG = Finished Grade

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COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.258' N / 75º 49.146' W	Hand Auger	D-77	3' BFG	6/17/2010	NT	NT	14.9	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-78	FG	6/17/2010	NT	NT	11.9	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-79	1' BFG	6/17/2010	NT	NT	13.8	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-80	2' BFG	6/17/2010	NT	NT	14.8	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-81	3' BFG	6/17/2010	NT	NT	14.3	NT	NT	NT	NT
Lot 4	Bulk	Proctor #5	2' BFG	5/25/2010	SM	A-2-4	24.5	NP/NL	28.1	108.5	16.0
Lot 1	Bulk	Proctor #6	1' BFG	5/25/2010	SM	A-2-4	23.5	NP/NL	12.5	103.4	14.1

NT = Not Tested
BFG = Below Finished Grade
FG = Finished Grade
NP/NL = Non Plastic/Non Liquid

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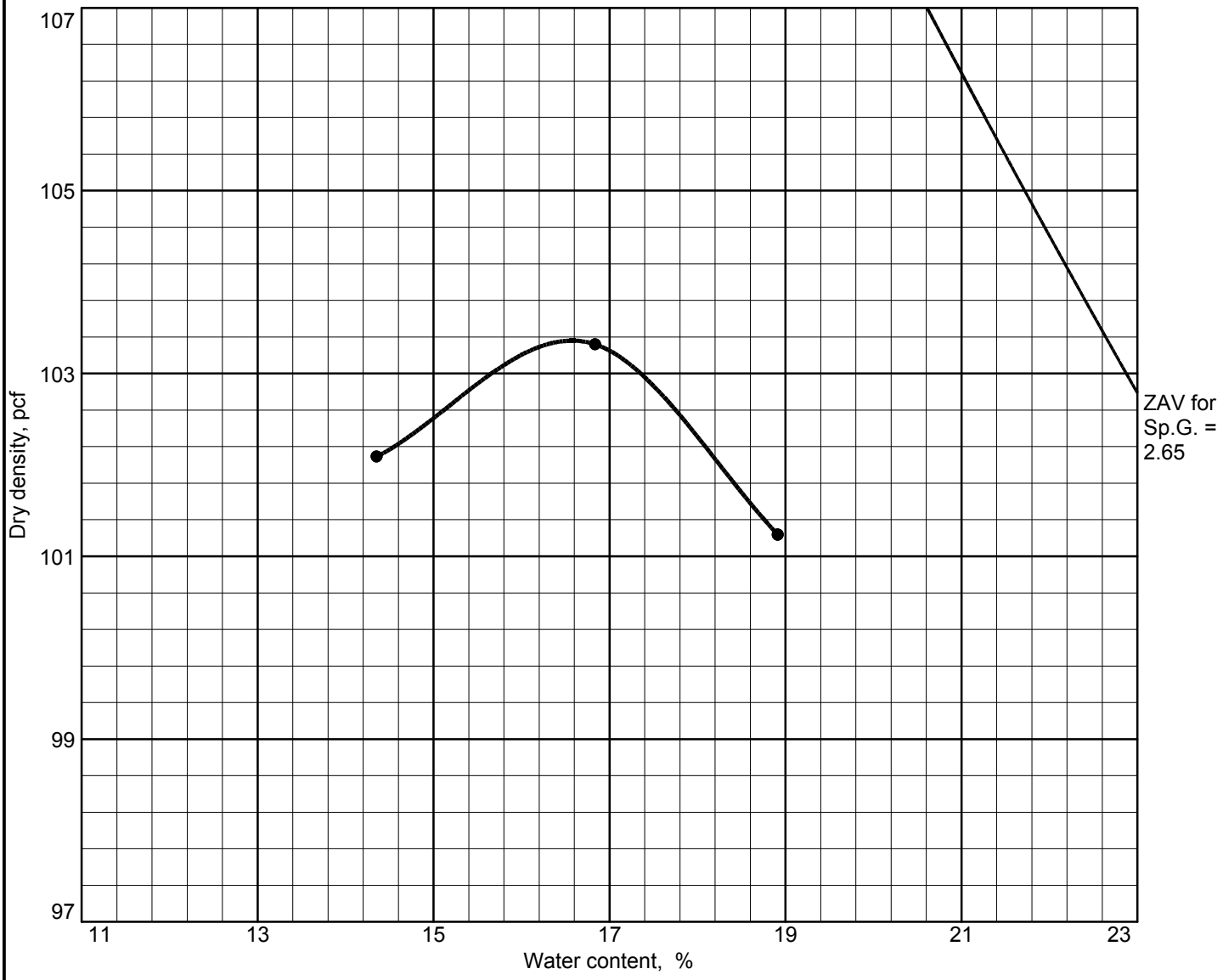
MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
	SM	A-2-4(0)	12.2		NP	NP	0.0	16.0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 103.4 pcf Optimum moisture = 16.6 %	Tan Silty fine SAND (SM)

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App170'South from Northend and app 82'West from East edge

Remarks:

Proctor-#1

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

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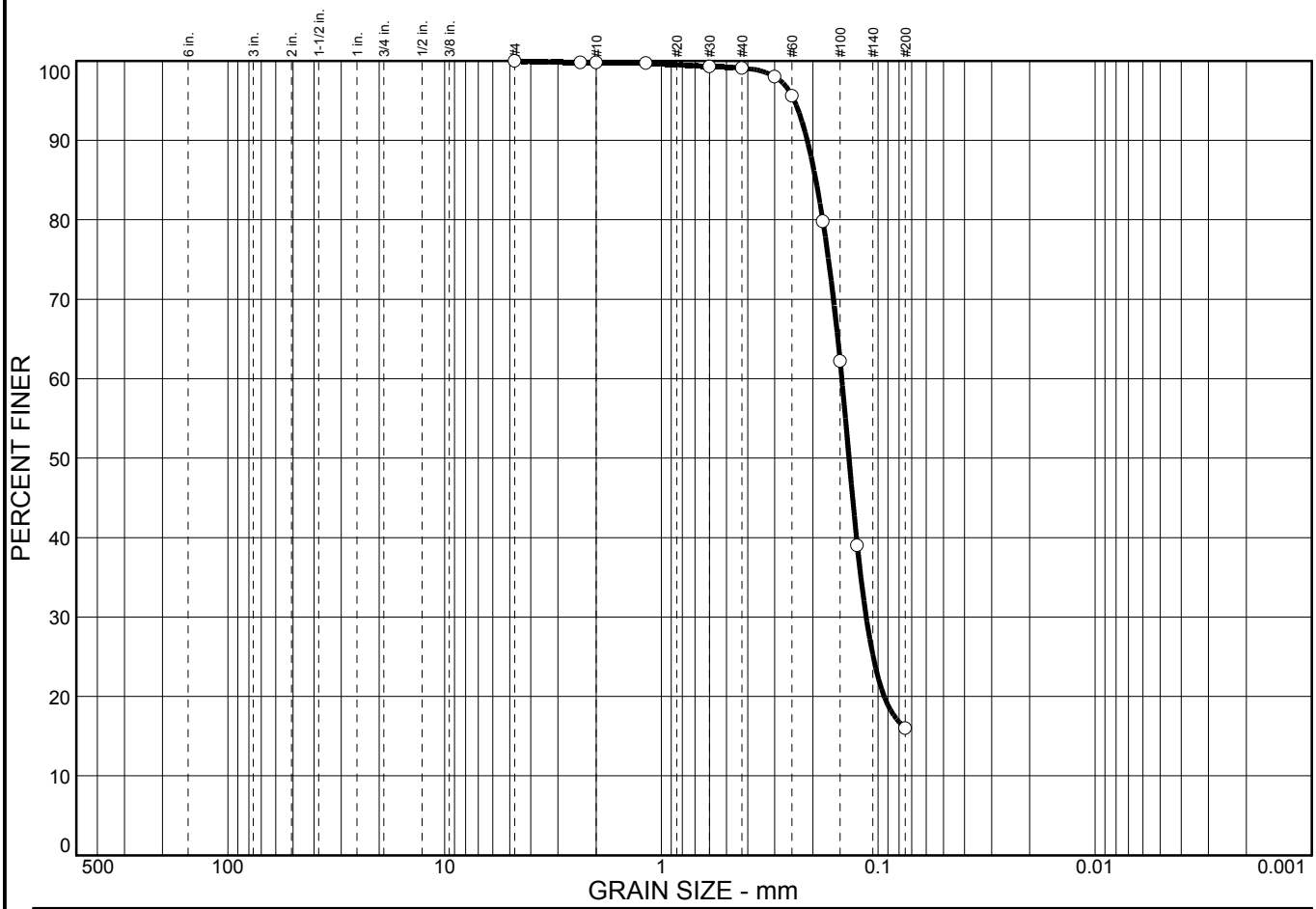
Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	84.0	16.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.8		
#10	99.8		
#16	99.7		
#30	99.3		
#40	99.1		
#50	98.0		
#60	95.6		
#80	79.8		
#100	62.2		
#120	39.0		
#200	16.0		

* (no specification provided)

Soil Description

Tan Silty fine SAND (SM)

Atterberg Limits

PL= LL= NP PI= NP

Coefficients

D_{85}= 0.194 D_{60}= 0.147 D_{50}= 0.137
D_{30}= 0.114 D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

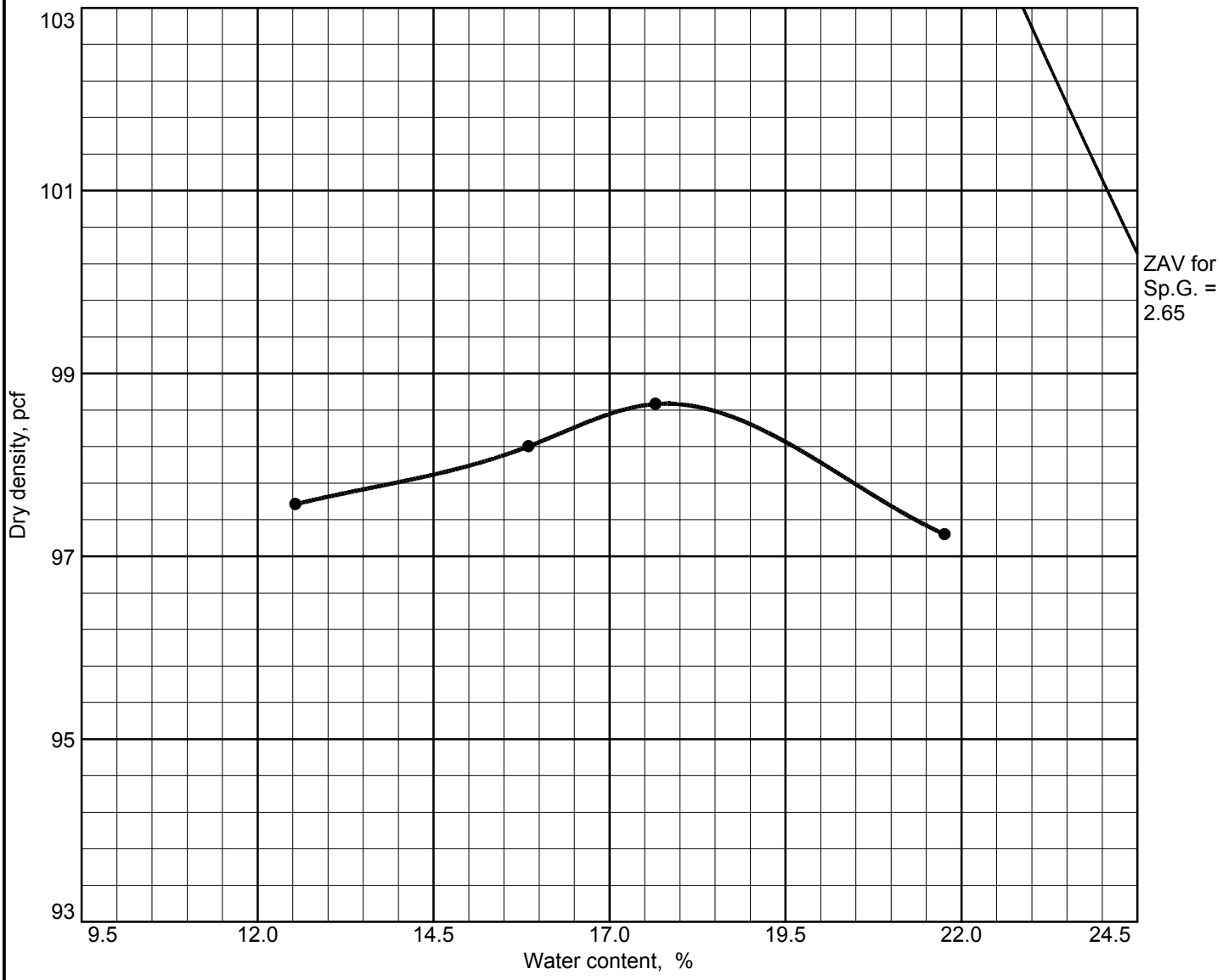
Proctor No. 1
F.M.=0.41

Sample No.: 1 **Source of Sample:** **Date:**
Location: App170'South from Northend and app 82'West from East edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
	SP	A-3	11.8		NP	NP	0.0	3.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 98.7 pcf Optimum moisture = 17.8 %	Gray poorly graded fine to medium SAND (SP)

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App 55' South from Northend and app 20'East from West edge

Remarks:

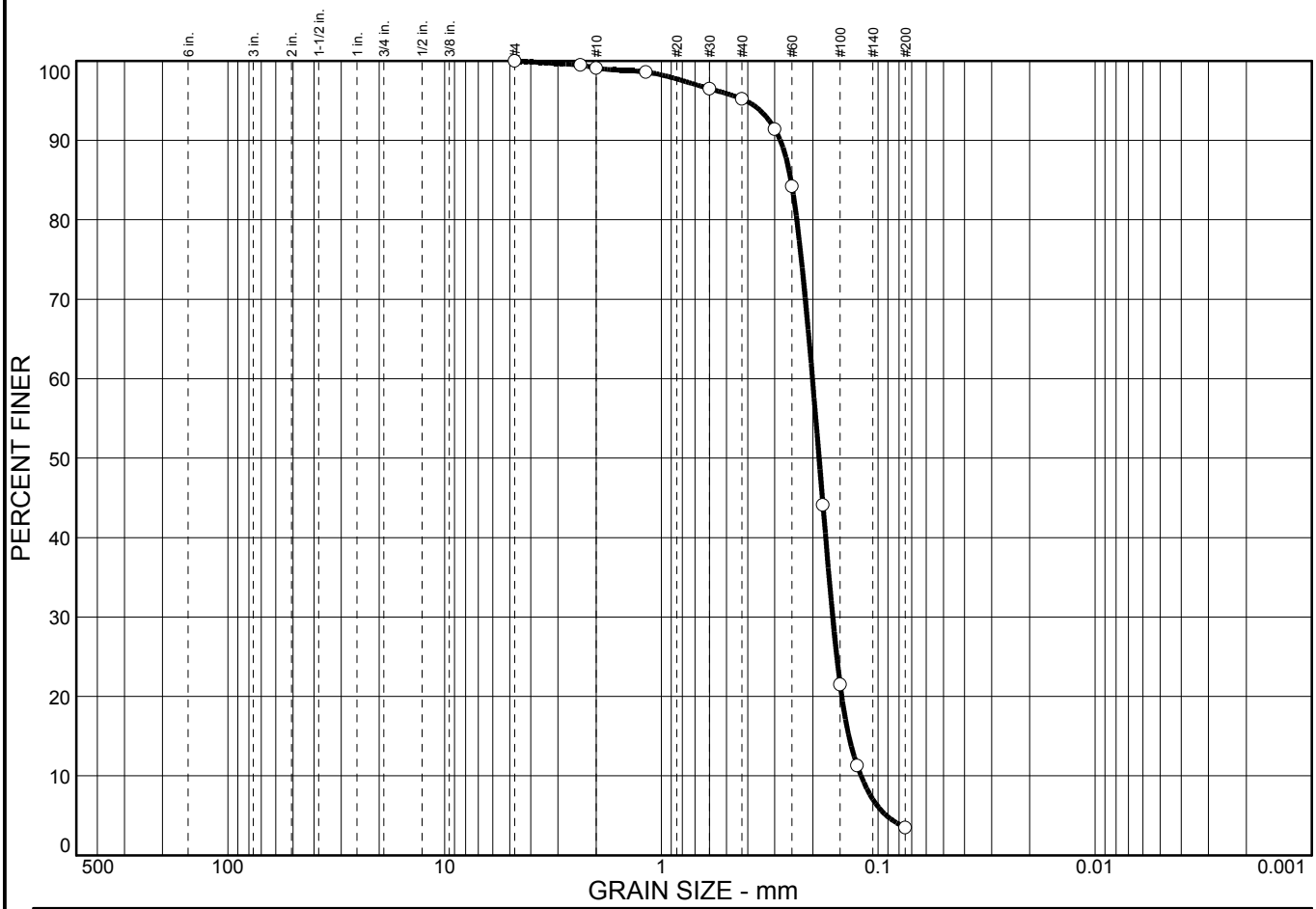
Proctor-#2

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	96.5	3.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.5		
#10	99.1		
#16	98.6		
#30	96.5		
#40	95.2		
#50	91.4		
#60	84.2		
#80	44.1		
#100	21.5		
#120	11.3		
#200	3.5		

* (no specification provided)

Soil Description

Gray poorly graded fine to medium SAND (SP)

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{85}= 0.253 D_{60}= 0.201 D_{50}= 0.188
D_{30}= 0.162 D_{15}= 0.137 D_{10}= 0.120
C_u= 1.68 C_c= 1.09

Classification

USCS= SP AASHTO= A-3

Remarks

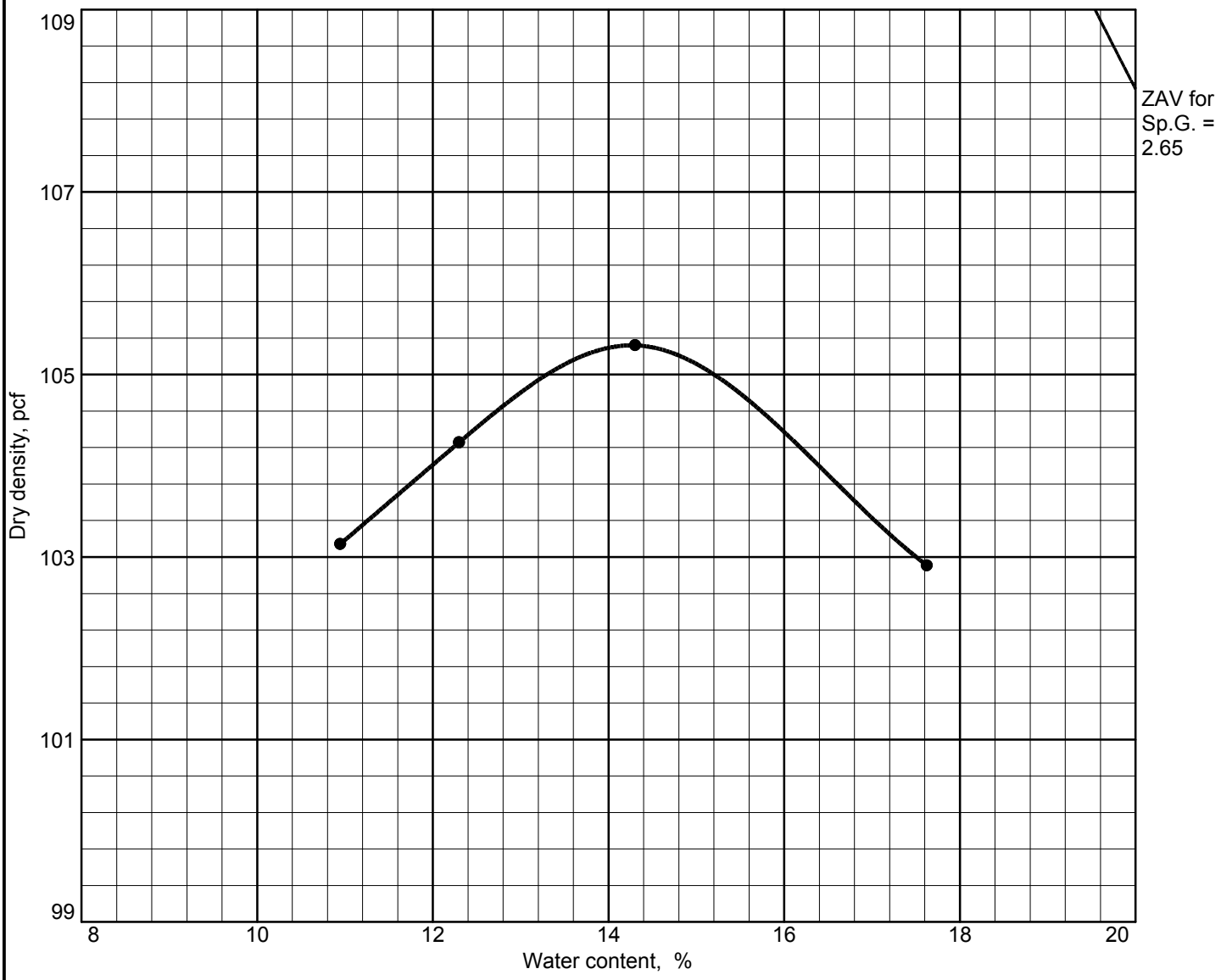
Proctor No. 2
F.M.=0.93

Sample No.: 2 **Source of Sample:** **Date:**
Location: App 55' South from Northend and app 20'East from West edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
	SM	A-2-4(0)	15.2		NP	NP	0.0	12.1

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 105.3 pcf Optimum moisture = 14.3 %	Gray Silty fine to medium SAND (SM) with marine shell fragments

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App 937'South from Northend and 95'West of East edge

Remarks:

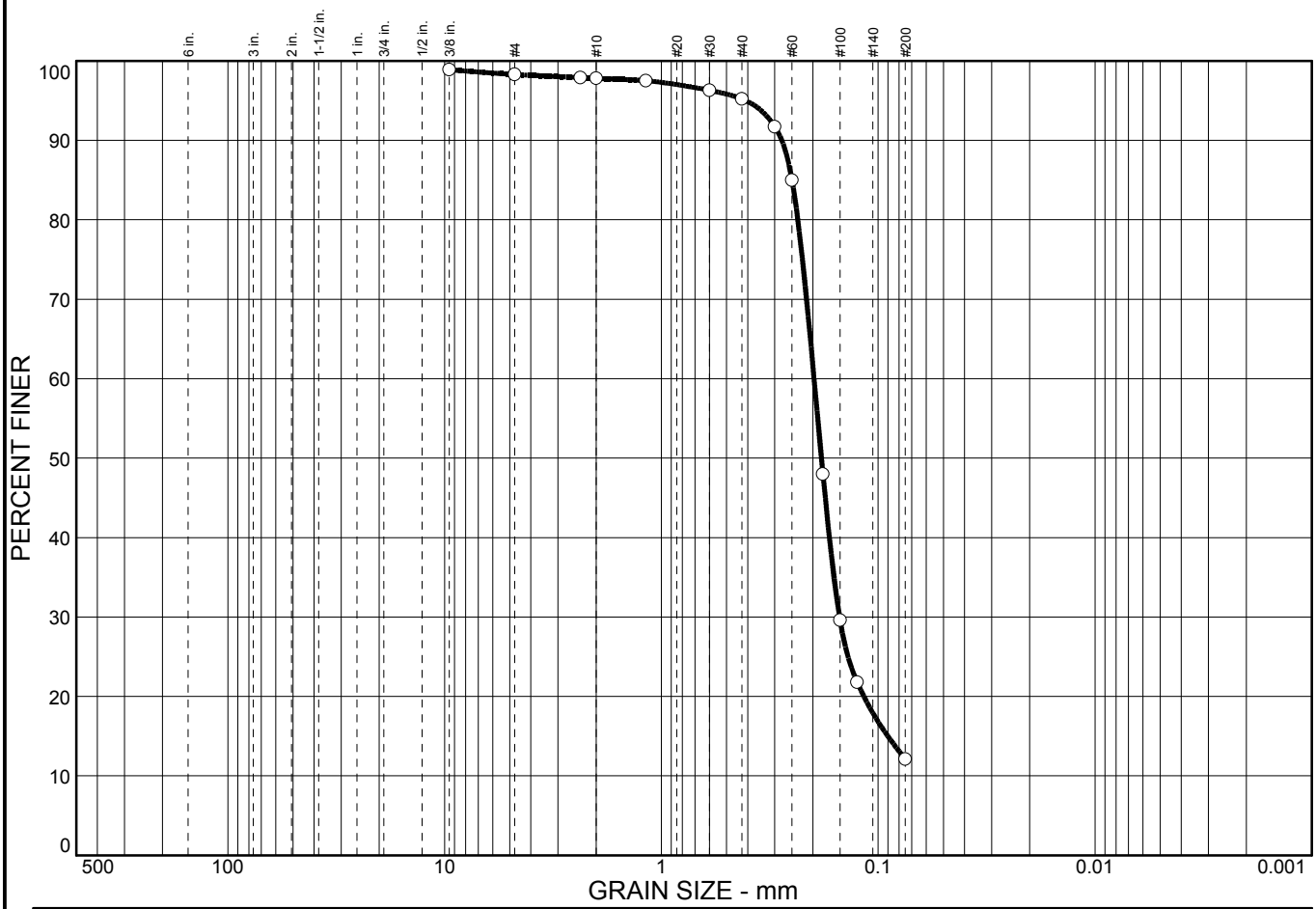
Proctor-#3

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
		86.2	12.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375 in.	98.9		
#4	98.3		
#8	97.9		
#10	97.8		
#16	97.5		
#30	96.3		
#40	95.2		
#50	91.7		
#60	85.0		
#80	48.0		
#100	29.6		
#120	21.8		
#200	12.1		

* (no specification provided)

Soil Description

Gray Silty fine to medium SAND (SM) with marine shell fragments

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{85}= 0.250 D_{60}= 0.198 D_{50}= 0.183
D_{30}= 0.151 D_{15}= 0.0904 D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Proctor No. 3
F.M.=0.90

Sample No.: 3 **Source of Sample:** **Date:**
Location: App 937'South from Northend and 95'West of East edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
		A-2-4(0)	12.2		NP	NP	0.0	12.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 103.7 pcf Optimum moisture = 13.2 %	Gray-Tan Silty fine SAND (SM) with Clay

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App 156'North from Southend and app 51' East from West edge

Remarks:

Proctor-#4

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

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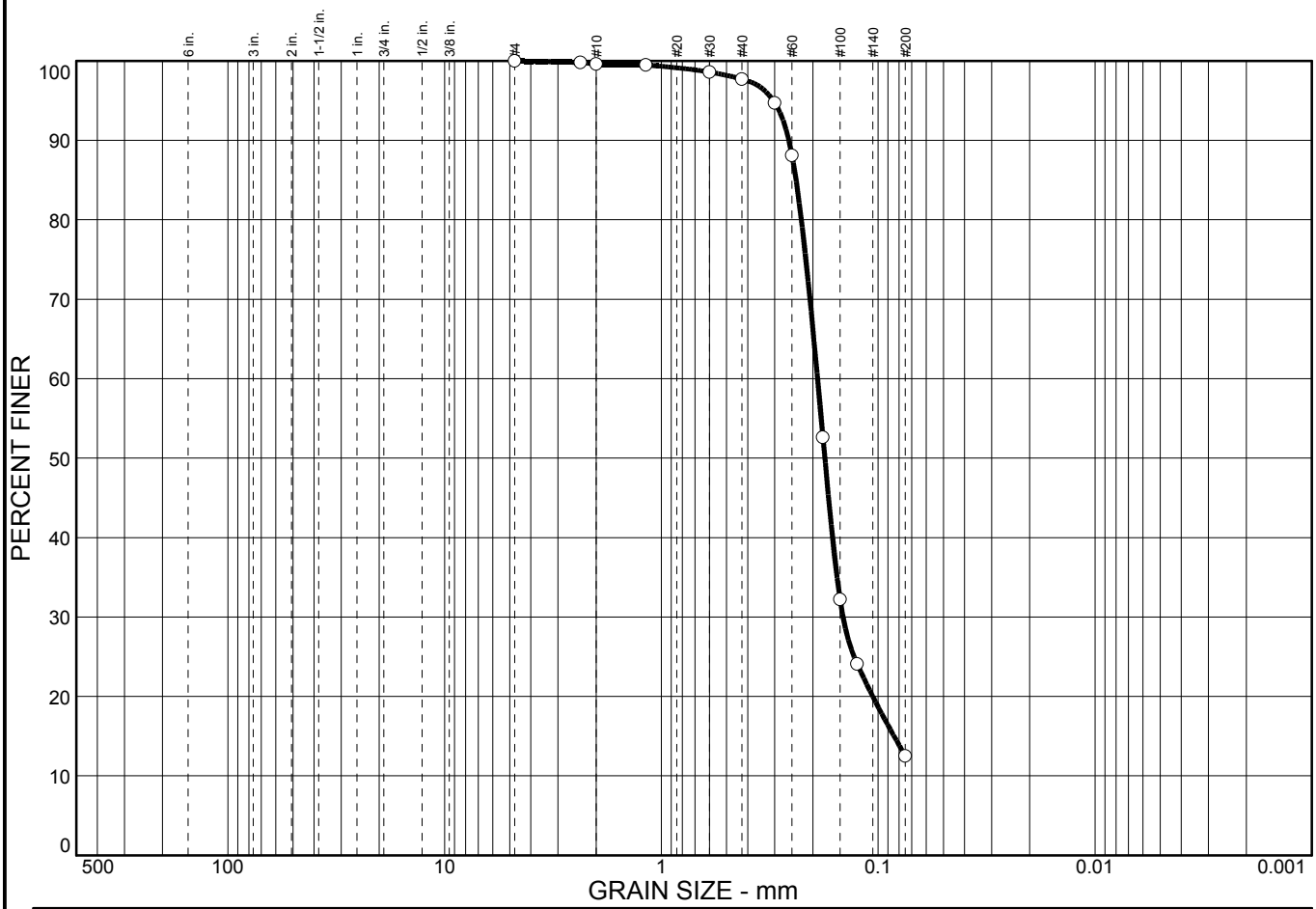
Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	87.5	12.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.8		
#10	99.6		
#16	99.5		
#30	98.6		
#40	97.7		
#50	94.7		
#60	88.1		
#80	52.6		
#100	32.2		
#120	24.1		
#200	12.5		

* (no specification provided)

Soil Description

Gray-Tan Silty fine SAND (SM) with Clay

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{85}= 0.239 D_{60}= 0.191 D_{50}= 0.176
D_{30}= 0.145 D_{15}= 0.0845 D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

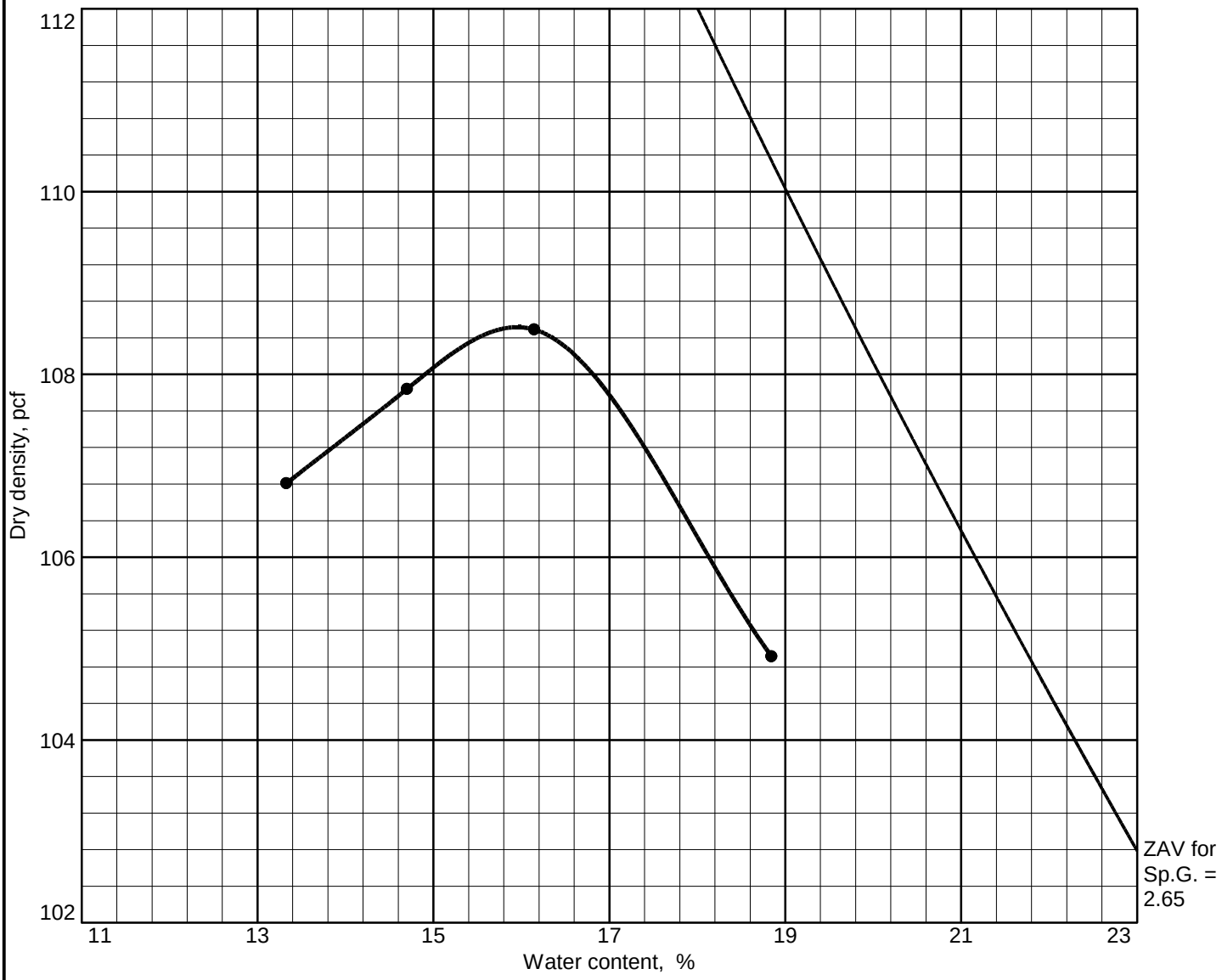
Proctor No. 4
F.M.=0.75

Sample No.: 4 **Source of Sample:** **Date:**
Location: App 156'North from Southend and app 51' East from West edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
2' BFG	SM		24.5		NP	NP	0.0	28.1

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 108.5 pcf Optimum moisture = 16.0 %	Dark Brown Silty fine SAND (SM) with Clay

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** Center of Lot#10

Remarks:

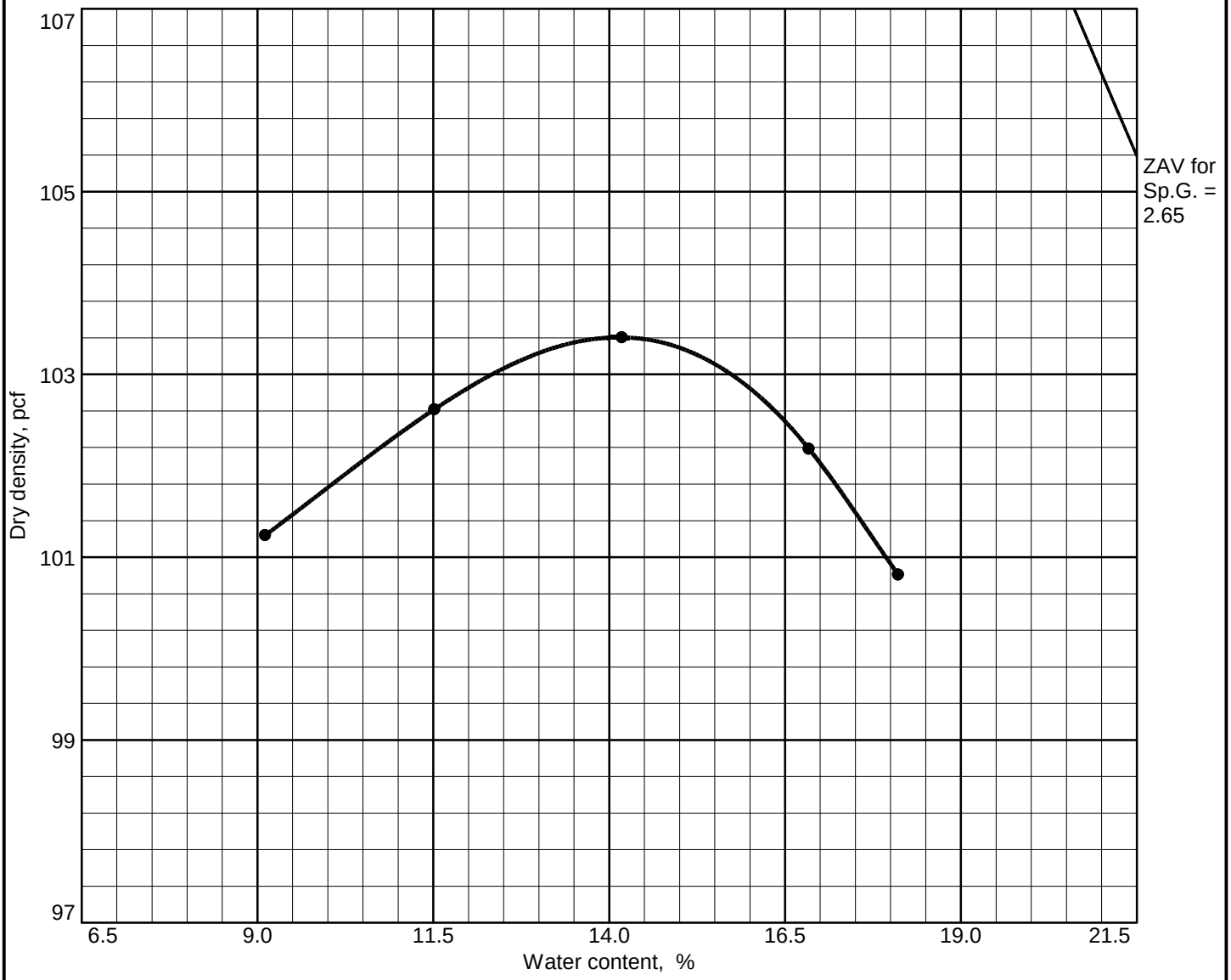
Proctor-#5

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
1'BFG	SM		23.5		NP	NP	0.0	12.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 103.4 pcf Optimum moisture = 14.1 %	Gray-Tan Silty fine SAND with trace clay

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** Center of Lot-#1

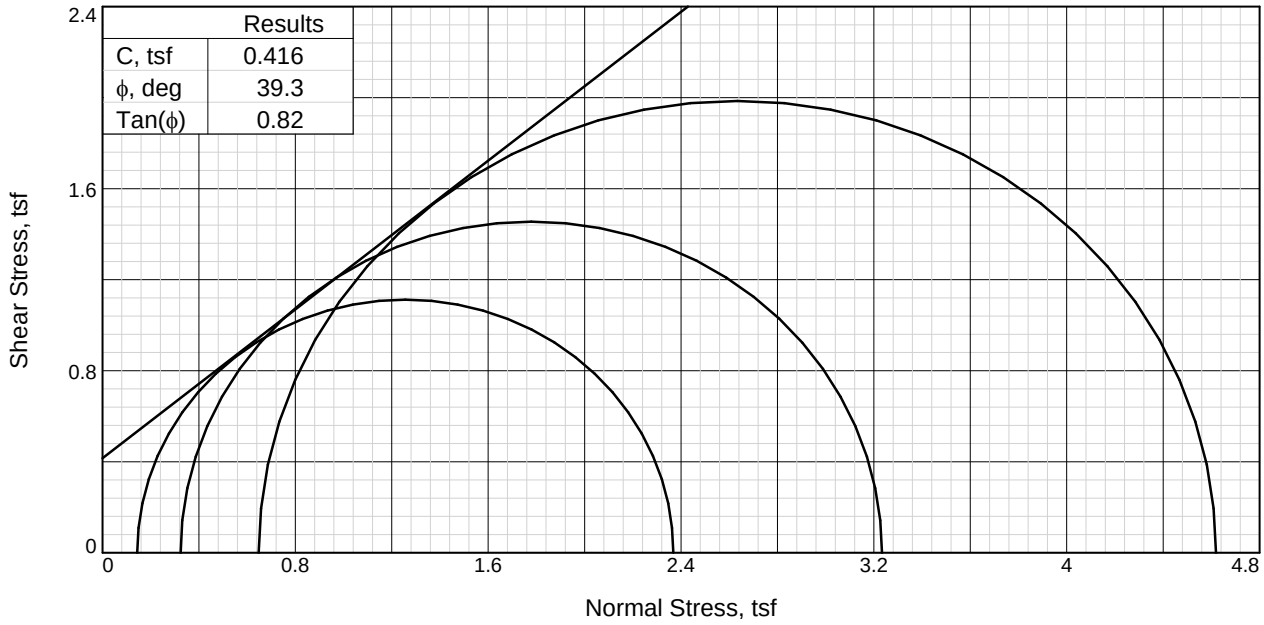
Remarks:

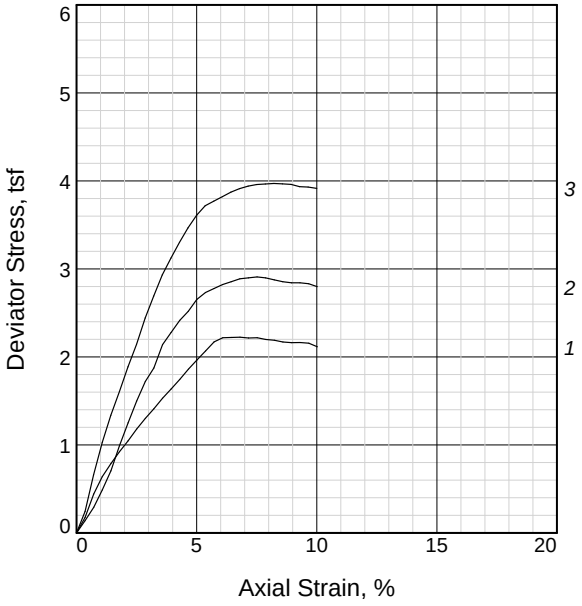
Proctor-#6

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure





Sample No.		1	2	3
Initial	Water Content, %	16.6	16.6	16.6
	Dry Density, pcf	98.3	98.2	98.2
	Saturation, %	64.5	64.4	64.4
	Void Ratio	0.6835	0.6841	0.6839
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	25.3	25.4	25.8
	Dry Density, pcf	99.1	98.8	98.2
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.6700	0.6742	0.6839
	Diameter, in.	2.79	2.79	2.80
	Height, in.	5.59	5.59	5.60
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		2.22	2.91	3.97
Ult. Stress, tsf				
σ_1 Failure, tsf		2.37	3.23	4.62
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained
Sample Type: Recompacted
Description: Tan Silty fine SAND (SM)

Assumed Specific Gravity= 2.65
Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

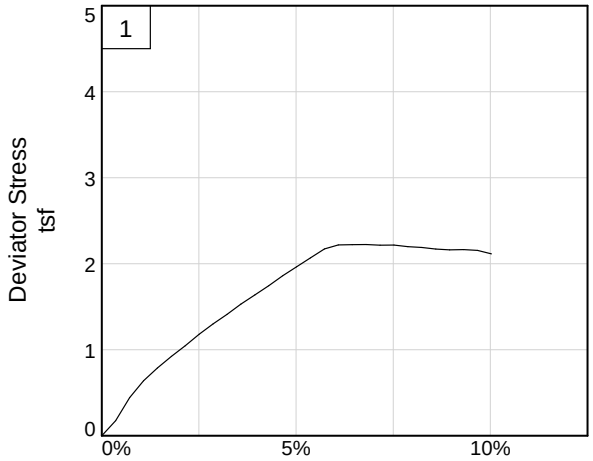
Location: App170'South from North End and 82'West from East Edge
Sample Number: Proctor No. 1
Proj. No.: EC10-166T **Date Sampled:**

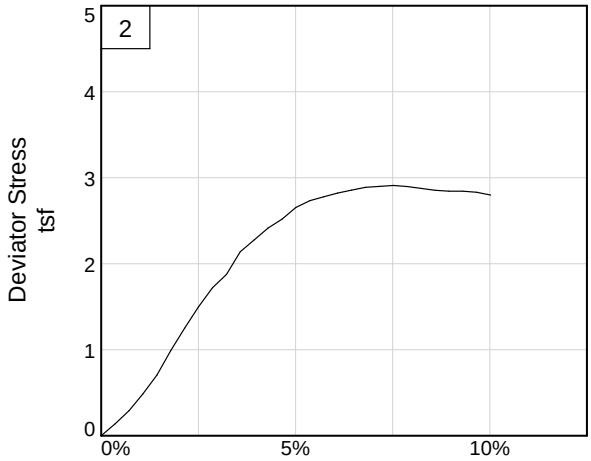
TRIAXIAL SHEAR TEST REPORT

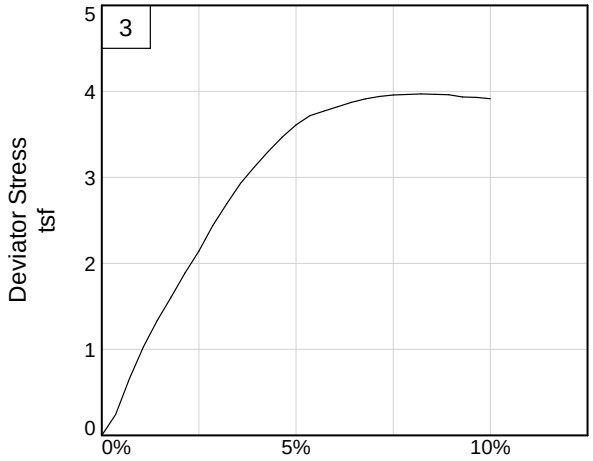
GET SOLUTIONS, INC.

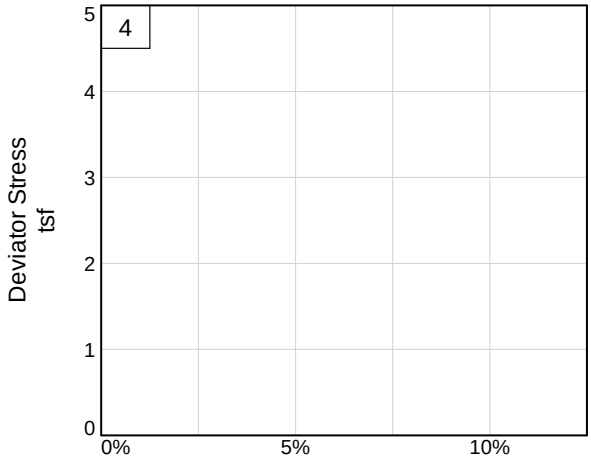
Figure T1

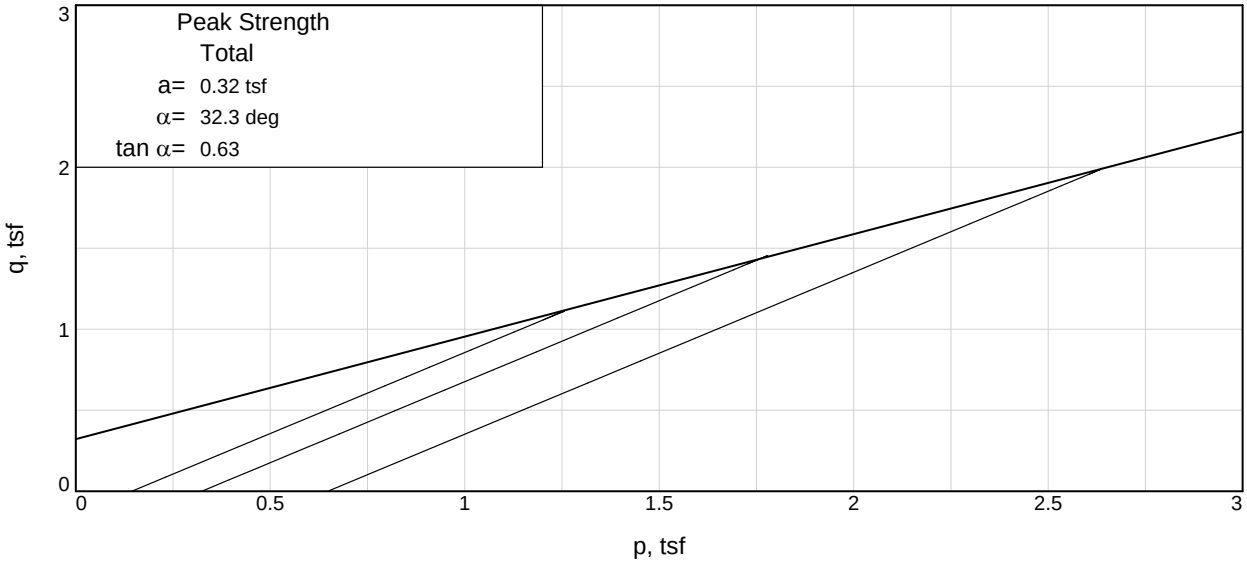
Tested By: PB **Checked By:** GS







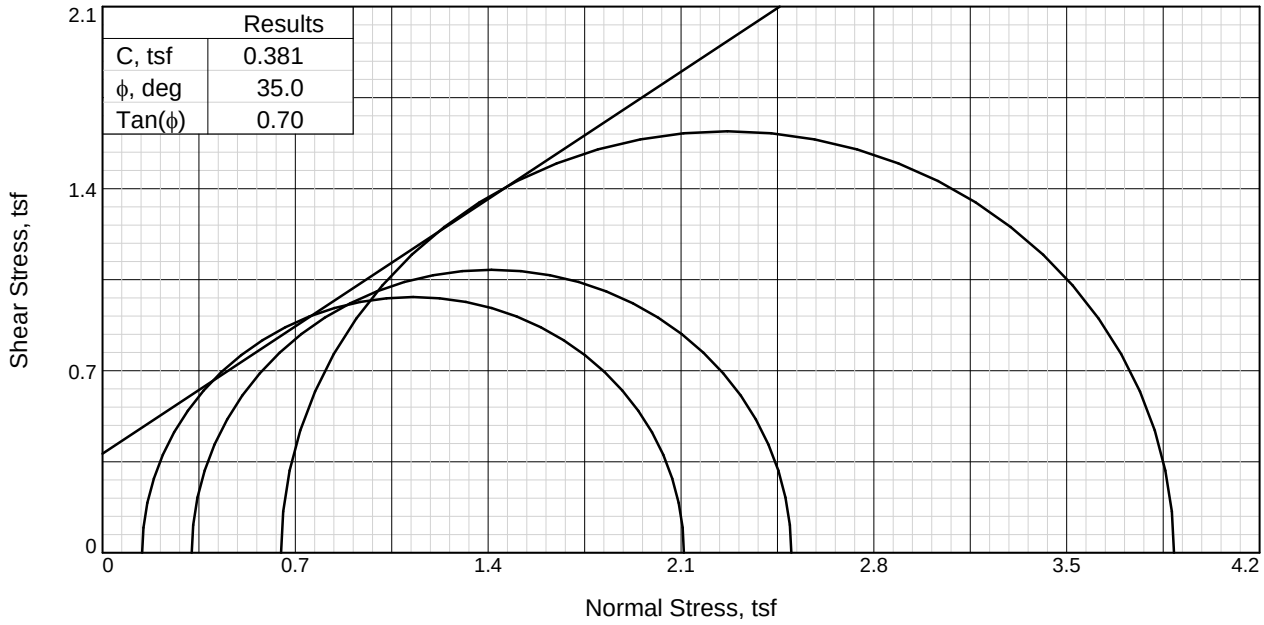


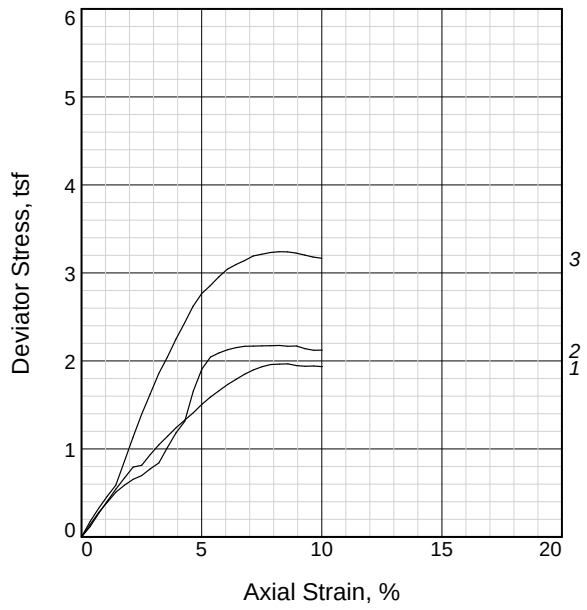


Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App170'South from North End and 82'West from East Edge
Sample Number: Proctor No. 1
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS





Sample No.		1	2	3
Initial	Water Content, %	17.8	17.8	17.8
	Dry Density, pcf	93.8	93.8	93.9
	Saturation, %	61.9	61.8	62.0
	Void Ratio	0.7629	0.7645	0.7623
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	28.3	28.5	28.8
	Dry Density, pcf	94.6	94.3	93.9
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.7488	0.7542	0.7623
	Diameter, in.	2.79	2.79	2.80
	Height, in.	5.58	5.59	5.60
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		1.97	2.18	3.24
Ult. Stress, tsf				
σ_1 Failure, tsf		2.11	2.50	3.89
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained
Sample Type: Recompacted
Description: Gray Poorly Graded fine to medium SAND (SP)

Assumed Specific Gravity= 2.65
Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

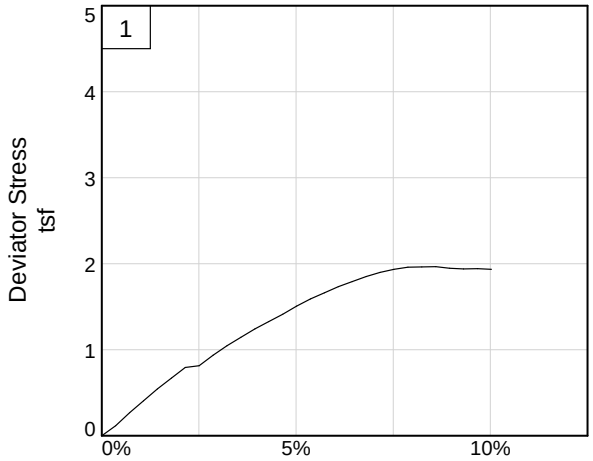
Location: App55'South from North End and 20'East from West Edge
Sample Number: Proctor No. 2
Proj. No.: EC10-166T **Date Sampled:**

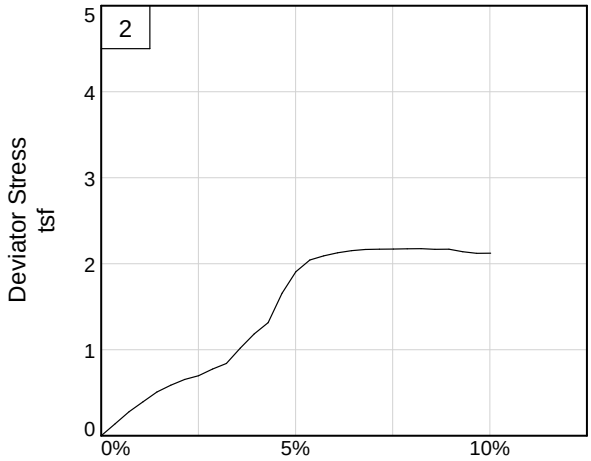
TRIAXIAL SHEAR TEST REPORT

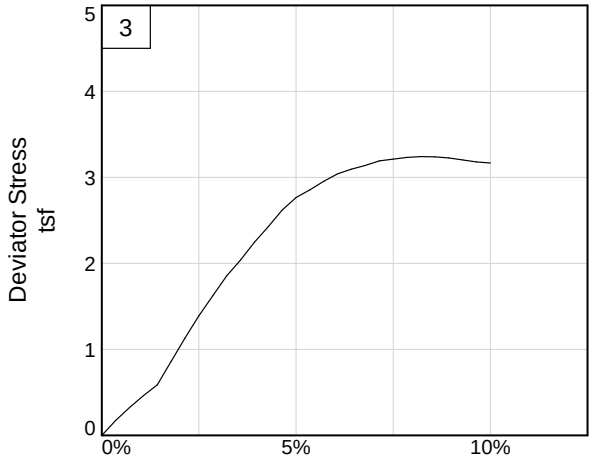
GET SOLUTIONS, INC.

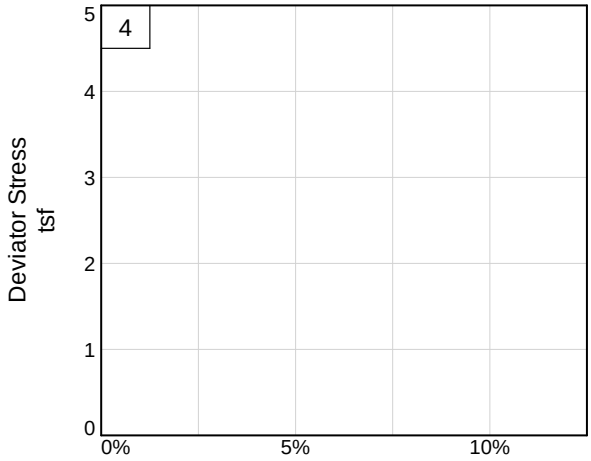
Figure T2

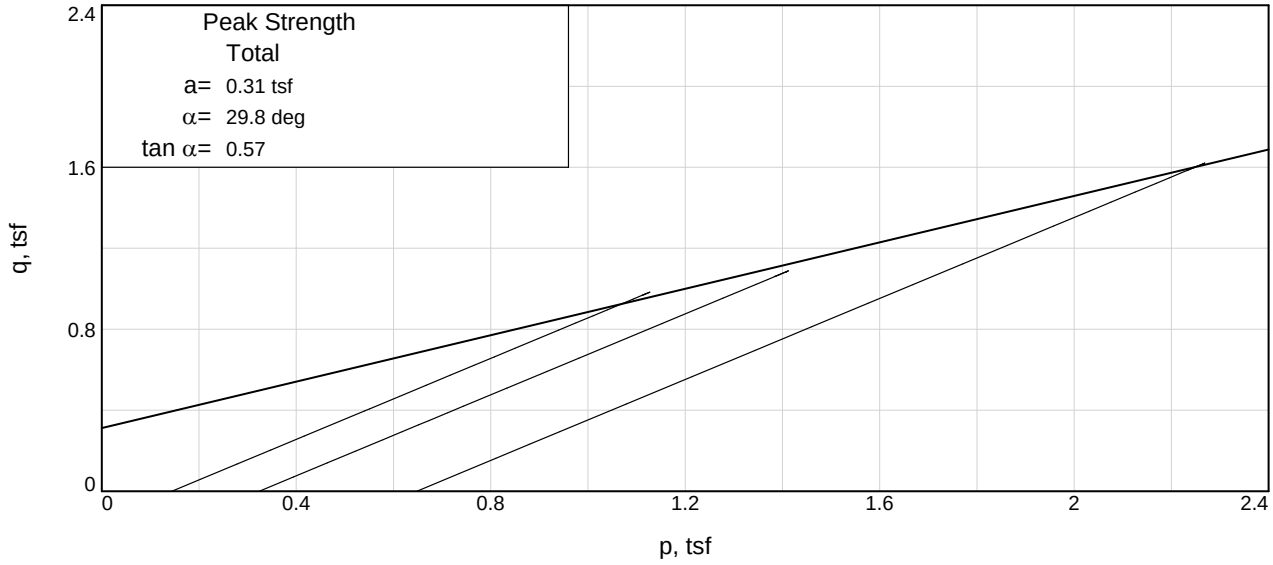
Tested By: PB **Checked By:** GS







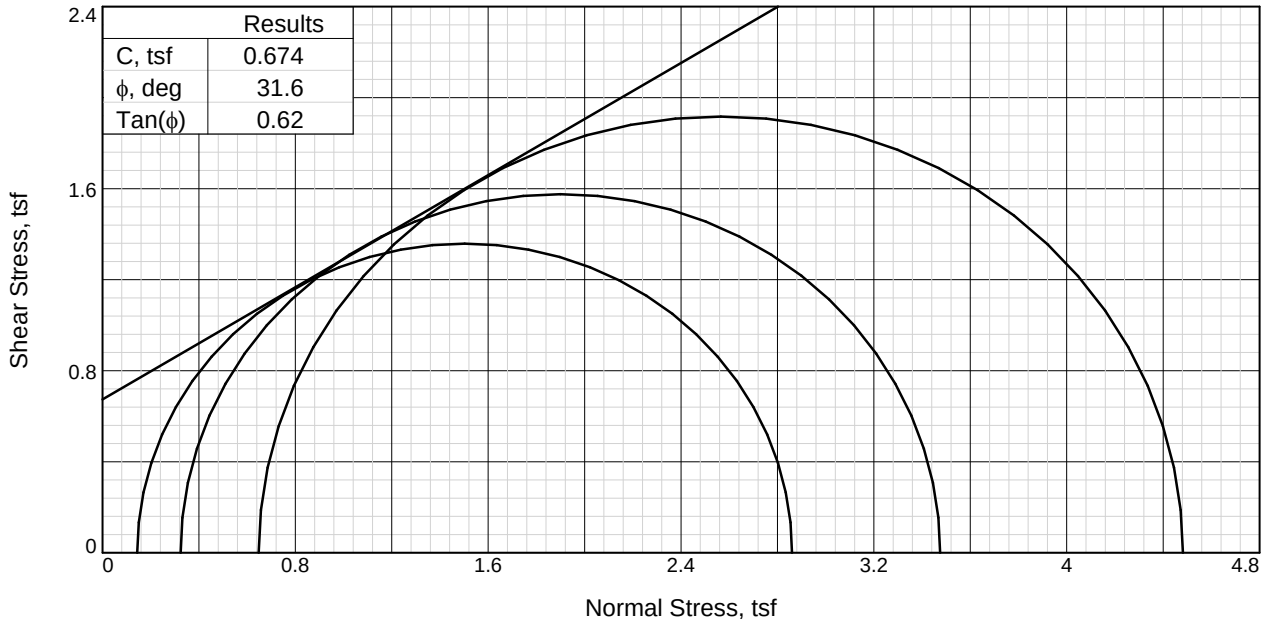


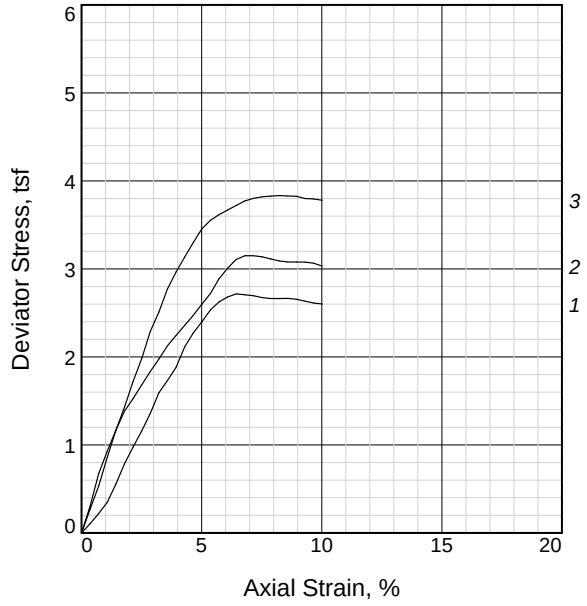


Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App55'South from North End and 20'East from West Edge
Sample Number: Proctor No. 2
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS





Sample No.		1	2	3
Initial	Water Content, %	14.3	14.3	14.3
	Dry Density, pcf	100.1	100.0	100.0
	Saturation, %	57.8	57.8	57.7
	Void Ratio	0.6530	0.6538	0.6551
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	24.1	24.3	24.4
	Dry Density, pcf	100.9	100.6	100.5
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.6398	0.6441	0.6462
	Diameter, in.	2.79	2.79	2.79
	Height, in.	5.58	5.59	5.59
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		2.72	3.15	3.83
Ult. Stress, tsf				
σ_1 Failure, tsf		2.86	3.48	4.48
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained
Sample Type: Recompacted
Description: Gray Silty fine to medium SAND (SM) with marine shell fragments

Assumed Specific Gravity= 2.65
Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

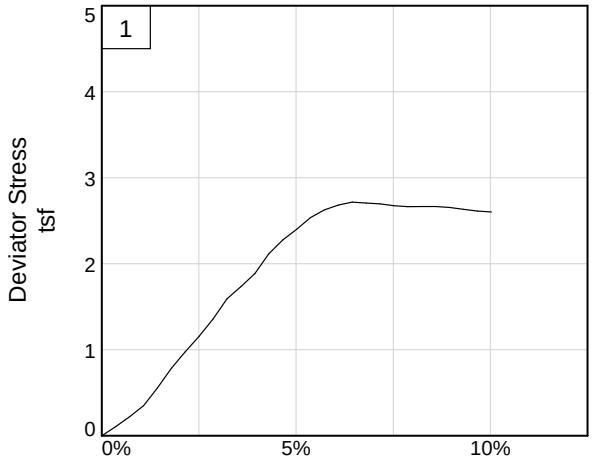
Location: App973'South from North End and 95'West from East Edge
Sample Number: Proctor No. 3
Proj. No.: EC10-166T **Date Sampled:**

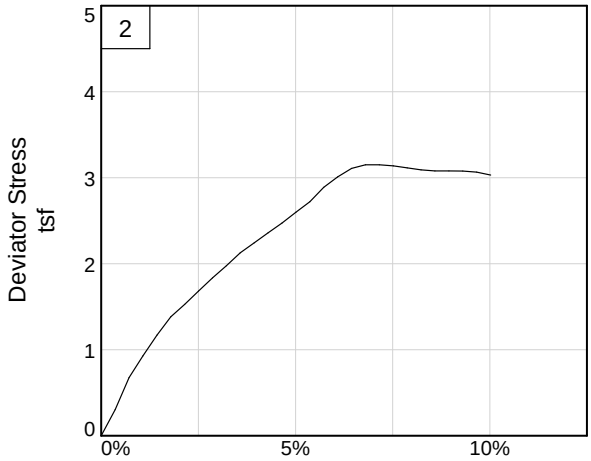
TRIAXIAL SHEAR TEST REPORT

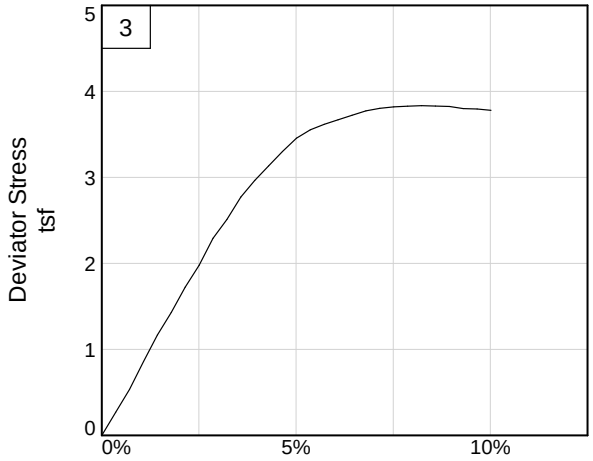
GET SOLUTIONS, INC.

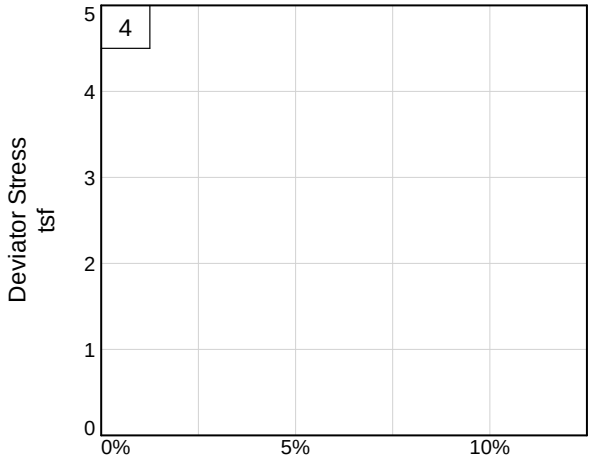
Figure T3

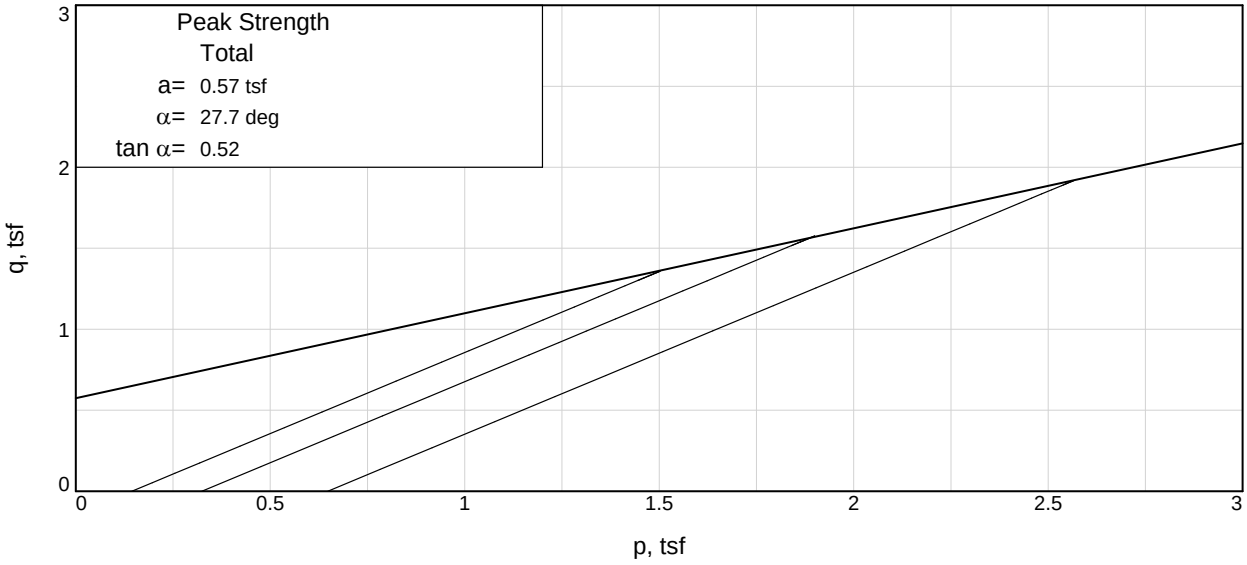
Tested By: PB **Checked By:** GS







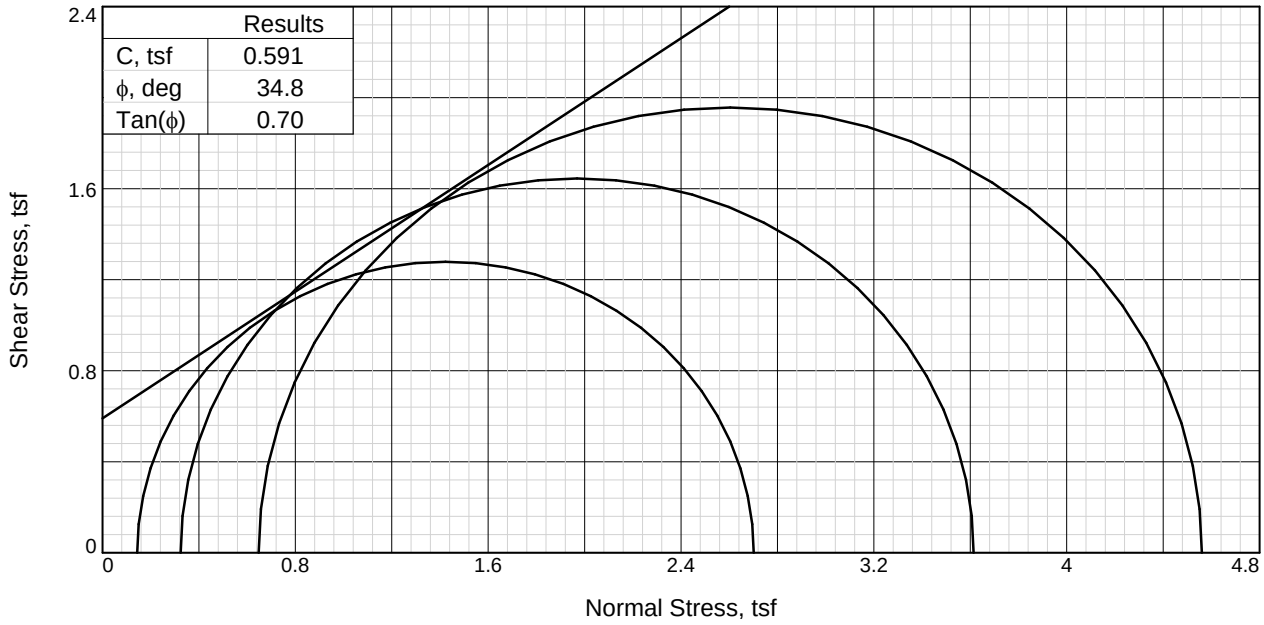


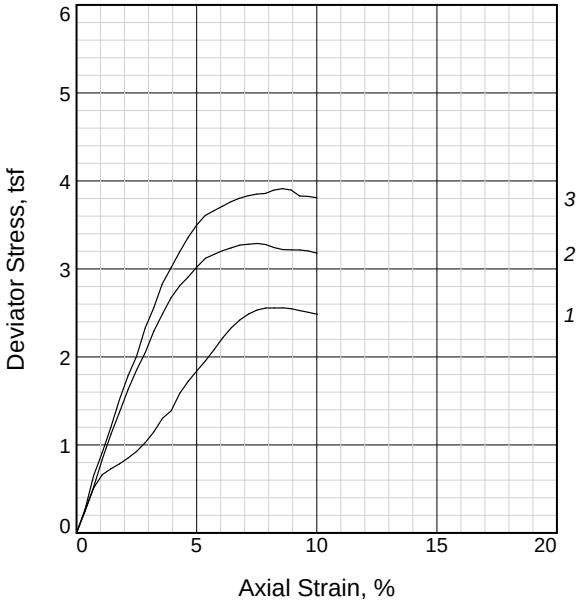


Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App973'South from North End and 95'West from East Edge
Sample Number: Proctor No. 3
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS





Sample No.		1	2	3
Initial	Water Content, %	13.2	13.2	13.2
	Dry Density, pcf	98.5	98.6	98.5
	Saturation, %	51.7	51.7	51.6
	Void Ratio	0.6794	0.6785	0.6800
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	25.1	25.2	25.7
	Dry Density, pcf	99.3	99.1	98.5
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.6659	0.6686	0.6800
	Diameter, in.	2.79	2.79	2.80
	Height, in.	5.58	5.59	5.60
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		2.56	3.29	3.91
Ult. Stress, tsf				
σ_1 Failure, tsf		2.70	3.61	4.56
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained

Sample Type: Recompacted

Description: Gray-Tan Silty fine SAND (SM) with Clay

Assumed Specific Gravity= 2.65

Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

Location: App156'North from South End and 51'East from West Edge

Sample Number: Proctor No. 4

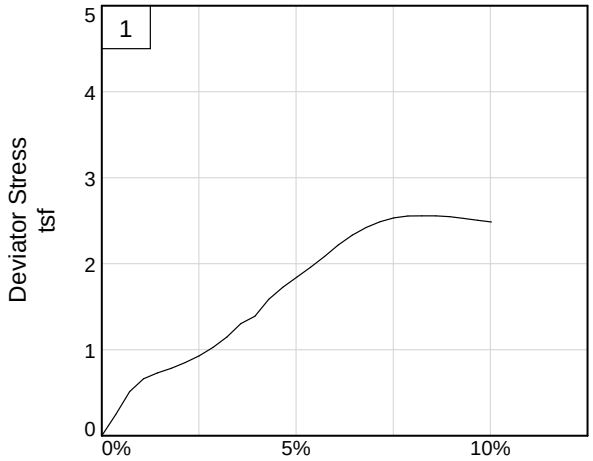
Proj. No.: EC10-166T **Date Sampled:**

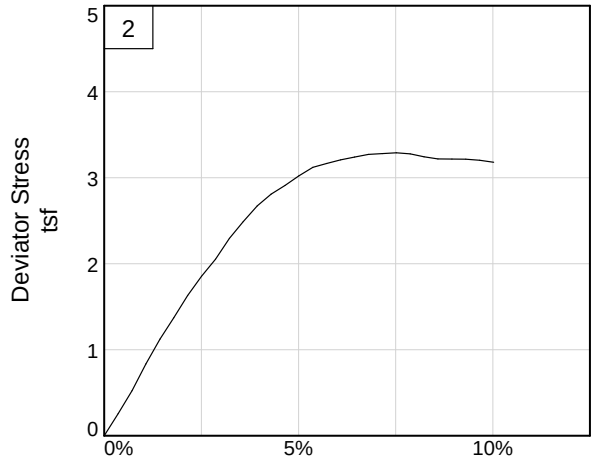
TRIAXIAL SHEAR TEST REPORT

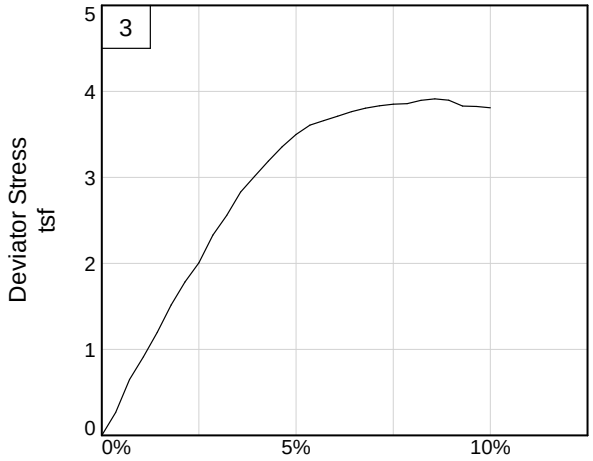
GET SOLUTIONS, INC.

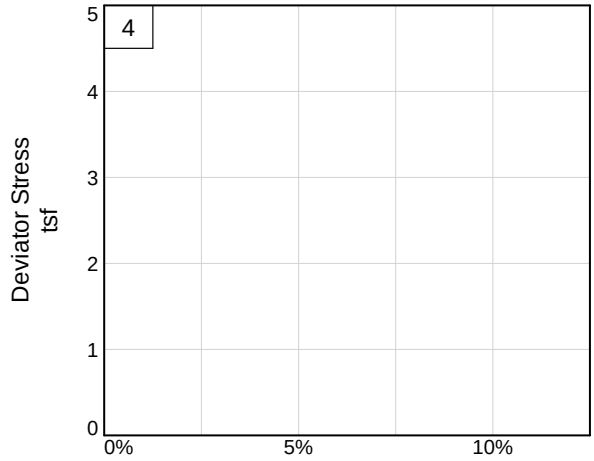
Figure T4

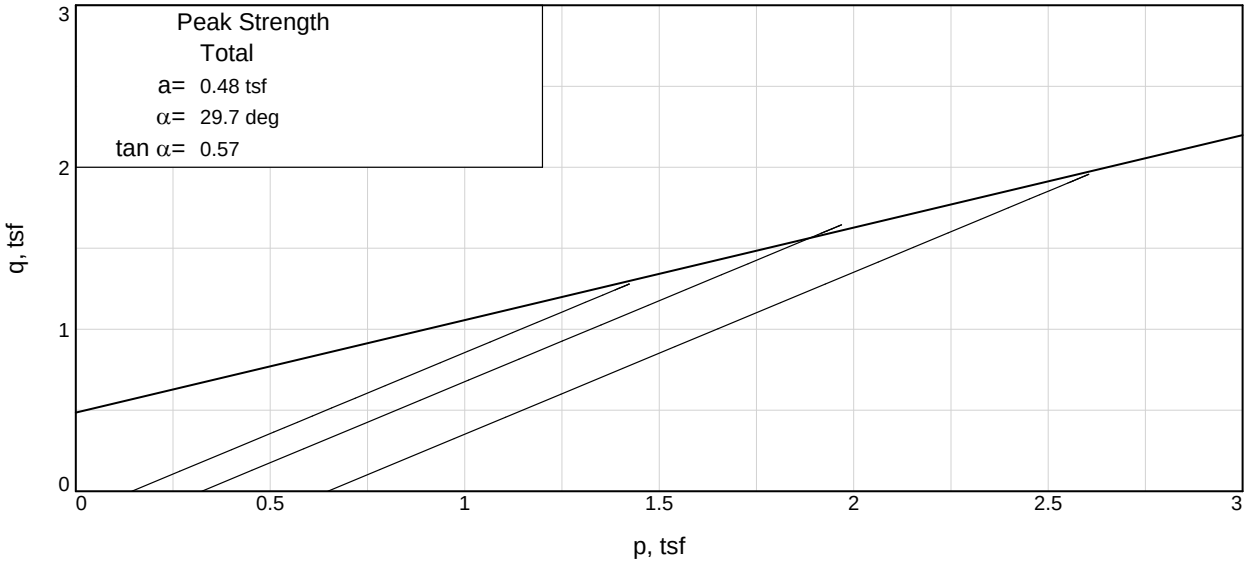
Tested By: PB **Checked By:** GS











Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App156'North from South End and 51'East from West Edge
Sample Number: Proctor No. 4
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/29/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear Temp. (˚F)
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	13.7	97.1	110.5	2	95%	98%	X		2' BFG	35º 50.182' N 75º 49.134' W
2	8.8	103.3	112.3	3	95%	98%	X		2' BFG	35º 50.182' N 75º 49.149' W
3	8.9	105.2	114.4	3	95%	100+%	X		2' BFG	35º 50.181' N 75º 49.160' W
4	14.9	102.8	118.1	3	95%	98%	X		2' BFG	35º 50.148' N 75º 49.129' W
5	14.5	103.9	118.9	3	95%	99%	X		2' BFG	35º 50.146' N 75º 49.142' W
6	14.6	104.8	120.1	3	95%	99%	X		2' BFG	35º 50.146' N 75º 49.155' W
7	13.5	105.4	119.7	3	95%	100%	X		2' BFG	35º 50.094' N 75º 49.123' W
8	13.0	105.6	119.3	3	95%	100%	X		2' BFG	35º 50.094' N 75º 49.137' W
9	12.9	105.8	119.4	3	95%	100%	X		2' BFG	35º 50.055' N 75º 49.115' W
10	13.6	104.7	118.9	3	95%	99%	X		2' BFG	35º 50.052' N 75º 49.127' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3 4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3 103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6%	17.8%	14.3% 13.2%
Description of Material Tested:	Tan SAND, Gray SAND	Field Testing Procedure:	ASTM D 6938		
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth		
Gauge Standardization counts:	Moisture: 659 Density: 2642		□ B) Backscatter		

Gauge make/model/serial #:	Troxler	3430	32867
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/29/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear Temp. (˚F)
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
11	7.2	107.3	115.1	3	95%	100+%	X		2' BFG	35º 50.946' N 75º 49.096' W
12	8.3	104.8	113.5	3	95%	100%	X		2' BFG	35º 50.969' N 75º 49.104' W
13	6.2	111.9	118.8	3	95%	100+%	X		2' BFG	35º 50.010' N 75º 49.113' W
14	9.2	108.9	118.9	3	95%	100+%	X		2' BFG	35º 50.022' N 75º 49.141' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3	4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6%	17.8%	14.3%	13.2%
Description of Material Tested:	Tan SAND, Gray SAND	Field Testing Procedure:	ASTM D 6938			
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth			
Gauge Standardization counts:	Moisture: 659 Density: 2642		□ B) Backscatter			

Gauge make/model/serial #:	Troxler	3430	32867
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/30/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 66
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	13.3	111.4	126.3	3	95%	100+%	x		3' BFG	35º 49.944' N 75º 49.098' W
2	11.0	111.0	124.1	3	95%	100+%	x		4' BFG	35º 49.944' N 75º 49.098' W
3	13.8	110.9	125.9	3	95%	100+%	x		5' BFG	35º 49.944' N 75º 49.098' W
4	10.9	111.4	123.5	3	95%	100+%	x		3' BFG	35º 50.001' N 75º 49.107' W
5	12.4	110.7	124.4	3	95%	100+%	x		4' BFG	35º 50.001' N 75º 49.107' W
6	12.7	110.6	124.7	3	95%	100+%	x		3' BFG	35º 50.042' N 75º 49.113' W
7	12.2	110.9	124.5	3	95%	100+%	x		4' BFG	35º 50.042'N 75º 49.113'W
8	15.6	109.3	126.3	3	95%	100+%	x		3' BFG	35º 50.100' N 75º 49.122' W
9	15.9	110.6	124.9	3	95%	100+%	x		4' BFG	35º 50.100' N 75º 49.122' W
10	15.2	108.4	124.9	3	95%	100+%	x		5' BFG	35º 50.100' N 75º 49.122' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Vibratory Roller	Proctor Number:	1	2	3	4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6%	17.8%	14.3%	13.2%
Description of Material Tested:	Gray SAND	Field Testing Procedure:	ASTM D 6938			
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth			
Gauge Standardization counts:	Moisture: 655 — Density: 2604		□ B) Backscatter			

Gauge make/model/serial #:	MAKE	MODEL	SERIAL #
	Troxler	3430	32867

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/30/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 66
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
11	10.9	110.2	122.2	3	95%	100+%	x		3' BFG	35º 50.142' N 75º 49.127' W
12	15.2	110.8	127.6	3	95%	100+%	x		4' BFG	35º 50.142' N 75º 49.127' W
13	11.1	109.7	121.8	3	95%	100+%	x		3' BFG	35º 50.188' N 75º 49.134' W
14	12.7	111.3	125.5	3	95%	100+%	x		4' BFG	35º 50.188' N 75º 49.134' W
15	13.6	111.9	126.2	3	95%	100+%	x		5' BFG	35º 50.188' N 75º 49.134' W
16	13.8	106.6	121.2	3	95%	100+%	x		3' BFG	35º 50.177' N 75º 49.162' W
17	13.6	109.1	123.9	3	95%	100+%	x		4' BFG	35º 50.177' N 75º 49.162' W
18	11.8	110.8	123.9	3	95%	100+%	x		3' BFG	35º 50.131' N 75º 49.157' W
19	13.7	108.5	123.5	3	95%	100+%	x		4' BFG	35º 50.131' N 75º 49.157' W
20	13.6	109.0	122.6	3	95%	100+%	x		5' BFG	35º 50.131' N 75º 49.157' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1 2 3 4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4 98.7 105.3 103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6% 17.8% 14.3% 13.2%
Description of Material Tested:	Gray SAND	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 655		□ B) Backscatter
Gauge make/model/serial #:	Troxler / 3430 / 32867 (MAKE / MODEL / SERIAL #)		

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/30/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:		Weather:	Clear — Temp. (˚F) 66
Grading Contractor:		General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
21	20.2	106.4	127.9	3	95%	100+%	x		3' BFG	35º 50.086' N 75º 49.153' W
22	16.8	107.5	125.5	3	95%	100+%	x		4' BFG	35º 50.086' N 75º 49.153' W
23	13.2	110.2	124.7	3	95%	100+%	x		3' BFG	35º 50.031' N 75º 49.145' W
24	14.2	109.6	123.7	3	95%	100+%	x		4' BFG	35º 50.031' N 75º 49.145' W
25	13.7	109.8	124.8	3	95%	100+%	x		3' BFG	35º 50.044' N 75º 49.125' W
26	12.6	111.1	125.8	3	95%	100+%	x		4' BFG	35º 50.044' N 75º 49.125' W
27	14.8	108.9	124.9	3	95%	100+%	x		3' BFG	35º 50.095' N 75º 49.134' W
28	14.9	109.5	124.1	3	95%	100+%	x		4' BFG	35º 50.095' N 75º 49.134' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1 2 3 4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4 98.7 105.3 103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6% 17.8% 14.3% 13.2%
Description of Material Tested:	Gray SAND	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 655 Density: 2604		□ B) Backscatter

Gauge make/model/serial #:	Troxler	3430	32867
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
504 East Elizabeth Street; Suite 2
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	5/25/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Overcast Temp. (˚F) 75
Grading Contractor:	Glover	General Test Location:	Lots 2, 4, 6, 8, 10, 12, 14

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	17.6	99.8	117.4	2	95%	100+%	x		1' BFG	Approx. center of Lot 2' 35.40 05' N 75.49.125' W
2	22.4	101.0	123.6	6	95%	98%	x		2' BFG	Approx. center of Lot 2' 35.40 05' N 75.49.125' W
3	21.3	98.2	119.1	2	95%	100%	x		1' BFG	Approx. center of Lot 4 35.49.996' N 75.49.132' W
4	20.7	100.2	120.9	6	95%	97%	x		2' BFG	Approx. center of Lot 4 35.49.996' N 75.49.132' W
5	22.7	94.8	116.4	2	95%	96%	x		1' BFG	Approx. center of Lot 6 35.50.040' N 75.48.138' W
6	10.9	110.0	122.0	5	95%	100%	x		2' BFG	Approx. center of Lot 6 35.50.040' N 75.48.138' W
7	20.4	98.1	118.5	2	95%	99%	x		1' BFG	Approx. center of Lot 8 35.50.084' N 75.49.145' W
8	24.7	98.3	122.6	2	95%	100%	x		2' BFG	Approx. center of Lot 8 35.50.084' N 75.49.145' W
9	22.4	97.3	119.1	2	95%	98%	x		1' BFG	Approx. center of Lot 10 35.50.128' N 75.49.151' W
10	17.7	107.4	126.4	5	95%	99%	x		2' BFG	Approx. center of Lot 10 35.50.128' N 75.49.151' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3	4	5	6
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7	108.5	103.4
Test Elevation Established By:	Geotechnics	Optimum Moisture (%):	16.6%	17.8%	4.3%	13.2%	16.0%	14.1%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938					
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth					
Gauge Standardization counts:	Moisture: 602 Density: 2754		□ B) Backscatter					
Gauge make/model/serial #:	Troxler / 3430 / 31918 (MAKE / MODEL / SERIAL #)							

Remarks:

G E T Solutions, Inc.
504 East Elizabeth Street; Suite 2
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	5/25/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Overcast Temp. (˚F) 75
Grading Contractor:	Glover	General Test Location:	Lots 2, 4, 6, 8, 10, 12, 14

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
11	20.3	100.8	121.4	6	95%	97%	X		1' BFG	Approx. center of lot 12 35.50.173' N 75.49.157' W
12	19.9	99.7	119.5	6	95%	96%	X		2' BFG	Approx. center of lot 12 35.50.173' N 75.49.157' W
13	21.8	97.2	118.4	2	95%	98%	x		1' BFG	Approx. center of lot 14 35.50.215' N 75.49.164' W
14	18.6	101.3	120.1	6	95%	98%	x		2' BFG	Approx. center of lot 14 35.50.215' N 75.49.164' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3	4	5	6
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7	108.5	103.4
Test Elevation Established By:	Geotechnics	Optimum Moisture (%):	16.6%	17.8%	4.3%	13.2%	16.0%	14.1%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938					
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth					
Gauge Standardization counts:	Moisture: 602 Density: 2754		□ B) Backscatter					
Gauge make/model/serial #:	Troxler / 3430 / 31918 (MAKE / MODEL / SERIAL #)							

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	6/11/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear Temp. (˚F) 75
Grading Contractor:	Glover	General Test Location:	Cell 4 Pad; Sub-Lots 5, 6, 7, 8, 9, 10

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	17.8	105.3	119.8	5	95%	97%	x		FG	Lot 5; 35.50.027' N 74.49.115' W
2	11.0	111.8	124.1	5	95%	100+%	x		FG	Lot 4; 35.50.027' N 75.49.137' W
3	15.9	104.9	121.5	5	95%	97%	x		FG	Lot 7 35.50.070' N 75.49.117' W
4	14.3	107.6	123.0	5	95%	99%	x		FG	Lot 6 35.50.068' N 75.49.140' W
5	16.1	105.1	122.0	5	95%	97%	x		FG	Lot 9 35.50.121' N 75.49.122' W
6	13.1	108.7	122.9	5	95%	100%	x		FG	Lot 10 35.50.119' N 75.49.147' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	5
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	108.5
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.0%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 602		Density: 2768
			☐ B) Backscatter

Gauge make/model/serial #:	Troxler	3430	31918
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	6/14/10
Project Location:	Dare County North Carolina	Technician:	G. Gallop
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 90
Grading Contractor:	Glover	General Test Location:	Cell 4

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	16.3	101.8	118.4	6	95%	98%	x		FG	35º 49.969 N / 75º 49.101' W
2	21.4	102.3	124.2	6	95%	99%	x		1' BFG	35º 49.969' N / 75º 49.101' W
3	13.8	101.6	115.7	6	95%	98%	x		FG	35º 50.000' N / 75º 49.110' W
4	25.7	95.2	119.7	2	95%	96%	x		1' BFG	35º 50.000' N / 75º 49.110' W
5	11.3	105.9	117.9	5	95%	98%	x		FG	35º 50.053' N / 75º 49.115' W
6	26.0	95.0	119.7	2	95%	96%	x		1' BFG	35º 50.053' N / 75º 49.115' W
7	11.7	104.8	117.0	5	95%	96%	x		FG	35º 50.084' N / 75º 49.123' W
8	24.7	96.4	120.2	2	95%	98%	x		1' BFG	35º 50.084' N / 75º 49.123' W
9	10.9	108.0	119.8	5	95%	99%	x		FG	35º 50.137' N / 75º 49.127' W
10	17.3	99.8	117.6	6	95%	96%	x		1' BFG	35º 50.137' N / 75º 49.127' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	2 5 6
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	98.7 108.5 103.4
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	17.8% 16.0% 14.1%
Description of Material Tested:	On-site Excavated Soils	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 705 Density: 2497		□ B) Backscatter
Gauge make/model/serial #:	Troxler / 3430 / 31918 (MAKE / MODEL / SERIAL #)		

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	6/17/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 89
Grading Contractor:	Glover	General Test Location:	Cell 4

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	13.5	105.0	119.2	5	95%	97%	x		FG	Lot 12; 35º 50.166' N 75º 49.158' W
2	14.1	107.6	122.8	5	95%	99%	x		FG	Lot 14; 35º 50.211' N 75º 49.164' W
3	11.9	108.0	120.9	5	95%	99%	X		FG	Lot 15; 35º 50.258' N 75º 49.146' W
4	13.5	106.9	121.3	5	95%	98%	X		1' BFG	Lot 15; 35º 50.258' N 75º 49.146' W
5	15.0	104.5	120.2	3	95%	100%	x		2' BFG	Lot 15; 35º 50.258' N 75º 49.146' W
6	15.3	104.0	119.9	3	95%	100%	x		3' BFG	Lot 15; 35º 50.258' N 75º 49.146' W
7	9.7	108.5	119.0	5	95%	100%	x		FG	Lot 16; 35º 50.253' N 75º 49.171' W
8	12.0	105.5	118.1	5	95%	97%	x		1' FG	Lot 16; 35º 50.253' N 75º 49.171' W
9	12.8	103.4	116.6	3	95%	100%	x		2' FG	Lot 16; 35º 50.253' N 75º 49.171' W
10	15.0	103.0	118.5	3	95%	100%	x		3' FG	Lot 16; 35º 50.253' N 75º 49.171' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	3 5
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	105.3 108.5
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	14.3% 16.0%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: Density:		□ B) Backscatter

Gauge make/model/serial #:	MAKE	MODEL	SERIAL #
	Troxler	3430	31918

Remarks:

Appendix A-6

Geotechnics
INTEGRITY IN TESTING

April 5, 2010

Project No. 2010-652-01

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

2200 Westinghouse Boulevard • Suite 103 • Raleigh, NC 27604 • Phone (919) 876-0405 • Fax (919) 876-0460

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MOISTURE CONTENT

ASTM D 2216 (SOP-S1)

Client	GLOVER CONSTRUCTION
Client Reference	DARE CO. C&D LF.
Project No.	2010-652-01

Lab ID	.001	.002	.003
Boring No.	STOCKPILE	STOCKPILE	STOCKPILE
Depth (ft)	NA	NA	NA
Sample No.	CF-01	CF-02	CF-03
Tare Number	832	839	842
Wt. of Tare & WS (gm)	470.32	500.93	445.95
Wt. of Tare & DS (gm)	447.85	476.57	427.96
Wt. of Tare (gm)	259.03	258.03	255.77
Wt. of Water (gm)	22.47	24.36	17.99
Wt. of DS (gm)	188.82	218.54	172.19
Water Content (%)	**11.9**	**11.1**	**10.4**

Notes : *NA*

Tested By *DAW* *Date* *4/2/2010* *Checked By* GEM *Date* 4-5-10

DCN: CT-S1 DATE 6-30-98 REVISION: 2

\\Server\data drive\Data Sheets\[WATCONT.XLS]Sheet1

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C & D LF	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-01
Lab ID	2010-652-01-01	Visual Description	**BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/1/2010 *Checked By* GEM *Date* 4-2-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-03 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C & D LF	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-02
Lab ID	2010-652-01-02	Visual Description	**BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/1/2010 *Checked By* GEM *Date* 4-2-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-02 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C & D LF	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-03
Lab ID	2010-652-01-03	Visual Description	**LIGHT BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/1/2010 *Checked By* GEM *Date* 4-2-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-03 Limit-(NP).xls]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-01
Lab ID	2010-652-01-01	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By DAW Date 4/2/2010 Checked By GEM Date 4-5-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *S:\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-01 SIEVON REV 4.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-01
Lab ID	2010-652-01-01	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	832	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	470.32	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	447.85	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	259.03	Weight of Tare (gm)	NA
Weight of Water (gm)	22.47	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	188.82	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	188.82
Dry Weight - 3/4" Sample (gm)	164.9	Weight of minus #200 material (gm)	23.94
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	164.88
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	1.81	1.0	1.0	99.0	**99.0**
#10	2.00	0.86	0.5	1.4	98.6	**98.6**
#20	0.850	2.08	1.1	2.5	97.5	**97.5**
#40	0.425	3.41	1.8	4.3	95.7	**95.7**
#60	0.250	21.15	11.2	15.5	84.5	**84.5**
#140	0.106	110.92	58.7	74.3	25.7	**25.7**
#200	0.075	24.65	13.1	87.3	12.7	**12.7**
Pan	-	23.94	12.7	100.0	-	**-**

Tested By DAW Date 4/2/2010 Checked By GEM Date 4-5-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-01 SIEVON REV 4.xls]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-02
Lab ID	2010-652-01-02	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By DAW Date 4/2/2010 Checked By GEM Date 4-5-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *S:\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-02 SIEVON REV 4.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-02
Lab ID	2010-652-01-02	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	839	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	500.93	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	476.57	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	258.03	Weight of Tare (gm)	NA
Weight of Water (gm)	24.36	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	218.54	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	218.54
Dry Weight - 3/4" Sample (gm)	190.5	Weight of minus #200 material (gm)	28.00
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	190.54
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.36	0.2	0.2	99.8	**99.8**
#10	2.00	0.37	0.2	0.3	99.7	**99.7**
#20	0.850	0.93	0.4	0.8	99.2	**99.2**
#40	0.425	3.51	1.6	2.4	97.6	**97.6**
#60	0.250	25.82	11.8	14.2	85.8	**85.8**
#140	0.106	139.12	63.7	77.8	22.2	**22.2**
#200	0.075	20.43	9.3	87.2	12.8	**12.8**
Pan	-	28.00	12.8	100.0	-	**-**

Tested By DAW Date 4/2/2010 Checked By GEM Date 4-5-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-02 SIEVON REV 4.xls]Sheet1*

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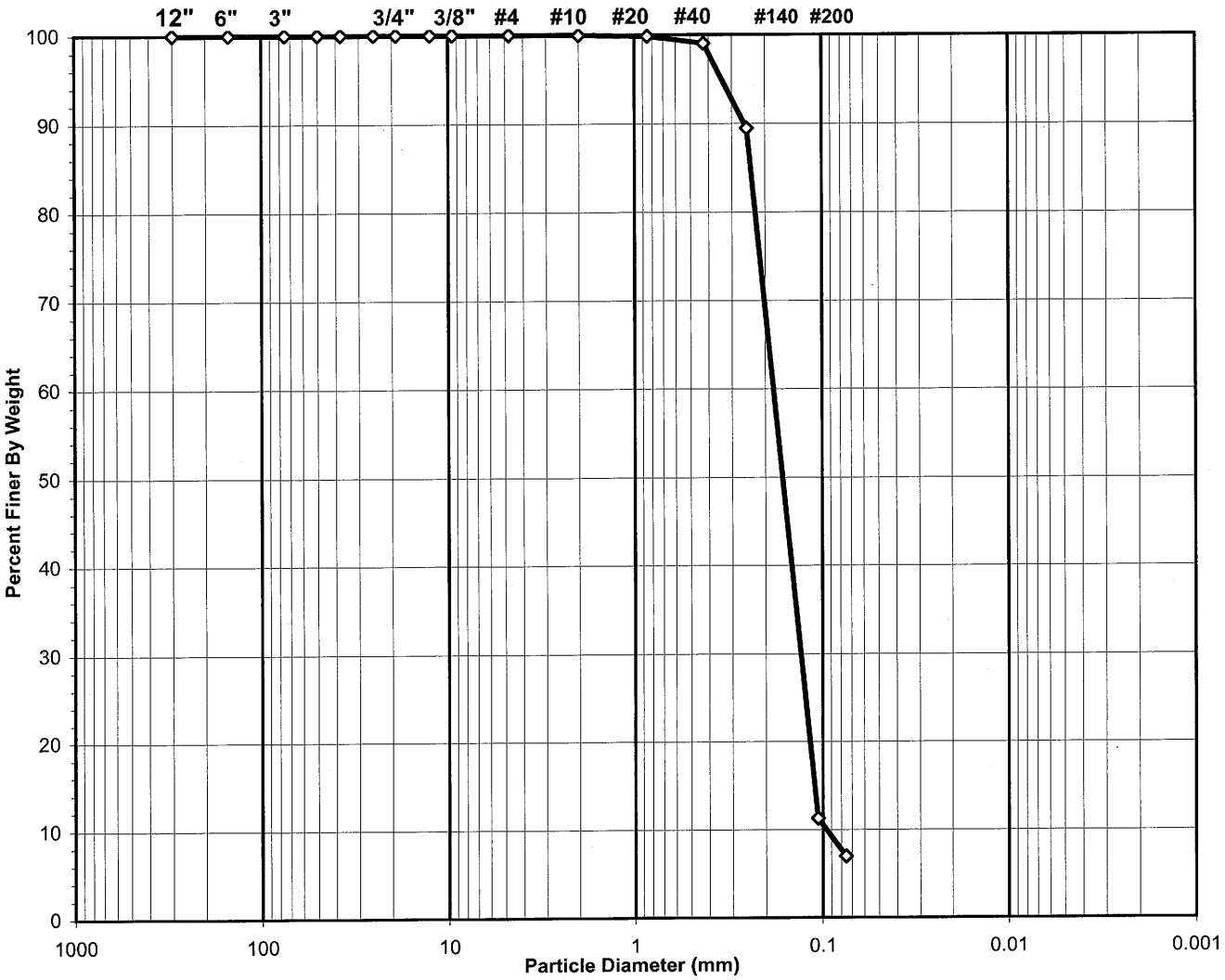
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-03
Lab ID	2010-652-01-03	Soil Color	**LIGHT BROWN**

	SIEVE ANALYSIS		***HYDROMETER***
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol	***SP-SM, TESTED (NON PLASTIC FINES)***	**D60 =**	**0.2**	**CC =**	**1.0**
USCS Classification	***POORLY GRADED SAND WITH SILT***	**D30 =**	**0.1**	**CU =**	**1.9**
		D10 =	**0.1**		

Tested By DAW Date 4/2/2010 Checked By GAM Date 4-5-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-03 SIEVON REV 4.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-03
Lab ID	2010-652-01-03	Soil Color	**LIGHT BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	842	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	445.95	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	427.96	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	255.77	Weight of Tare (gm)	NA
Weight of Water (gm)	17.99	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	172.19	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**10.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	172.19
Dry Weight - 3/4" Sample (gm)	160.2	Weight of minus #200 material (gm)	11.99
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	160.20
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.08	0.0	0.0	100.0	**100.0**
#20	0.850	0.22	0.1	0.2	99.8	**99.8**
#40	0.425	1.37	0.8	1.0	99.0	**99.0**
#60	0.250	16.48	9.6	10.5	89.5	**89.5**
#140	0.106	134.63	78.2	88.7	11.3	**11.3**
#200	0.075	7.42	4.3	93.0	7.0	**7.0**
Pan	-	11.99	7.0	100.0	-	**-**

Tested By DAW Date 4/2/2010 Checked By GEM Date 4-5-10

DCN: CT-S3C DATE 6-25-98 REVISIONS *S:\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-03 SIEVON REV 4.xls]Sheet1*

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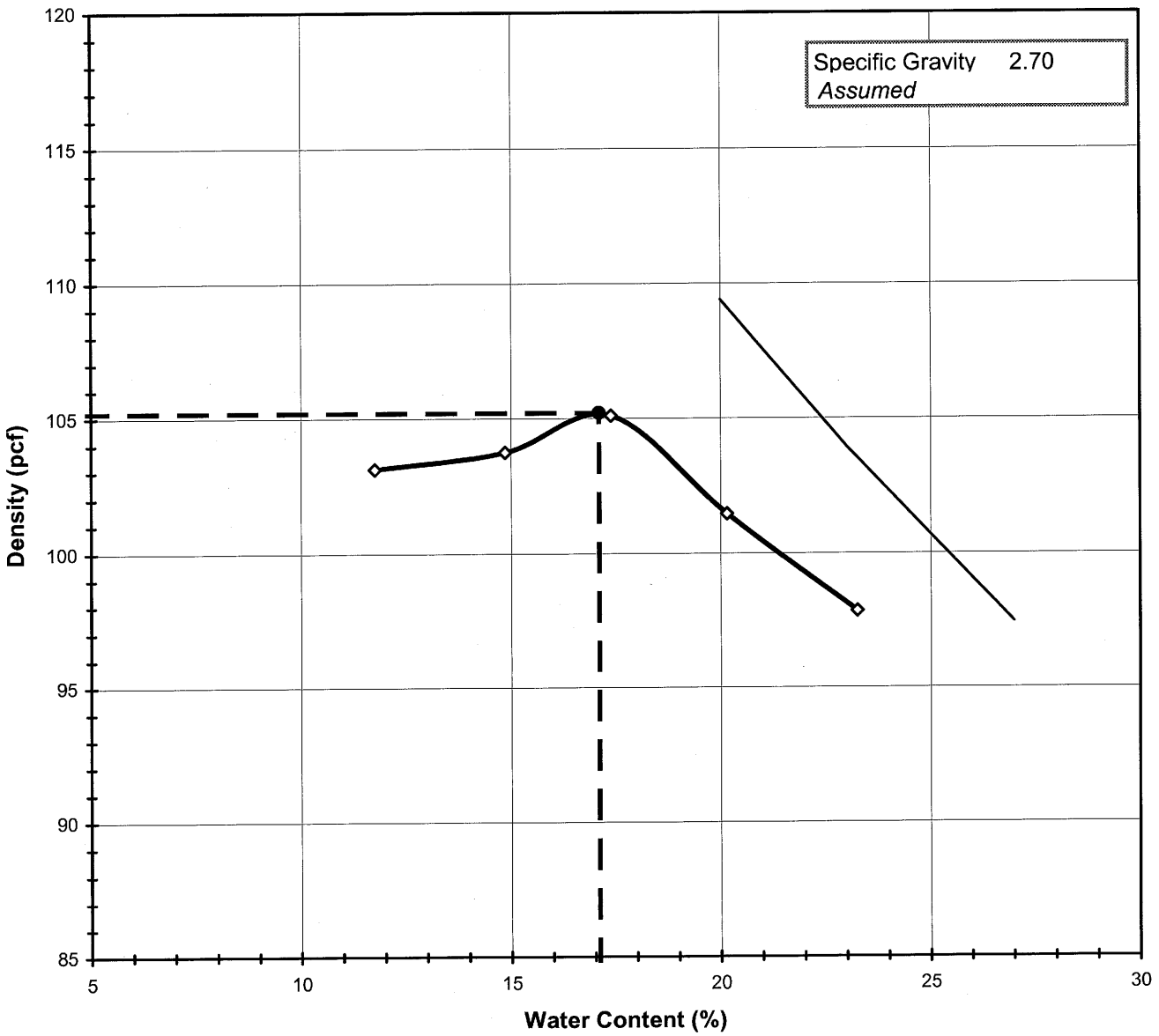
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-01
Lab ID	2010-652-01-01	Test Method	**STANDARD**

Visual Description BROWN SILTY SAND

Optimum Water Content **17.1**
Maximum Dry Density **105.2**



Tested By SD *Date* 4/2/2010 *Checked By* GEM *Date* 4-5-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-01 Proctor.xls]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-01
Lab ID	2010-652-01-01		

Visual Description BROWN SILTY SAND

Total Weight of the Sample (gm)	27216
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4311
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6051	6110	6173	6151	6132
Wt.of Mold (gm)	4311	4311	4311	4311	4311
Wt. of WS	1740	1799	1862	1840	1821
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	300	308	317	399	311
Wt. of Tare & WS (gm)	388.84	453.50	444.40	470.80	551.40
Wt. of Tare & DS (gm)	359.61	409.21	391.06	406.35	463.31
Wt. of Tare (gm)	111.10	111.10	84.20	86.50	84.40
Wt. of Water (gm)	29.23	44.29	53.34	64.45	88.09
Wt. of DS (gm)	248.51	298.11	306.86	319.85	378.91

Wet Density (gm/cc)	1.85	1.91	1.98	1.95	1.93
Wet Density (pcf)	115.3	119.2	123.4	121.9	120.6
Moisture Content (%)	**11.8**	**14.9**	**17.4**	**20.2**	**23.2**
Dry Density (pcf)	**103.1**	**103.7**	**105.1**	**101.5**	**97.9**

Zero Air Voids

Moisture Content (%)	20.0	23.0	27.0
Dry Unit Weight (pcf)	109.4	103.9	97.4

Tested By SD *Date* 4/2/2010 *Checked By* GEM *Date* 4-5-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-01 Proctor.xls]Sheet1

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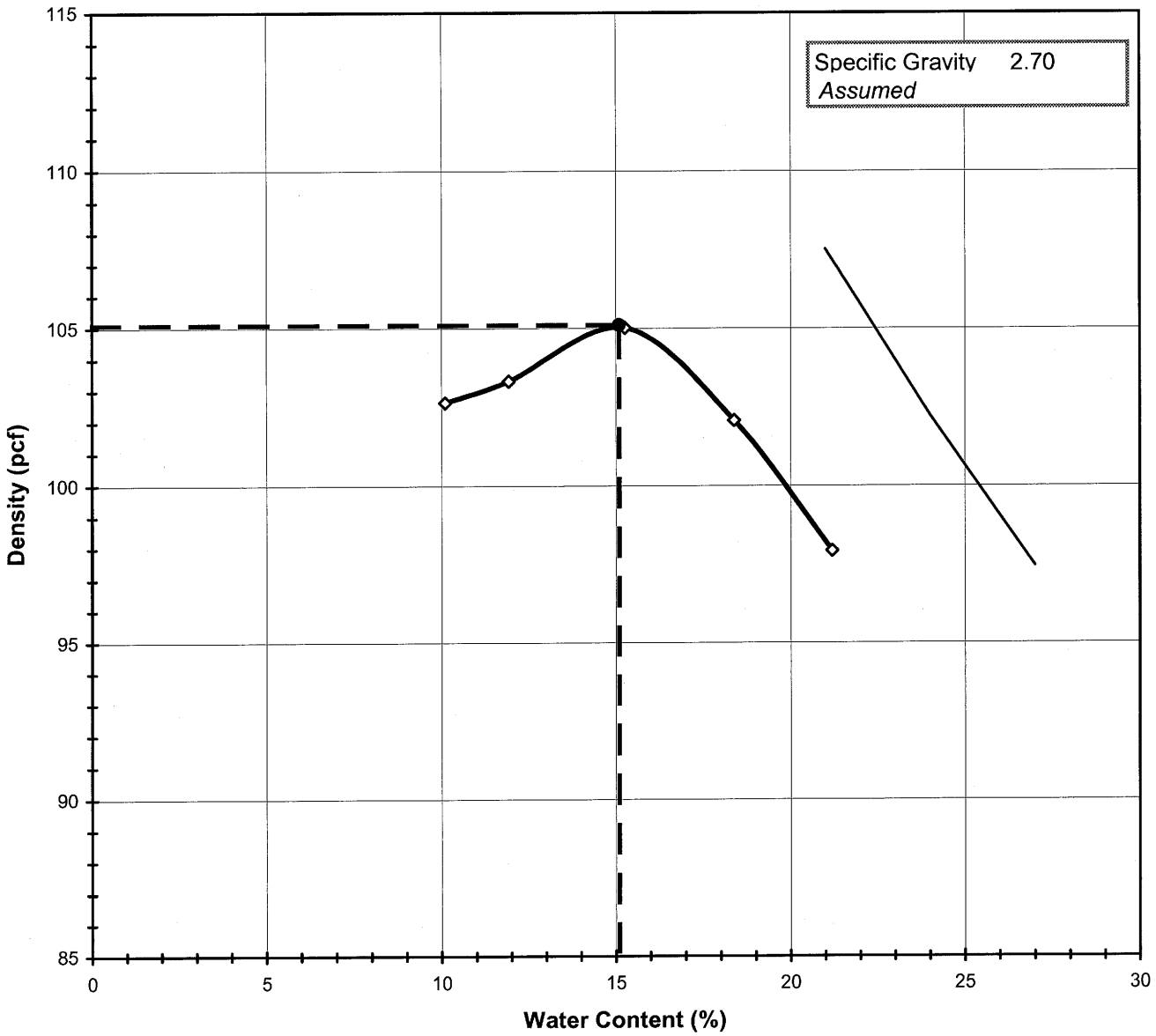
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-02
Lab ID	2010-652-01-02	Test Method	**STANDARD**

Visual Description BROWN SILTY SAND

Optimum Water Content **15.1**
Maximum Dry Density **105.1**



Tested By SD *Date* 4/2/2010 *Checked By* GEM *Date* 4-5-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-01-02 Proctor.xls]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-02
Lab ID	2010-652-01-02		

Visual Description BROWN SILTY SAND

Total Weight of the Sample (gm)	16969
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4311
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6017	6057	6138	6135	6103
Wt.of Mold (gm)	4311	4311	4311	4311	4311
Wt. of WS	1706	1746	1827	1824	1792
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	310	312	306	314	K-7
Wt. of Tare & WS (gm)	378.30	469.50	553.60	320.00	540.20
Wt. of Tare & DS (gm)	353.68	428.46	492.07	283.47	465.08
Wt. of Tare (gm)	110.00	84.40	89.10	84.70	110.70
Wt. of Water (gm)	24.62	41.04	61.53	36.53	75.12
Wt. of DS (gm)	243.68	344.06	402.97	198.77	354.38

Wet Density (gm/cc)	1.81	1.85	1.94	1.94	1.90
Wet Density (pcf)	113.0	115.6	121.0	120.8	118.7
Moisture Content (%)	**10.1**	**11.9**	**15.3**	**18.4**	**21.2**
Dry Density (pcf)	**102.6**	**103.3**	**105.0**	**102.1**	**97.9**

Zero Air Voids

Moisture Content (%)	21.0	24.0	27.0
Dry Unit Weight (pcf)	107.5	102.2	97.4

Tested By SD *Date* 4/2/2010 *Checked By* GAM *Date* 4-5-10

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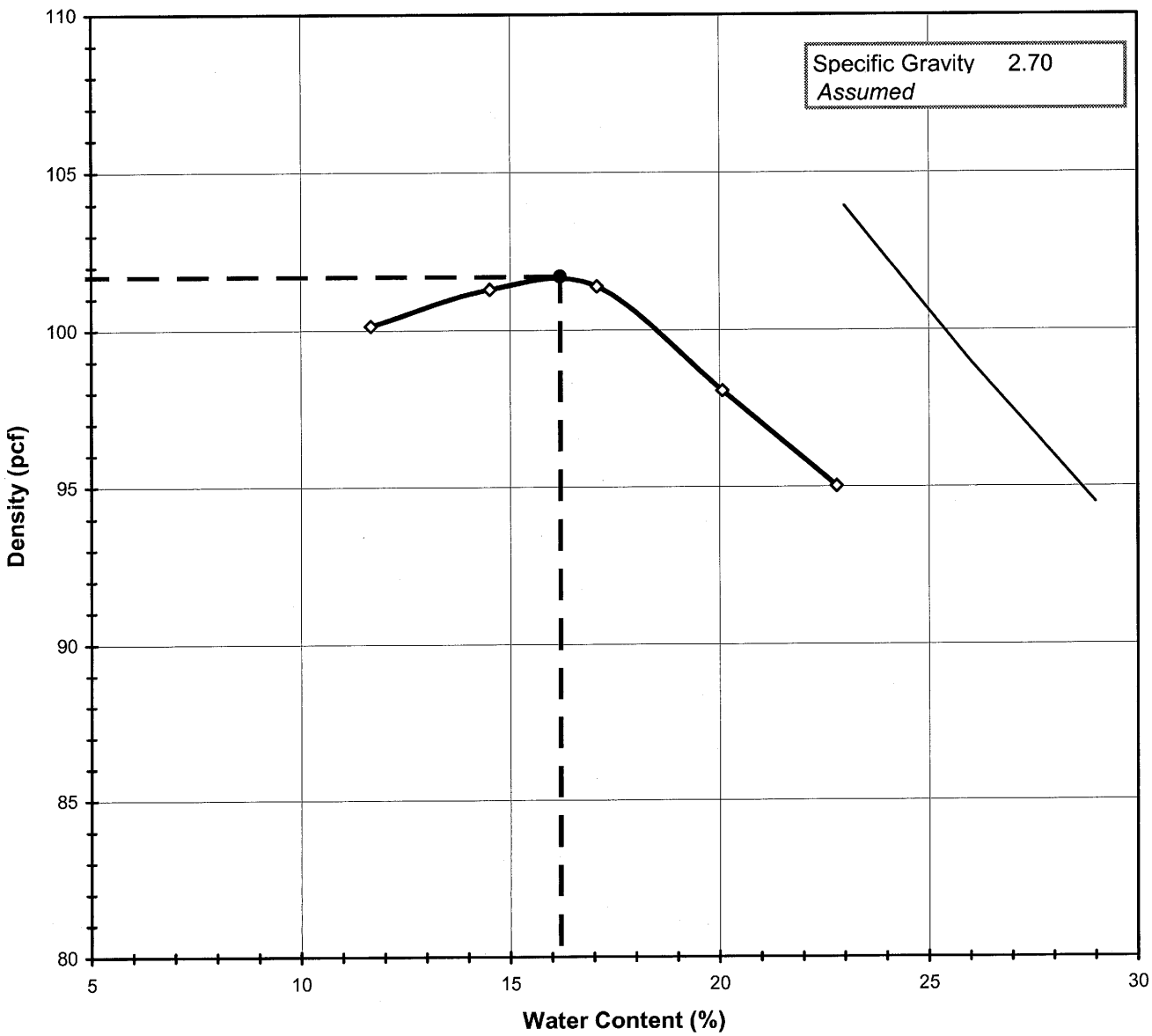
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-03
Lab ID	2010-652-01-03	Test Method	**STANDARD**

Visual Description LIGHT BROWN POORLY GRADED SAND WITH SILT

Optimum Water Content **16.2**
Maximum Dry Density **101.7**



Tested By SD *Date* 4/2/2010 *Checked By* GEM *Date* 4-5-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-651 TRIANGLE GRADING\[2010-652-01-03 Proctor.xls]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	NA
Project No.	2010-652-01	Sample No.	CF-03
Lab ID	2010-652-01-03		

Visual Description: LIGHT BROWN POORLY GRADED SAND WITH SILT

Total Weight of the Sample (gm)	18670
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4312
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6000	6063	6104	6089	6073
Wt.of Mold (gm)	4312	4312	4312	4312	4312
Wt. of WS	1688	1751	1792	1777	1762
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	309	307	398	818	827
Wt. of Tare & WS (gm)	424.30	389.10	409.10	470.10	508.30
Wt. of Tare & DS (gm)	391.31	353.81	361.64	414.42	439.44
Wt. of Tare (gm)	108.70	110.70	83.70	137.00	137.50
Wt. of Water (gm)	32.99	35.29	47.46	55.68	68.86
Wt. of DS (gm)	282.61	243.11	277.94	277.42	301.94

Wet Density (gm/cc)	1.79	1.86	1.90	1.89	1.87
Wet Density (pcf)	111.8	116.0	118.7	117.7	116.7
Moisture Content (%)	**11.7**	**14.5**	**17.1**	**20.1**	**22.8**
Dry Density (pcf)	**100.1**	**101.3**	**101.4**	**98.1**	**95.0**

Zero Air Voids

Moisture Content (%)	23.0	26.0	29.0
Dry Unit Weight (pcf)	103.9	99.0	94.5

Tested By SD *Date* 4/2/2010 *Checked By* GEM *Date* 4-5-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-651 TRIANGLE GRADING\[2010-652-01-03 Proctor.xls]Sheet1

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INTEGRITY IN TESTING

April 14, 2010

Project No. 2010-652-02

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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MOISTURE CONTENT

ASTM D 2216 (SOP-S1)

Client	GLOVER CONSTRUCTION
Client Reference	DARE CO. C&D LF
Project No.	2010-652-02

Lab ID	.001	.002
Boring No.	STOCKPILE	STOCKPILE
Depth (ft)	BL	BL
Sample No.	CF-04	CF-05
Tare Number	211	840
Wt. of Tare & WS (gm)	692.03	687.97
Wt. of Tare & DS (gm)	633.70	637.79
Wt. of Tare (gm)	171.25	262.67
Wt. of Water (gm)	58.33	50.18
Wt. of DS (gm)	462.45	375.12
Water Content (%)	**12.6**	**13.4**

Notes : *NA*

Tested By *SD* *Date* *4/14/2010* *Checked By* GZM *Date* 4-14-10

DCN: CT-S1 DATE 6-30-98 REVISION: 2

\\Server\data drive\Data Sheets\[WATCONT.XLS]Sheet1

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-04
Lab ID	2010-652-02-01	Visual Description	**GRAY BROWN**

(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/14/2010 *Checked By* GEM *Date* 4-14-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-02-02 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-05
Lab ID	2010-652-02-02	Visual Description	**GRAY**

(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/14/2010 *Checked By* GM *Date* 4-14-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-04
Lab ID	2010-652-02-01	Soil Color	**GRAY BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 4/14/2010 Checked By GM Date 4-14-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-02-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-04
Lab ID	2010-652-02-01	Soil Color	**GRAY BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	211	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	692.03	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	633.70	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.25	Weight of Tare (gm)	NA
Weight of Water (gm)	58.33	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	462.45	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**12.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	462.45
Dry Weight - 3/4" Sample (gm)	386.4	Weight of minus #200 material (gm)	76.06
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	386.39
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.46	0.1	0.1	99.9	**99.9**
#4	4.75	0.74	0.2	0.3	99.7	**99.7**
#10	2.00	1.52	0.3	0.6	99.4	**99.4**
#20	0.850	5.37	1.2	1.7	98.3	**98.3**
#40	0.425	10.27	2.2	4.0	96.0	**96.0**
#60	0.250	78.30	16.9	20.9	79.1	**79.1**
#140	0.106	235.24	50.9	71.8	28.2	**28.2**
#200	0.075	54.49	11.8	83.6	16.4	**16.4**
Pan	-	76.06	16.4	100.0	-	**-**

Tested By SD Date 4/14/2010 Checked By GBM Date 4-14-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-02-01 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-05
Lab ID	2010-652-02-02	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 4/14/2010 Checked By GM Date 4-14-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-02-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-05
Lab ID	2010-652-02-02	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	840	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	687.97	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	637.79	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	262.67	Weight of Tare (gm)	NA
Weight of Water (gm)	50.18	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	375.12	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	375.12
Dry Weight - 3/4" Sample (gm)	311.0	Weight of minus #200 material (gm)	64.17
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	310.95
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.66	0.2	0.2	99.8	**99.8**
#10	2.00	1.21	0.3	0.5	99.5	**99.5**
#20	0.850	3.37	0.9	1.4	98.6	**98.6**
#40	0.425	6.04	1.6	3.0	97.0	**97.0**
#60	0.250	59.07	15.7	18.8	81.2	**81.2**
#140	0.106	200.10	53.3	72.1	27.9	**27.9**
#200	0.075	40.50	10.8	82.9	17.1	**17.1**
Pan	-	64.17	17.1	100.0	-	**-**

Tested By SD Date 4/14/2010 Checked By GBM Date 4-14-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *\\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-02-02 SIEVON REV 4.XLS]Sheet1*

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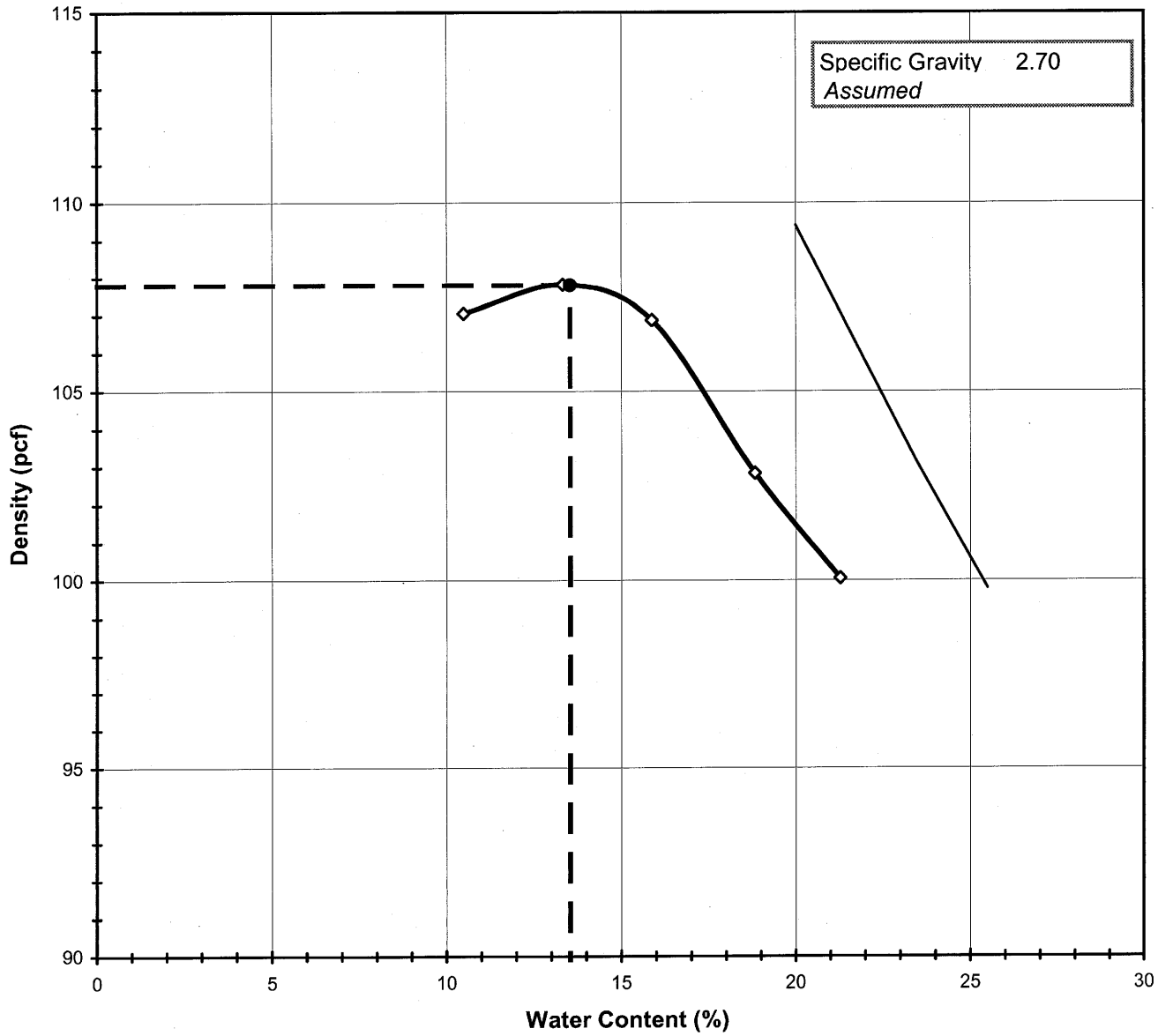
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-04
Lab ID	2010-652-02-01	Test Method	**STANDARD**

Visual Description GRAY BROWN SILTY SAND

Optimum Water Content **13.5**
Maximum Dry Density **107.8**



Tested By SD *Date* 4/13/2010 *Checked By* GM *Date* 4-14-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-02-01 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-02	Sample No.	CF-04
Lab ID	2010-652-02-01		

Visual Description GRAY BROWN SILTY SAND

Total Weight of the Sample (gm)	20911
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4311
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6096	6155	6180	6155	6142
Wt.of Mold (gm)	4311	4311	4311	4311	4311
Wt. of WS	1786	1845	1870	1845	1832
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	309	298	K-7	308	318
Wt. of Tare & WS (gm)	530.50	478.60	468.50	575.90	477.10
Wt. of Tare & DS (gm)	490.56	432.21	419.47	502.34	408.64
Wt. of Tare (gm)	109.80	84.20	110.70	111.60	87.00
Wt. of Water (gm)	39.94	46.39	49.03	73.56	68.46
Wt. of DS (gm)	380.76	348.01	308.77	390.74	321.64

Wet Density (gm/cc)	1.90	1.96	1.98	1.96	1.94
Wet Density (pcf)	118.3	122.2	123.8	122.2	121.3
Moisture Content (%)	**10.5**	**13.3**	**15.9**	**18.8**	**21.3**
Dry Density (pcf)	**107.1**	**107.8**	**106.9**	**102.8**	**100.0**

Zero Air Voids

Moisture Content (%)	20.0	23.5	25.5
Dry Unit Weight (pcf)	109.4	103.1	99.8

Tested By SD *Date* 4/13/2010 *Checked By* GEM *Date* 4-14-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-02-01 Proctor.XLS]Sheet1

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INTEGRITY IN TESTING

April 21, 2010

Project No. 2010-652-03

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-03	Sample No.	CF-06
Lab ID	2010-652-03-01	Visual Description	**BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/19/2010 *Checked By* GTM *Date* 4-20-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-01 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 1
Project No.	2010-652-03	Sample No.	CF-07
Lab ID	2010-652-03-02	Visual Description	**BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/19/2010 *Checked By* GEM *Date* 4-20-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 2
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-08
Lab ID	2010-652-03-03	Soil Description	**BROWN LEAN CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

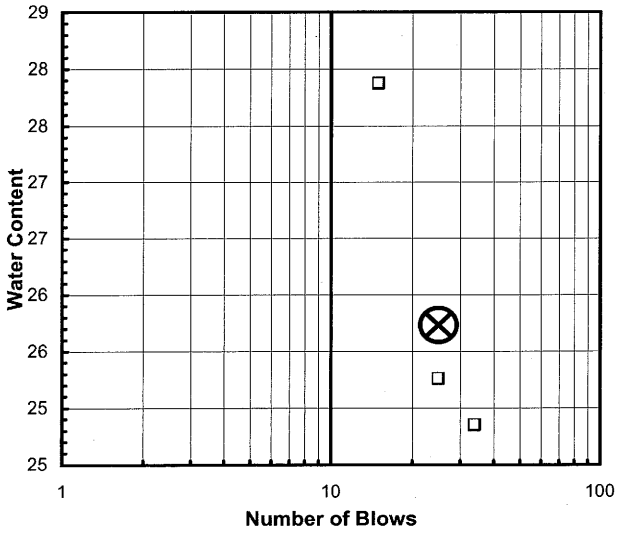
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	F	V	Q	**MULTIPOINT**
Wt. of Tare & WS (gm)	27.66	28.64	27.35	
Wt. of Tare & DS (gm)	24.92	25.94	24.92	
Wt. of Tare (gm)	15.09	15.25	15.14	
Wt. of Water (gm)	2.7	2.7	2.4	
Wt. of DS (gm)	9.8	10.7	9.8	
Moisture Content (%)	**27.9**	**25.3**	**24.8**	
Number of Blows	**15**	**25**	**34**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	M	S	
Wt. of Tare & WS (gm)	21.44	21.28	
Wt. of Tare & DS (gm)	20.47	20.35	
Wt. of Tare (gm)	15.11	15.18	
Wt. of Water (gm)	1.0	0.9	
Wt. of DS (gm)	5.4	5.2	
Moisture Content (%)	**18.1**	**18.0**	**0.1**

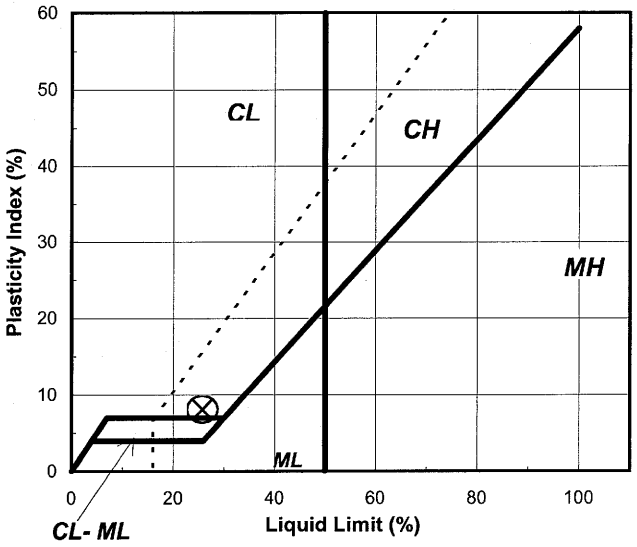
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**26**
Plastic Limit (%)	**18**
Plasticity Index (%)	**8**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



Tested By SD *Date* 4/20/2010 *Checked By* GM *Date* 4-21-10

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 3
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-09
Lab ID	2010-652-03-04	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/19/2010 *Checked By* GEM *Date* 4-20-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-05 SIEVON REV 4.XLS]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 4
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-10
Lab ID	2010-652-03-05	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/19/2010 *Checked By* GEM *Date* 4-20-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-01 Limit-(NP).xls]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-03	Sample No.	CF-06
Lab ID	2010-652-03-01	Soil Color	**BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By DAW Date 4/21/2010 Checked By GEM Date 4-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-01 SIEVON REV 4.XLS]Sheet1*

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INTEGRITY IN TESTING

WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	BL
Project No.	2010-652-03	Sample No.	CF-06
Lab ID	2010-652-03-01	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	842	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	669.51	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	616.81	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	255.81	Weight of Tare (gm)	NA
Weight of Water (gm)	52.70	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	361.00	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	361.00
Dry Weight - 3/4" Sample (gm)	308.7	Weight of minus #200 material (gm)	52.33
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	308.67
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	1.37	0.4	0.4	99.6	**99.6**
#10	2.00	0.26	0.1	0.5	99.5	**99.5**
#20	0.850	1.26	0.3	0.8	99.2	**99.2**
#40	0.425	5.02	1.4	2.2	97.8	**97.8**
#60	0.250	69.88	19.4	21.5	78.5	**78.5**
#140	0.106	205.28	56.9	78.4	21.6	**21.6**
#200	0.075	25.60	7.1	85.5	14.5	**14.5**
Pan	-	52.33	14.5	100.0	-	-

Tested By DAW Date 4/21/2010 Checked By GEM Date 4-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-01 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 1
Project No.	2010-652-03	Sample No.	CF-07
Lab ID	2010-652-03-02	Soil Color	**BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 4/20/2010 Checked By GDM Date 4-20-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 1
Project No.	2010-652-03	Sample No.	CF-07
Lab ID	2010-652-03-02	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	213	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	587.08	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	543.06	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	173.23	Weight of Tare (gm)	NA
Weight of Water (gm)	44.02	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	369.83	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	369.83
Dry Weight - 3/4" Sample (gm)	318.2	Weight of minus #200 material (gm)	51.63
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	318.20
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	1.83	0.5	0.5	99.5	**99.5**
#10	2.00	1.24	0.3	0.8	99.2	**99.2**
#20	0.850	2.86	0.8	1.6	98.4	**98.4**
#40	0.425	5.11	1.4	3.0	97.0	**97.0**
#60	0.250	55.49	15.0	18.0	82.0	**82.0**
#140	0.106	223.69	60.5	78.5	21.5	**21.5**
#200	0.075	27.98	7.6	86.0	14.0	**14.0**
Pan	-	51.63	14.0	100.0	-	**-**

Tested By SD Date 4/20/2010 Checked By GEM Date 4-20-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-02 SIEVON REV 4.XLS]Sheet1*

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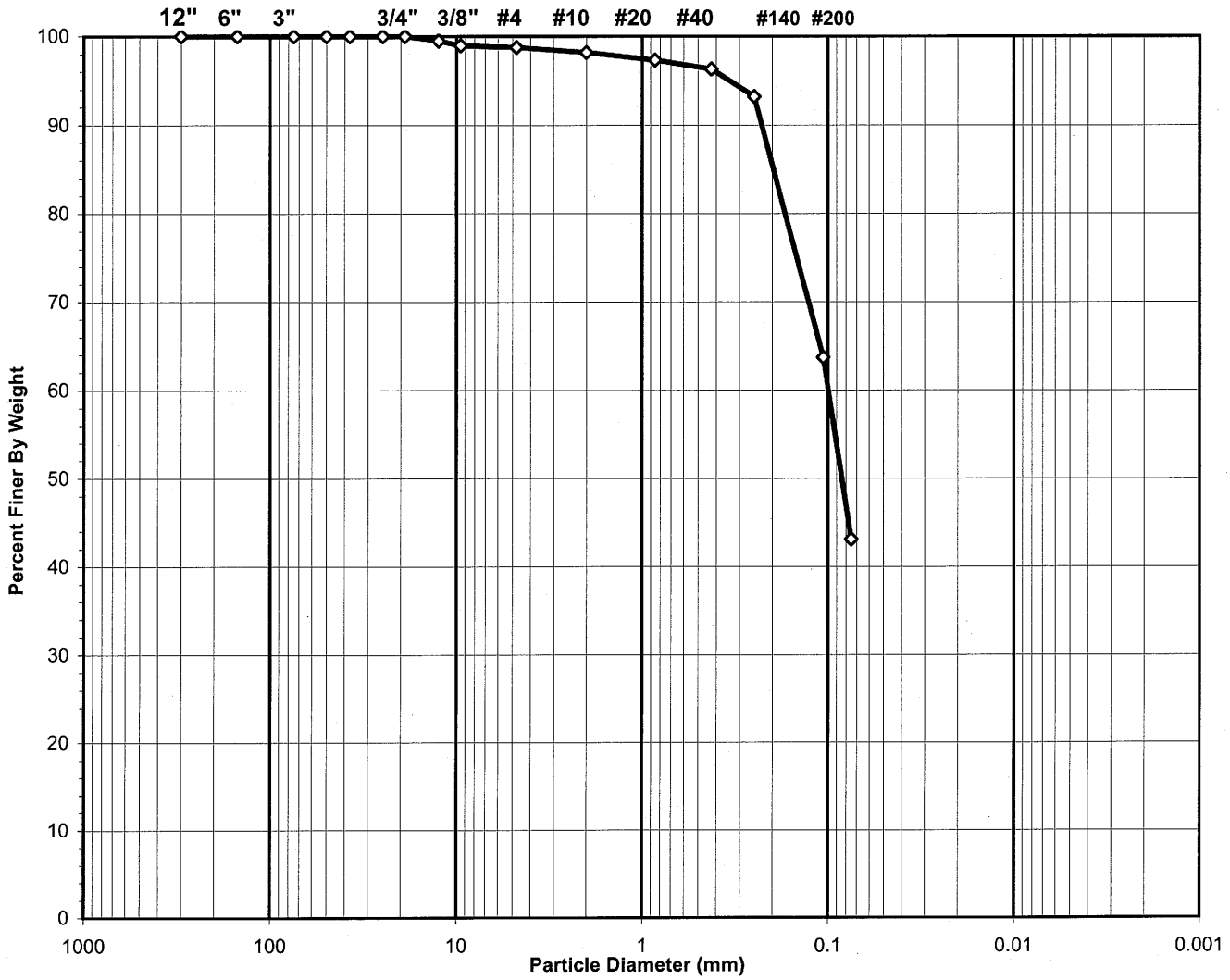
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 2
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-08
Lab ID	2010-652-03-03	Soil Color	**BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***SC, TESTED***

USCS Classification ***CLAYEY SAND***

Tested By SD Date 4/20/2010 Checked By GEM Date 4-21-10

 DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-03 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 2
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-08
Lab ID	2010-652-03-03	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	211	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	593.42	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	537.91	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.18	Weight of Tare (gm)	NA
Weight of Water (gm)	55.51	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	366.73	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	366.73
Dry Weight - 3/4" Sample (gm)	208.7	Weight of minus #200 material (gm)	158.06
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	208.67
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	1.79	0.5	0.5	99.5	**99.5**
3/8"	9.50	2.03	0.6	1.0	99.0	**99.0**
#4	4.75	0.69	0.2	1.2	98.8	**98.8**
#10	2.00	2.18	0.6	1.8	98.2	**98.2**
#20	0.850	3.21	0.9	2.7	97.3	**97.3**
#40	0.425	3.70	1.0	3.7	96.3	**96.3**
#60	0.250	11.25	3.1	6.8	93.2	**93.2**
#140	0.106	108.12	29.5	36.3	63.7	**63.7**
#200	0.075	75.70	20.6	56.9	43.1	**43.1**
Pan	-	158.06	43.1	100.0	-	-

Tested By SD Date 4/20/2010 Checked By GEM Date 4-21-10

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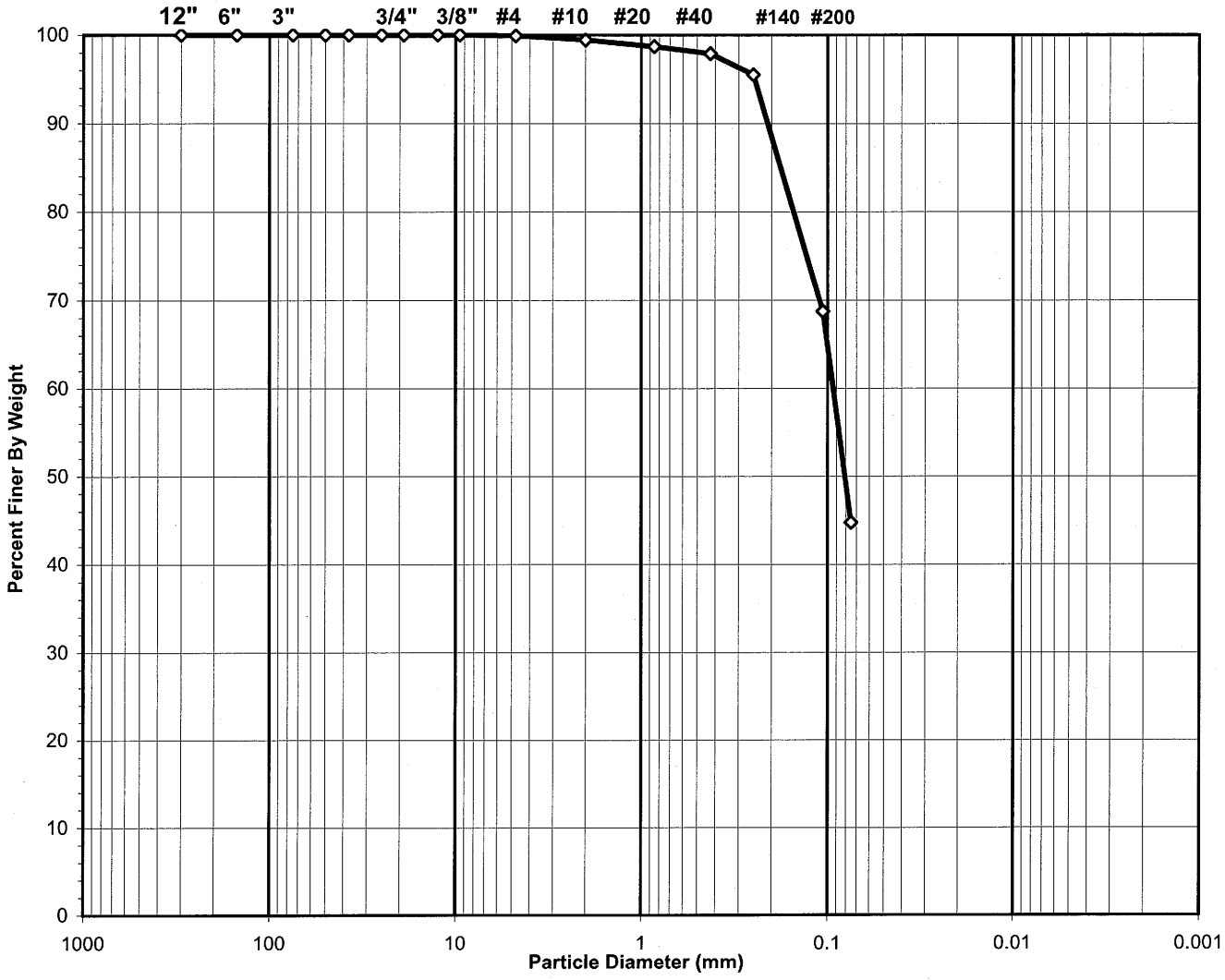
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 3
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-09
Lab ID	2010-652-03-04	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay



USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 4/20/2010 Checked By GEM Date 4-20-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-04 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 3
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-09
Lab ID	2010-652-03-04	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	214	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	735.72	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	676.80	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.32	Weight of Tare (gm)	NA
Weight of Water (gm)	58.92	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	505.48	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	505.48
Dry Weight - 3/4" Sample (gm)	279.4	Weight of minus #200 material (gm)	226.11
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	279.37
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.55	0.1	0.1	99.9	**99.9**
#10	2.00	2.37	0.5	0.6	99.4	**99.4**
#20	0.850	3.74	0.7	1.3	98.7	**98.7**
#40	0.425	4.11	0.8	2.1	97.9	**97.9**
#60	0.250	11.92	2.4	4.5	95.5	**95.5**
#140	0.106	135.37	26.8	31.3	68.7	**68.7**
#200	0.075	121.31	24.0	55.3	44.7	**44.7**
Pan	-	226.11	44.7	100.0	-	**-**

Tested By SD Date 4/20/2010 Checked By GEM Date 4-20-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-04 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 4
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-10
Lab ID	2010-652-03-05	Soil Color	**GRAY**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 4/20/2010 Checked By GM Date 4-20-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-05 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 4
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-10
Lab ID	2010-652-03-05	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	215	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	654.92	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	571.60	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	172.35	Weight of Tare (gm)	NA
Weight of Water (gm)	83.32	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	399.25	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**20.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	399.25
Dry Weight - 3/4" Sample (gm)	293.2	Weight of minus #200 material (gm)	106.02
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	293.23
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.53	0.1	0.1	99.9	**99.9**
#10	2.00	1.11	0.3	0.4	99.6	**99.6**
#20	0.850	1.26	0.3	0.7	99.3	**99.3**
#40	0.425	2.21	0.6	1.3	98.7	**98.7**
#60	0.250	6.41	1.6	2.9	97.1	**97.1**
#140	0.106	169.34	42.4	45.3	54.7	**54.7**
#200	0.075	112.37	28.1	73.4	26.6	**26.6**
Pan	-	106.02	26.6	100.0	-	-

Tested By SD Date 4/20/2010 Checked By GEM Date 4-20-10

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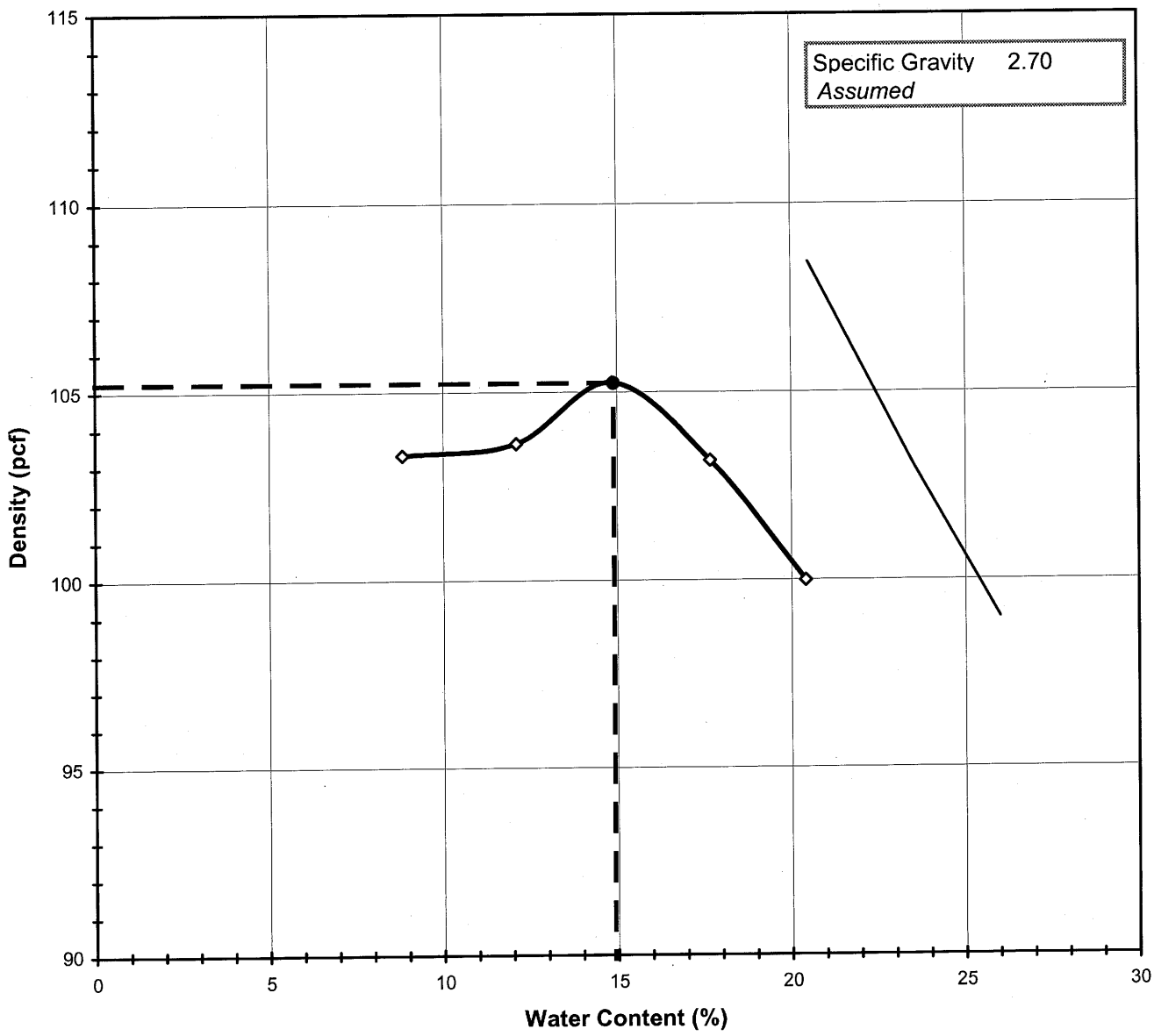
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. D&D LF	Depth (ft)	BL
Project No.	2010-652-03	Sample No.	CF-06
Lab ID	2010-652-03-01	Test Method	**STANDARD**

Visual Description BROWN SILTY SAND

Optimum Water Content **14.9**
Maximum Dry Density **105.2**



Tested By SD *Date* 4/20/2010 *Checked By* GEM *Date* 4-21-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-01 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. D&D LF	Depth (ft)	BL
Project No.	2010-652-03	Sample No.	CF-06
Lab ID	2010-652-03-01		

Visual Description BROWN SILTY SAND

Total Weight of the Sample (gm)	23380
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4311
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6009	6065	6136	6144	6128
Wt.of Mold (gm)	4311	4311	4311	4311	4311
Wt. of WS	1698	1754	1825	1833	1817
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	308	317	318	309	398
Wt. of Tare & WS (gm)	455.40	478.70	457.00	512.60	509.30
Wt. of Tare & DS (gm)	427.50	436.10	409.10	452.10	437.30
Wt. of Tare (gm)	111.40	84.30	86.90	109.80	84.50
Wt. of Water (gm)	27.90	42.60	47.90	60.50	72.00
Wt. of DS (gm)	316.10	351.80	322.20	342.30	352.80

Wet Density (gm/cc)	1.80	1.86	1.94	1.95	1.93
Wet Density (pcf)	112.5	116.2	120.9	121.4	120.4
Moisture Content (%)	**8.8**	**12.1**	**14.9**	**17.7**	**20.4**
Dry Density (pcf)	**103.3**	**103.6**	**105.2**	**103.2**	**100.0**

Zero Air Voids

Moisture Content (%)	20.5	23.5	26.0
Dry Unit Weight (pcf)	108.5	103.1	99.0

Tested By SD *Date* 4/20/2010 *Checked By* GM *Date* 4-21-10

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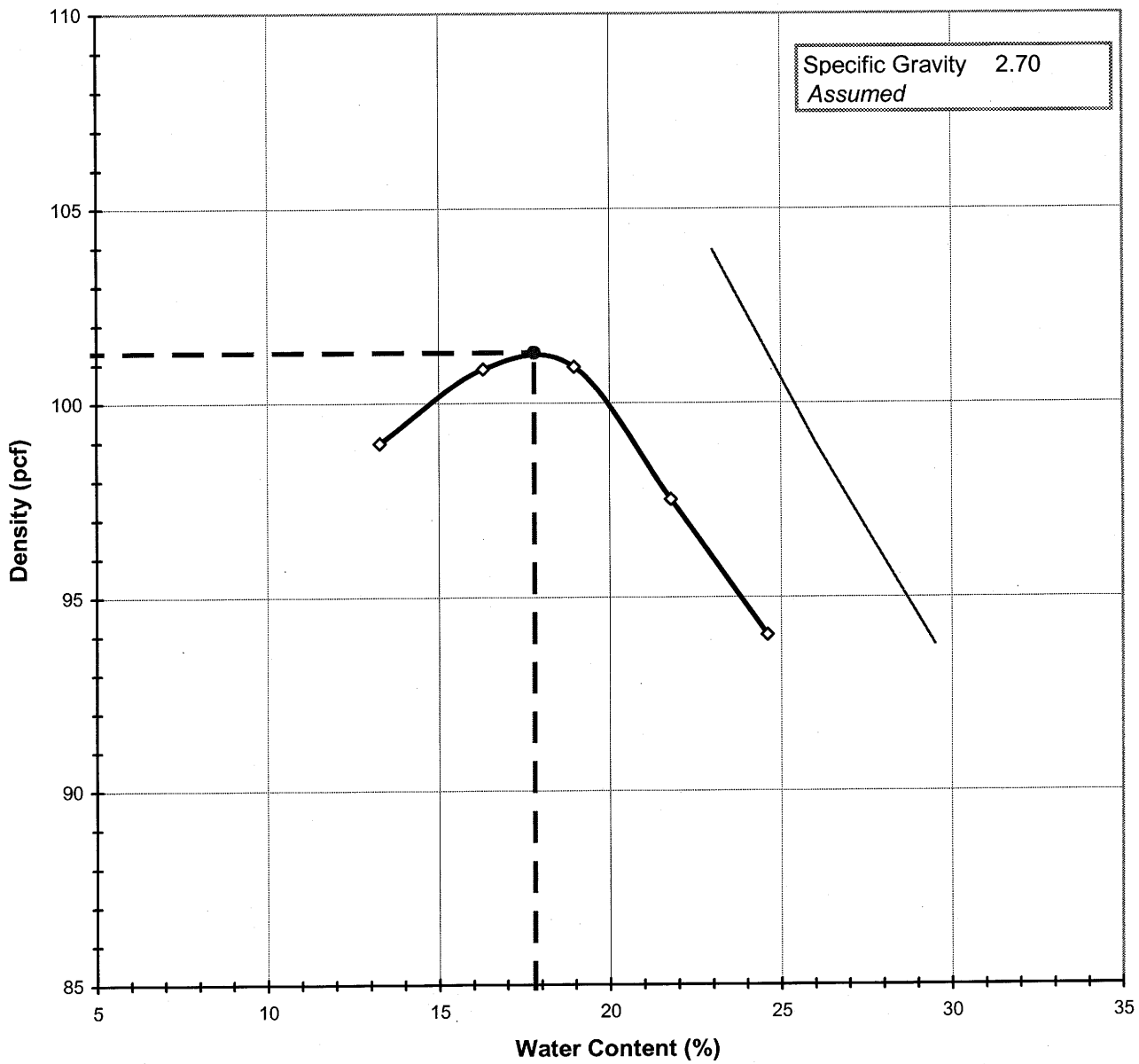
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 4
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-10
Lab ID	2010-652-03-05	Test Method	**STANDARD**

Visual Description GRAY SILTY SAND

Optimum Water Content **17.8**
Maximum Dry Density **101.3**



Tested By SD *Date* 4/19/2010 *Checked By* Gen *Date* 4-20-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 \\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-05 Proctor.XLS]Sheet1

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE 4
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-03	Sample No.	CF-10
Lab ID	2010-652-03-05		

Visual Description GRAY SILTY SAND

Total Weight of the Sample (gm)	19433
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4311
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6003	6082	6123	6104	6079
Wt.of Mold (gm)	4311	4311	4311	4311	4311
Wt. of WS	1692	1771	1813	1793	1769
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	318	317	398	309	301
Wt. of Tare & WS (gm)	497.30	448.50	469.00	510.90	491.60
Wt. of Tare & DS (gm)	449.17	397.44	407.63	439.12	411.22
Wt. of Tare (gm)	86.70	84.30	84.20	109.60	84.40
Wt. of Water (gm)	48.13	51.06	61.37	71.78	80.38
Wt. of DS (gm)	362.47	313.14	323.43	329.52	326.82

Wet Density (gm/cc)	1.80	1.88	1.92	1.90	1.88
Wet Density (pcf)	112.1	117.3	120.1	118.8	117.2
Moisture Content (%)	**13.3**	**16.3**	**19.0**	**21.8**	**24.6**
Dry Density (pcf)	**99.0**	**100.9**	**100.9**	**97.5**	**94.0**

Zero Air Voids

Moisture Content (%)	23.0	26.0	29.5
Dry Unit Weight (pcf)	103.9	99.0	93.8

Tested By *SD* *Date* *4/19/2010* *Checked By* *Date*

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-03-05 Proctor.XLS]Sheet1

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INTEGRITY IN TESTING

April 28, 2010

Project No. 2010-652-04

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

DCN: Data Transmittal Letter Date: 1/28/05 Rev.: 1

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MOISTURE CONTENT

ASTM D 2216 (SOP-S1)

Client	GLOVER CONSTRUCTION
Client Reference	DARE CO. C&D LF.
Project No.	2010-652-04

Lab ID	.001	.002	.003	.004
Boring No.	STOCKPILE	STOCKPILE	STOCKPILE	STOCKPILE
Depth (ft)	A8-L1	A10-L2	A2-L2	A11-L2
Sample No.	CF-11	CF-12	CF-13	CF-14
Tare Number	214	833	215	843
Wt. of Tare & WS (gm)	571.31	715.75	635.82	682.21
Wt. of Tare & DS (gm)	510.53	670.29	589.53	639.06
Wt. of Tare (gm)	171.58	259.30	172.64	262.15
Wt. of Water (gm)	60.78	45.46	46.29	43.15
Wt. of DS (gm)	338.95	410.99	416.89	376.91
Water Content (%)	**17.9**	**11.1**	**11.1**	**11.4**

Notes : *NA*

Tested By *DAW* *Date* *4/26/2010* *Checked By* *MMS* *Date* *4-28-10*

 DCN: CT-S1 DATE 6-30-98 REVISION: 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04 WATCONT.XLS]Sheet1*

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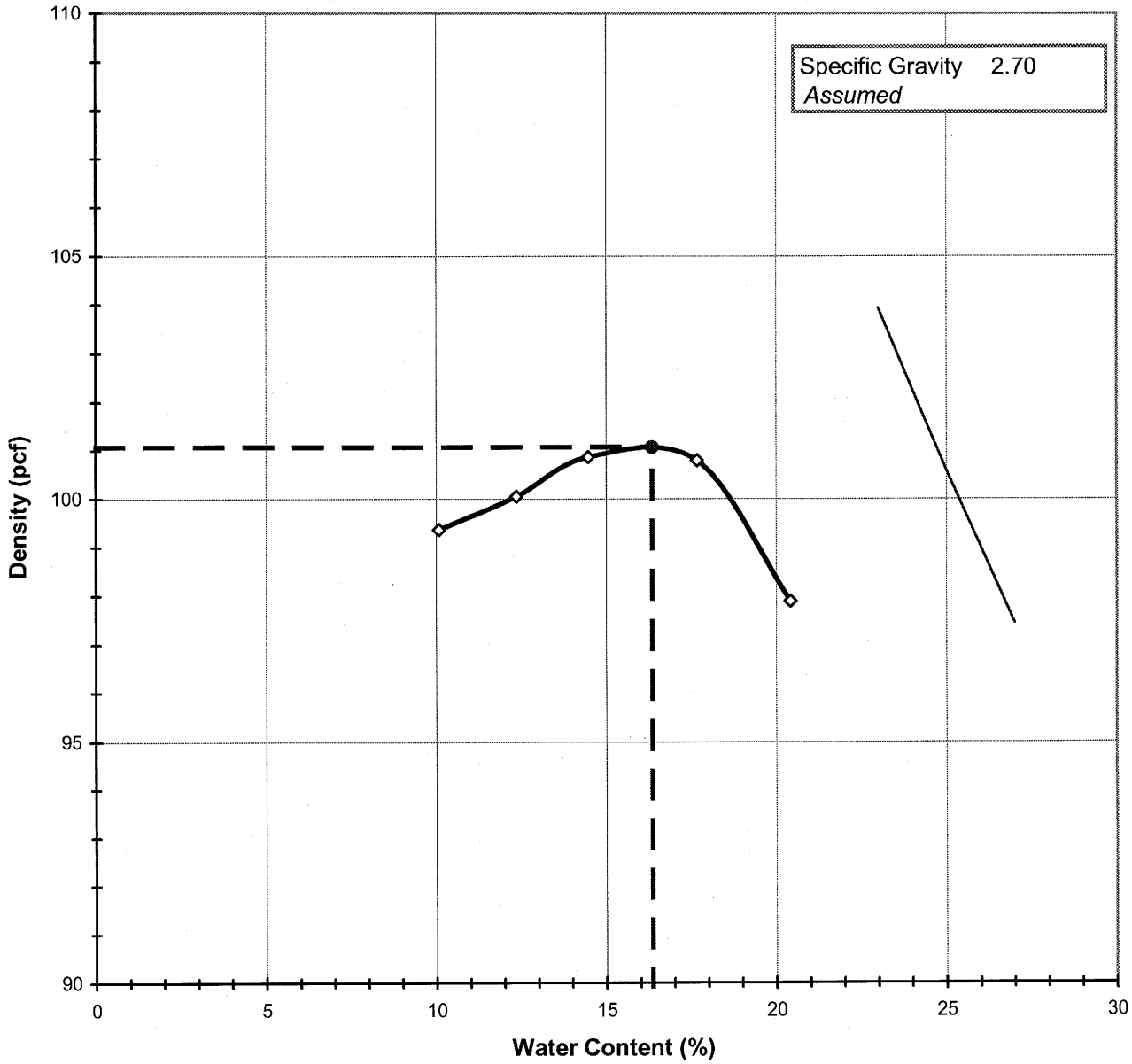
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	ACRE 10-L2
Project No.	2010-652-04	Sample No.	CF-12
Lab ID	2010-652-04-02	Test Method	**STANDARD**

Visual Description BROWN SILTY SAND

Optimum Water Content **16.4**
Maximum Dry Density **101.1**



Tested By SD *Date* 4/27/2010 *Checked By* mms *Date* 4/28/10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 \\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-02 Proctor.XLS]Sheet1

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	ACRE 10-L2
Project No.	2010-652-04	Sample No.	CF-12
Lab ID	2010-652-04-02		

Visual Description BROWN SILTY SAND

Total Weight of the Sample (gm)	18286
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4311
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5962	6008	6054	6101	6090
Wt.of Mold (gm)	4311	4311	4311	4311	4311
Wt. of WS	1651	1697	1743	1791	1780
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	312	399	310	311	300
Wt. of Tare & WS (gm)	530.90	460.90	551.20	531.40	486.10
Wt. of Tare & DS (gm)	490.00	419.73	495.46	464.33	422.50
Wt. of Tare (gm)	84.10	86.60	110.30	84.70	111.00
Wt. of Water (gm)	40.90	41.17	55.74	67.07	63.60
Wt. of DS (gm)	405.90	333.13	385.16	379.63	311.50

Wet Density (gm/cc)	1.75	1.80	1.85	1.90	1.89
Wet Density (pcf)	109.4	112.4	115.5	118.6	117.9
Moisture Content (%)	**10.1**	**12.4**	**14.5**	**17.7**	**20.4**
Dry Density (pcf)	**99.4**	**100.1**	**100.9**	**100.8**	**97.9**

Zero Air Voids

Moisture Content (%)	23.0	25.0	27.0
Dry Unit Weight (pcf)	103.9	100.6	97.4

Tested By SD *Date* 4/27/2010 *Checked By* TMS *Date* 4/28/10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-02 Proctor.XLS]Sheet1

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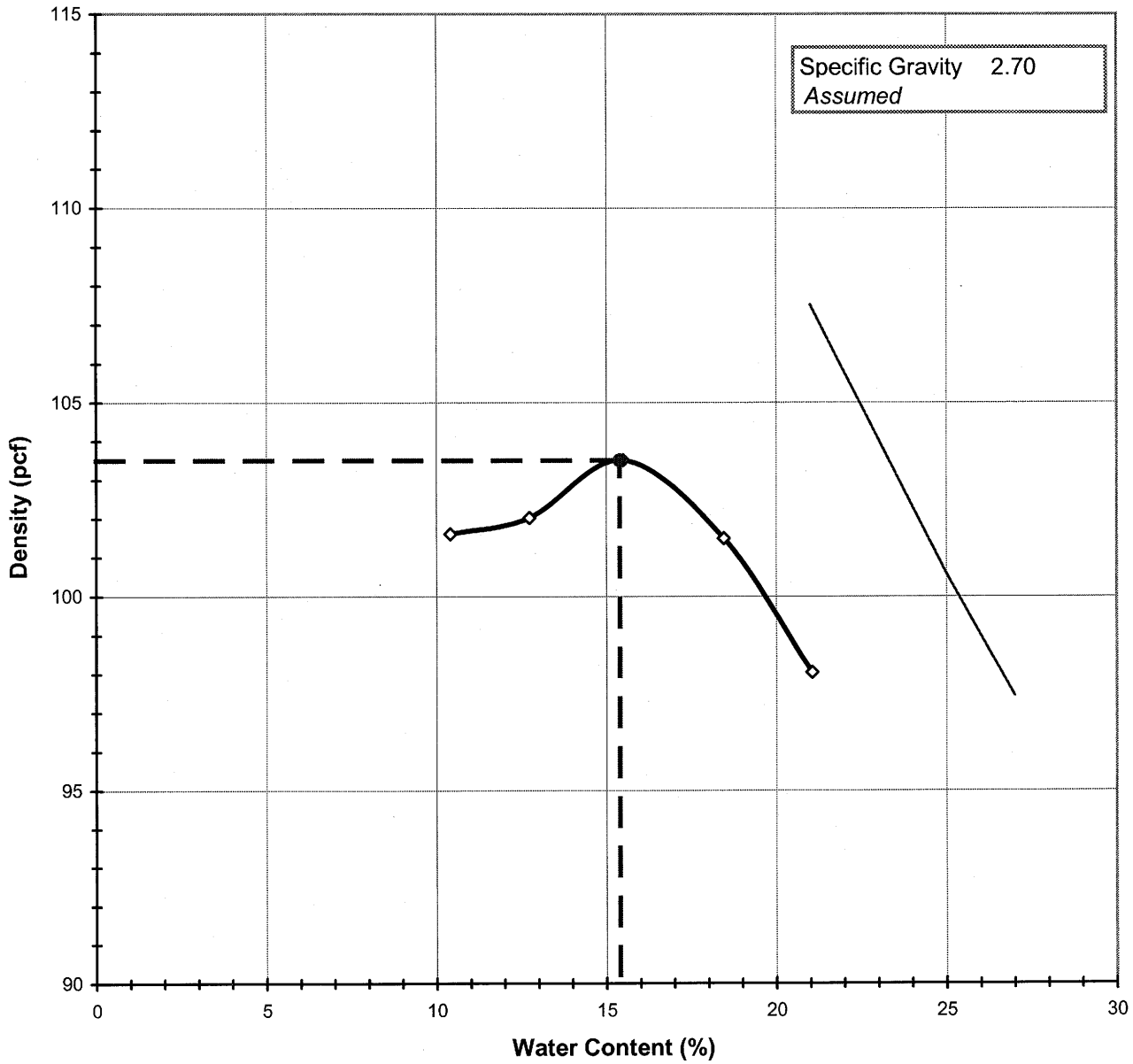
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	ACRE 11-L2
Project No.	2010-652-04	Sample No.	CF-14
Lab ID	2010-652-04-04	Test Method	**STANDARD**

Visual Description GRAY SANDY SILT

Optimum Water Content **15.4**
Maximum Dry Density **103.5**



Tested By SD *Date* 4/27/2010 *Checked By* TMS *Date* 4/28/10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-04 Proctor.XLS]Sheet1

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF	Depth (ft)	ACRE 11-L2
Project No.	2010-652-04	Sample No.	CF-14
Lab ID	2010-652-04-04		

Visual Description GRAY SANDY SILT

Total Weight of the Sample (gm)	21994
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4310
Volume of the Mold(cc)		942

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6004	6047	6115	6125	6102
Wt.of Mold (gm)	4310	4310	4310	4310	4310
Wt. of WS	1694	1737	1805	1815	1792
Mold Volume (cc)	942	942	942	942	942

Moisture Content / Density

Tare Number	306	303	307	304	305
Wt. of Tare & WS (gm)	441.80	517.20	478.90	521.40	473.30
Wt. of Tare & DS (gm)	408.50	471.32	429.50	457.38	405.72
Wt. of Tare (gm)	88.40	111.20	110.70	110.60	84.70
Wt. of Water (gm)	33.30	45.88	49.40	64.02	67.58
Wt. of DS (gm)	320.10	360.12	318.80	346.78	321.02

Wet Density (gm/cc)	1.80	1.84	1.92	1.93	1.90
Wet Density (pcf)	112.2	115.0	119.6	120.2	118.7
Moisture Content (%)	**10.4**	**12.7**	**15.5**	**18.5**	**21.1**
Dry Density (pcf)	**101.6**	**102.0**	**103.5**	**101.5**	**98.0**

Zero Air Voids

Moisture Content (%)	21.0	25.0	27.0
Dry Unit Weight (pcf)	107.5	100.6	97.4

Tested By *SD* *Date* *4/27/2010* *Checked By* *Date*

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-04 Proctor.XLS]Sheet1

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 8-L1
Project No.	2010-652-04	Sample No.	CF-11
Lab ID	2010-652-04-01	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED***

USCS Classification ***SILTY SAND***

Tested By DAW Date 4/28/2010 Checked By TMS Date 4/28/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 8-L1
Project No.	2010-652-04	Sample No.	CF-11
Lab ID	2010-652-04-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	214	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	571.31	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	510.53	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.58	Weight of Tare (gm)	NA
Weight of Water (gm)	60.78	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	338.95	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	338.95
Dry Weight - 3/4" Sample (gm)	296.0	Weight of minus #200 material (gm)	43.00
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	295.95
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.81	0.2	0.2	99.8	**99.8**
#20	0.850	2.66	0.8	1.0	99.0	**99.0**
#40	0.425	4.60	1.4	2.4	97.6	**97.6**
#60	0.250	59.78	17.6	20.0	80.0	**80.0**
#140	0.106	202.07	59.6	79.6	20.4	**20.4**
#200	0.075	26.03	7.7	87.3	12.7	**12.7**
Pan	-	43.00	12.7	100.0	-	**-**

Tested By DAW Date 4/28/2010 Checked By TMS Date 4/28/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *F:\DAR\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-01 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 10-L2
Project No.	2010-652-04	Sample No.	CF-12
Lab ID	2010-652-04-02	Soil Color	**BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED***

USCS Classification ***SILTY SAND***

Tested By SD Date 4/28/2010 Checked By TMS Date 4/28/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *R:\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 10-L2
Project No.	2010-652-04	Sample No.	CF-12
Lab ID	2010-652-04-02	Soil Color	**BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	833	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	715.75	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	670.29	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	259.30	Weight of Tare (gm)	NA
Weight of Water (gm)	45.46	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	410.99	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	410.99
Dry Weight - 3/4" Sample (gm)	360.9	Weight of minus #200 material (gm)	50.11
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	360.88
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.07	0.0	0.0	100.0	**100.0**
#10	2.00	0.12	0.0	0.0	100.0	**100.0**
#20	0.850	0.46	0.1	0.2	99.8	**99.8**
#40	0.425	0.77	0.2	0.3	99.7	**99.7**
#60	0.250	24.22	5.9	6.2	93.8	**93.8**
#140	0.106	290.81	70.8	77.0	23.0	**23.0**
#200	0.075	44.43	10.8	87.8	12.2	**12.2**
Pan	-	50.11	12.2	100.0	-	**-**

Tested By SD Date 4/28/2010 Checked By TMB Date 4/28/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-02 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 2-L2
Project No.	2010-652-04	Sample No.	CF-13
Lab ID	2010-652-04-03	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED***

USCS Classification ***SILTY SAND***

Tested By SD Date 4/28/2010 Checked By TMK Date 4/28/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-02 SIEVON REV 4.XLS]Sheet1*

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INTEGRITY IN TESTING

WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 2-L2
Project No.	2010-652-04	Sample No.	CF-13
Lab ID	2010-652-04-03	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	215	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	635.82	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	589.53	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	172.64	Weight of Tare (gm)	NA
Weight of Water (gm)	46.29	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	416.89	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	416.89
Dry Weight - 3/4" Sample (gm)	362.0	Weight of minus #200 material (gm)	54.94
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	361.95
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.07	0.0	0.0	100.0	**100.0**
#10	2.00	1.12	0.3	0.3	99.7	**99.7**
#20	0.850	2.43	0.6	0.9	99.1	**99.1**
#40	0.425	6.29	1.5	2.4	97.6	**97.6**
#60	0.250	96.59	23.2	25.5	74.5	**74.5**
#140	0.106	222.76	53.4	79.0	21.0	**21.0**
#200	0.075	32.69	7.8	86.8	13.2	**13.2**
Pan	-	54.94	13.2	100.0	-	**-**

Tested By SD Date 4/28/2010 Checked By TMS Date 4/28/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *R\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-02 SIEVON REV 4.XLS]Sheet1*

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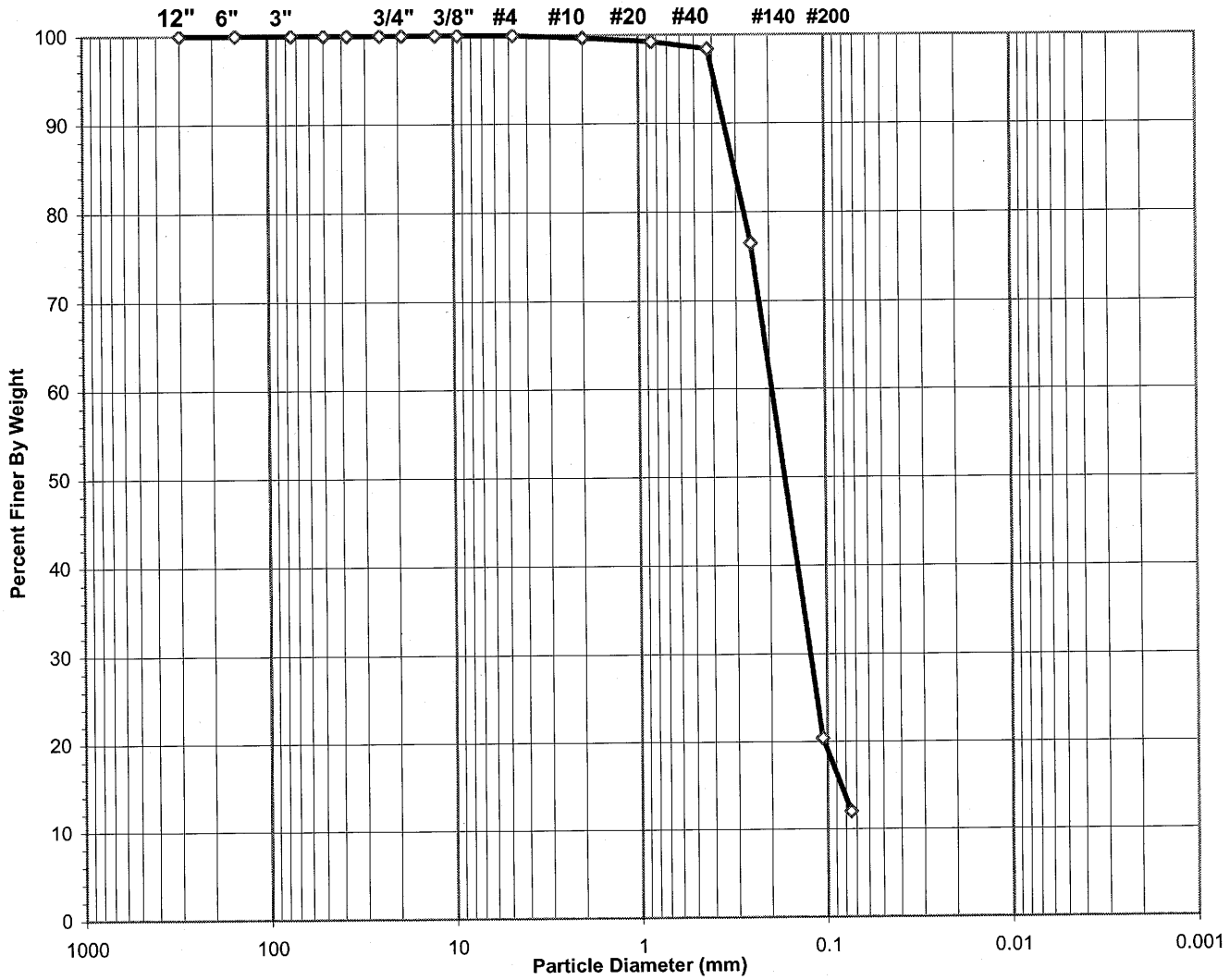
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 11-L2
Project No.	2010-652-04	Sample No.	CF-14
Lab ID	2010-652-04-04	Soil Color	**GRAY**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol ***SP-SM, TESTED***

USCS Classification ***POORLY GRADED SAND WITH SILT***

Tested By SD Date 4/28/2010 Checked By TMB Date 4/28/10

DCN: CT-S3C DATE 6-25-98 REVISION: 2 *\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-04 Proctor.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 11-L2
Project No.	2010-652-04	Sample No.	CF-14
Lab ID	2010-652-04-04	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	843	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	682.21	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	639.06	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	262.15	Weight of Tare (gm)	NA
Weight of Water (gm)	43.15	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	376.91	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	376.91
Dry Weight - 3/4" Sample (gm)	331.7	Weight of minus #200 material (gm)	45.17
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	331.74
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.05	0.0	0.0	100.0	**100.0**
#10	2.00	1.07	0.3	0.3	99.7	**99.7**
#20	0.850	1.70	0.5	0.7	99.3	**99.3**
#40	0.425	3.10	0.8	1.6	98.4	**98.4**
#60	0.250	82.69	21.9	23.5	76.5	**76.5**
#140	0.106	211.45	56.1	79.6	20.4	**20.4**
#200	0.075	31.68	8.4	88.0	12.0	**12.0**
Pan	-	45.17	12.0	100.0	-	**-**

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 8-L1
Project No.	2010-652-04	Sample No.	CF-11
Lab ID	2010-652-04-01	Visual Description	**GRAY SILT**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/27/2010 *Checked By* TMS *Date* 4/28/10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-01 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 10-L2
Project No.	2010-652-04	Sample No.	CF-12
Lab ID	2010-652-04-02	Visual Description	**BROWN SILT**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/27/2010 *Checked By* TMS *Date* 4/28/10

page 1 of 1 DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-02 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 2-L2
Project No.	2010-652-04	Sample No.	CF-13
Lab ID	2010-652-04-03	Visual Description	**GRAY SILT**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/27/2010 *Checked By* TMS *Date* 4/28/10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-03 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	STOCKPILE
Client Reference	DARE CO. C&D LF.	Depth (ft)	ACRE 11-L2
Project No.	2010-652-04	Sample No.	CF-14
Lab ID	2010-652-04-04	Visual Description	**GRAY SANDY SILT**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 4/27/2010 *Checked By* TMS *Date* 4/28/10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-04-04 Proctor.XLS]Sheet1*

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Client: **Glover Construction**
Project: **DARE CO. C&D LF.**
Client Contact: **Mr. Ed Marks**
(252) 536-2660 Fax: **(252) 536-4600**
Geotechnics Project No.: **2010-652-05**

Geotechnics, Inc. Laboratory Testing Program

Start Date: **4/28/2010**
Report Due Date: **5/12/2010**
No. of Samples: **1**
Storage Location: **A1**

Boring	Depth	Sample	Lab ID	Container	COMMENTS: (Tests performed are listed below each sample.)
BORROW PIT	ACRE 2 - L3	CF-15	2010-652-05-01	Bag	
Water Content	Sieve	A. Limits	Std. Proct	C.U. (rem)	

Test Totals

1 C.U. (rem)	1 Std. Proct	1 Sieve	1 A. Limits	1 Water Content

HOLD –

CANCEL – MAT'L NO GOOD
per Jacob 5-3-10

PLEASE NOTE: If the testing program or the "Report Due Date" shown above is NOT SATISFACTORY, please contact Geotechnics immediately so that we can meet your needs.

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Geotechnics

INTEGRITY IN TESTING

May 21, 2010

Project No. 2010-652-06

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare Co. C & D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF.	Depth (ft)	1-3
Project No.	2010-652-06	Sample No.	S-1
Lab ID	2010-652-06-01	Visual Description	**TAN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 5/20/2010 *Checked By* GEM *Date* 5-21-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF.	Depth (ft)	4-6
Project No.	2010-652-06	Sample No.	S-2
Lab ID	2010-652-06-02	Visual Description	**DARK GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 5/20/2010 *Checked By* GEM *Date* 5-21-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-01 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF.	Depth (ft)	7-10
Project No.	2010-652-06	Sample No.	S-3
Lab ID	2010-652-06-03	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 5/20/2010 *Checked By* GEM *Date* 5-21-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-02 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF.	Depth (ft)	1-10 COMP.
Project No.	2010-652-06	Sample No.	S-4
Lab ID	2010-652-06-04	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 5/20/2010 *Checked By* GBM *Date* 5-21-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-03 Limit-(NP).xls]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	1-3
Project No.	2010-652-06	Sample No.	S-1
Lab ID	2010-652-06-01	Soil Color	**TAN**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SP-SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***POORLY GRADED SAND WITH SILT***

Tested By SD Date 5/21/2010 Checked By GAM Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *\\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	1-3
Project No.	2010-652-06	Sample No.	S-1
Lab ID	2010-652-06-01	Soil Color	**TAN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	839	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	579.53	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	551.67	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	257.99	Weight of Tare (gm)	NA
Weight of Water (gm)	27.86	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	293.68	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**9.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	293.68
Dry Weight - 3/4" Sample (gm)	263.8	Weight of minus #200 material (gm)	29.88
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	263.80
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.23	0.1	0.1	99.9	**99.9**
#20	0.850	0.89	0.3	0.4	99.6	**99.6**
#40	0.425	1.53	0.5	0.9	99.1	**99.1**
#60	0.250	12.39	4.2	5.1	94.9	**94.9**
#140	0.106	213.78	72.8	77.9	22.1	**22.1**
#200	0.075	34.98	11.9	89.8	10.2	**10.2**
Pan	-	29.88	10.2	100.0	-	**-**

Tested By SD Date 5/21/2010 Checked By GEM Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-01 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	4-6
Project No.	2010-652-06	Sample No.	S-2
Lab ID	2010-652-06-02	Soil Color	**DARK GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol	***SP-SM, TESTED (NON PLASTIC FINES)***	**D60 =**	**0.2**	**CC =**	**1.1**
USCS Classification	***POORLY GRADED SAND WITH SILT***	**D30 =**	**0.1**	**CU =**	**2.5**
		D10 =	**0.1**		

Tested By SD Date 5/21/2010 Checked By GEM Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-02 SIEVON REV 4.XLS]Sheet1*

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INTEGRITY IN TESTING

WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	4-6
Project No.	2010-652-06	Sample No.	S-2
Lab ID	2010-652-06-02	Soil Color	**DARK GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	835	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	568.35	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	519.12	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	255.06	Weight of Tare (gm)	NA
Weight of Water (gm)	49.23	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	264.06	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**18.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	264.06
Dry Weight - 3/4" Sample (gm)	238.2	Weight of minus #200 material (gm)	25.91
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	238.15
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.07	0.0	0.0	100.0	**100.0**
#10	2.00	0.75	0.3	0.3	99.7	**99.7**
#20	0.850	2.73	1.0	1.3	98.7	**98.7**
#40	0.425	5.31	2.0	3.4	96.6	**96.6**
#60	0.250	47.92	18.1	21.5	78.5	**78.5**
#140	0.106	157.69	59.7	81.2	18.8	**18.8**
#200	0.075	23.68	9.0	90.2	9.8	**9.8**
Pan	-	25.91	9.8	100.0	-	-

Tested By SD Date 5/21/2010 Checked By GEM Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-02 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	7-10
Project No.	2010-652-06	Sample No.	S-3
Lab ID	2010-652-06-03	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol	***SP, TESTED (NON PLASTIC FINES)***	**D60 =**	**0.2**	**CC =**	**0.9**
USCS Classification	***POORLY GRADED SAND***	**D30 =**	**0.1**	**CU =**	**2.0**
		D10 =	**0.1**		

Tested By SD Date 5/20/2010 Checked By GM Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-03 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	7-10
Project No.	2010-652-06	Sample No.	S-3
Lab ID	2010-652-06-03	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	831	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	681.08	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	598.40	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	262.37	Weight of Tare (gm)	NA
Weight of Water (gm)	82.68	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	336.03	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**24.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	336.03
Dry Weight - 3/4" Sample (gm)	323.3	Weight of minus #200 material (gm)	12.70
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	323.33
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.63	0.2	0.2	99.8	**99.8**
#20	0.850	5.69	1.7	1.9	98.1	**98.1**
#40	0.425	8.70	2.6	4.5	95.5	**95.5**
#60	0.250	89.08	26.5	31.0	69.0	**69.0**
#140	0.106	204.93	61.0	92.0	8.0	**8.0**
#200	0.075	14.30	4.3	96.2	3.8	**3.8**
Pan	-	12.70	3.8	100.0	-	**-**

Tested By SD Date 5/20/2010 Checked By Gem Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-03 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	1-10 COMP
Project No.	2010-652-06	Sample No.	S-4
Lab ID	2010-652-06-04	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol	***SP-SM, TESTED (NON PLASTIC FINES)***	**D60 =**	**0.2**	**CC =**	**0.9**
USCS Classification	***POORLY GRADED SAND WITH SILT***	**D30 =**	**0.1**	**CU =**	**2.2**
		D10 =	**0.1**		

Tested By SD Date 5/21/2010 Checked By GEM Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-04 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW EXP.
Client Reference	DARE CO. C&D LF	Depth (ft)	1-10 COMP
Project No.	2010-652-06	Sample No.	S-4
Lab ID	2010-652-06-04	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	842	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	628.85	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	571.26	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	255.79	Weight of Tare (gm)	NA
Weight of Water (gm)	57.59	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	315.47	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**18.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	315.47
Dry Weight - 3/4" Sample (gm)	298.5	Weight of minus #200 material (gm)	16.95
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	298.52
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.47	0.1	0.1	99.9	**99.9**
#20	0.850	2.75	0.9	1.0	99.0	**99.0**
#40	0.425	5.10	1.6	2.6	97.4	**97.4**
#60	0.250	86.86	27.5	30.2	69.8	**69.8**
#140	0.106	185.54	58.8	89.0	11.0	**11.0**
#200	0.075	17.80	5.6	94.6	5.4	**5.4**
Pan	-	16.95	5.4	100.0	-	**-**

Tested By SD Date 5/21/2010 Checked By GEM Date 5-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-06-04 SIEVON REV 4.XLS]Sheet1*

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May 27, 2010

Project No. 2010-652-07

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 2
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-01
Lab ID	2010-652-07-01	Soil Description	**GRAY/TAN LEAN CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

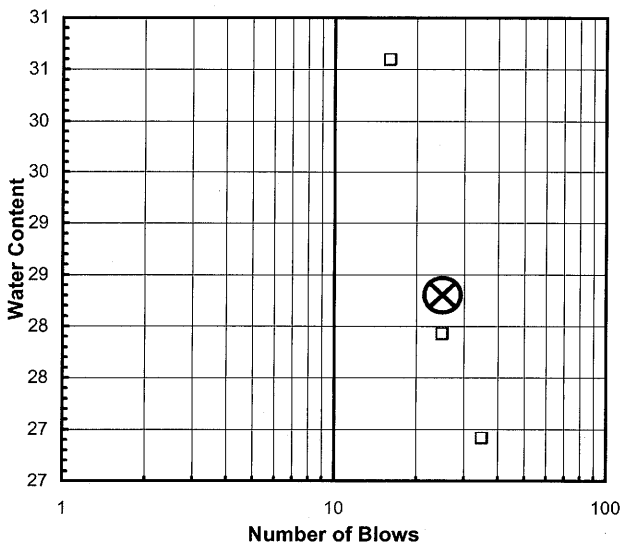
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	I	H	U	MULTIPOINT
Wt. of Tare & WS (gm)	26.45	26.37	28.25	
Wt. of Tare & DS (gm)	23.81	23.91	25.47	
Wt. of Tare (gm)	15.18	15.10	15.14	
Wt. of Water (gm)	2.6	2.5	2.8	
Wt. of DS (gm)	8.6	8.8	10.3	
Moisture Content (%)	**30.6**	**27.9**	**26.9**	
Number of Blows	**16**	**25**	**35**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	E	O	
Wt. of Tare & WS (gm)	21.27	21.37	
Wt. of Tare & DS (gm)	20.36	20.45	
Wt. of Tare (gm)	15.25	15.17	
Wt. of Water (gm)	0.9	0.9	
Wt. of DS (gm)	5.1	5.3	
Moisture Content (%)	**17.8**	**17.4**	**0.4**

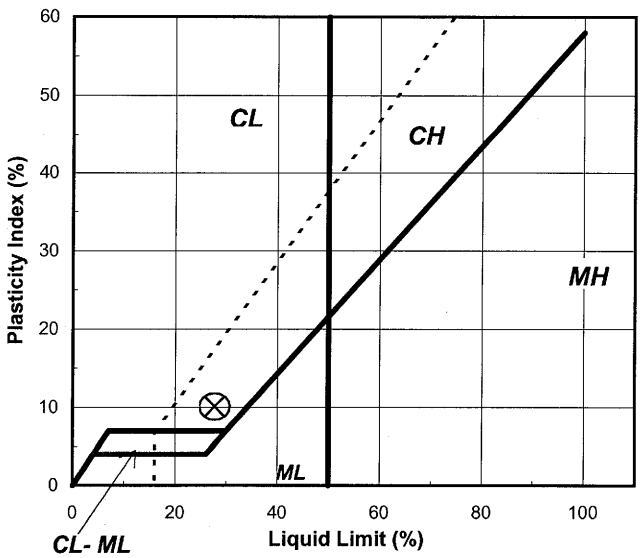
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**28**
Plastic Limit (%)	**18**
Plasticity Index (%)	**10**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



Tested By SD *Date* 5/24/2010 *Checked By,* TMS *Date* 5/25/10

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 10
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-02
Lab ID	2010-652-07-02	Soil Description	**GRAY SILT**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

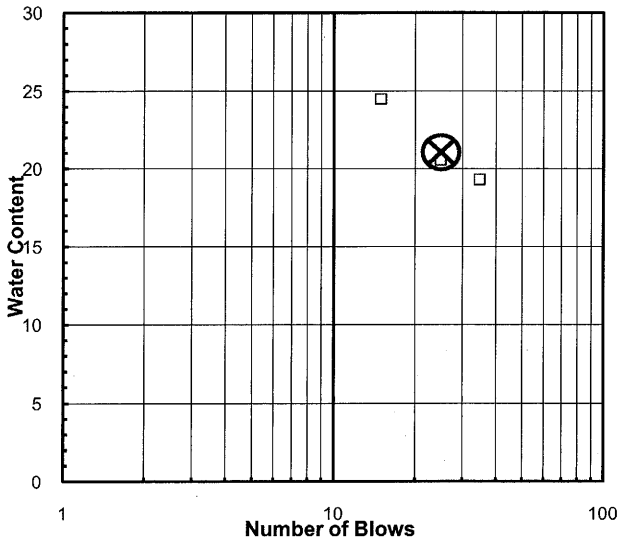
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	F	M	Q	**MULTIPOINT**
Wt. of Tare & WS (gm)	28.09	29.19	30.23	
Wt. of Tare & DS (gm)	25.53	26.79	27.79	
Wt. of Tare (gm)	15.06	15.09	15.12	
Wt. of Water (gm)	2.6	2.4	2.4	
Wt. of DS (gm)	10.5	11.7	12.7	
Moisture Content (%)	**24.5**	**20.5**	**19.3**	
Number of Blows	**15**	**25**	**35**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	V	S	
Wt. of Tare & WS (gm)	22.22	22.98	
Wt. of Tare & DS (gm)	21.15	21.77	
Wt. of Tare (gm)	15.22	15.14	
Wt. of Water (gm)	1.1	1.2	
Wt. of DS (gm)	5.9	6.6	
Moisture Content (%)	**18.0**	**18.3**	**-0.2**

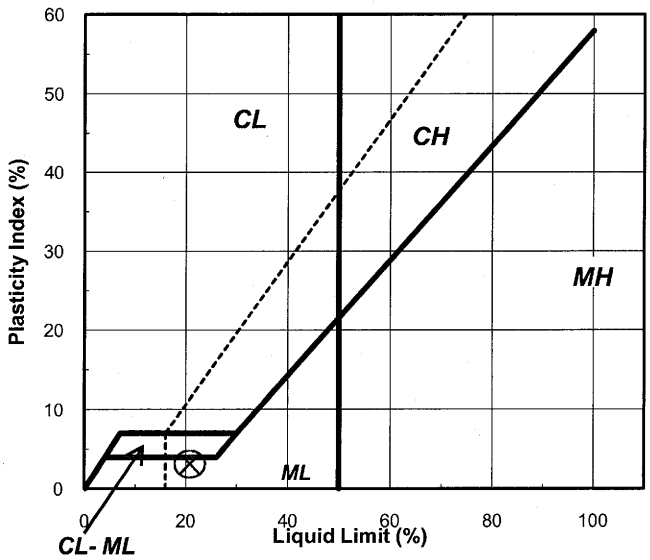
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**21**
Plastic Limit (%)	**18**
Plasticity Index (%)	**3**
USCS Symbol	**ML**

Flow Curve



Plasticity Chart



Tested By JBD *Date* 5/25/2010 *Checked By* GEM *Date* 5-26-10

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 7
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-03
Lab ID	2010-652-07-03	Soil Description	**GRAY LEAN CLAY**

Note: The* USCS *symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

(Minus No. 40 sieve material, Airdried)

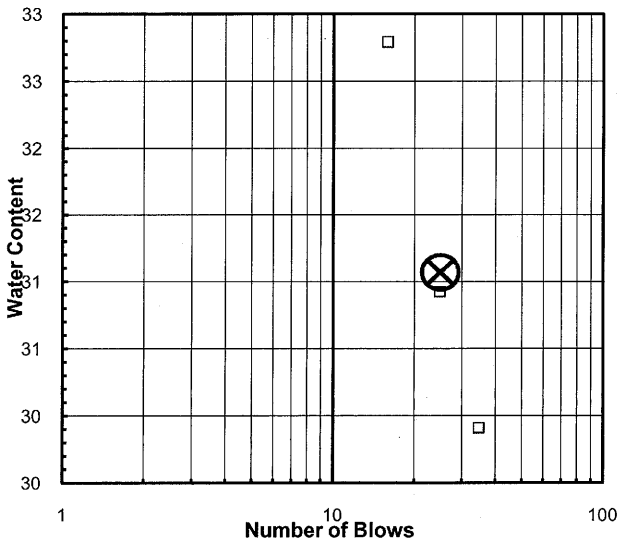
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	A-I	K-A	A-Q	MULTIPOINT
Wt. of Tare & WS (gm)	26.77	25.61	26.34	
Wt. of Tare & DS (gm)	23.97	23.22	23.84	
Wt. of Tare (gm)	15.43	15.49	15.48	
Wt. of Water (gm)	2.8	2.4	2.5	
Wt. of DS (gm)	8.5	7.7	8.4	
Moisture Content (%)	**32.8**	**30.9**	**29.9**	
Number of Blows	**16**	**25**	**35**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	A-K	A-P	
Wt. of Tare & WS (gm)	21.88	21.82	
Wt. of Tare & DS (gm)	20.94	20.91	
Wt. of Tare (gm)	15.50	15.55	
Wt. of Water (gm)	0.9	0.9	
Wt. of DS (gm)	5.4	5.4	
Moisture Content (%)	**17.3**	**17.0**	**0.3**

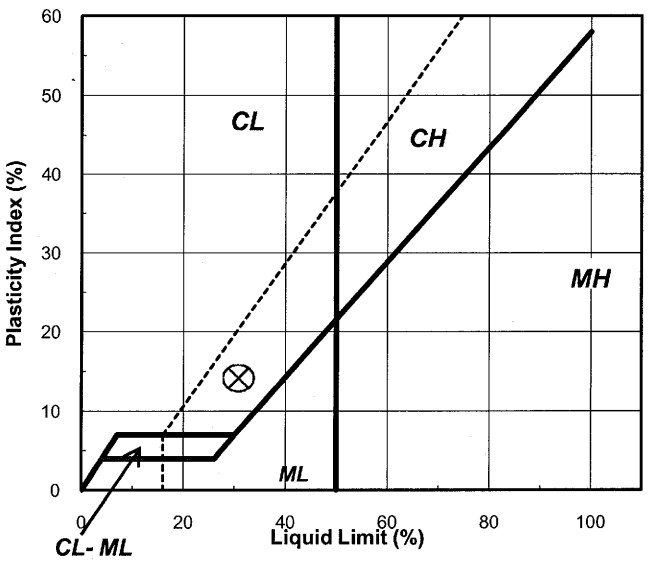
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**31**
Plastic Limit (%)	**17**
Plasticity Index (%)	**14**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



Tested By SD *Date* 5/25/2010 *Checked By* GDM *Date* 5-26-10

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 6
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-04
Lab ID	2010-652-07-04	Soil Description	**GRAY SILTY CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

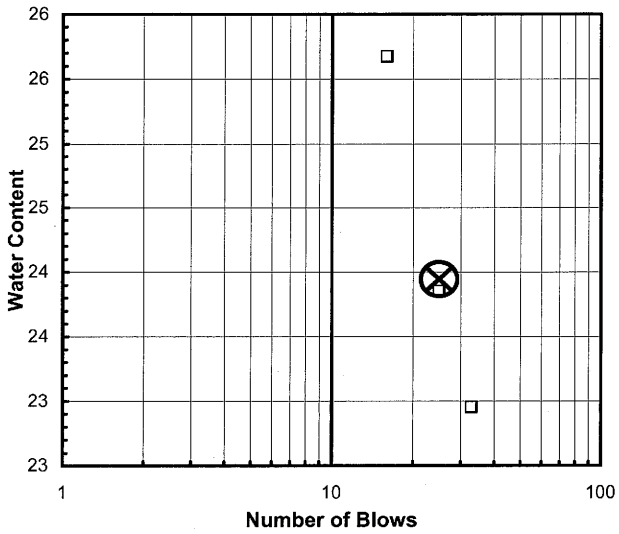
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	F	M	Q	MULTIPOINT
Wt. of Tare & WS (gm)	31.90	28.54	32.37	
Wt. of Tare & DS (gm)	28.46	25.95	29.15	
Wt. of Tare (gm)	15.06	15.09	15.12	
Wt. of Water (gm)	3.4	2.6	3.2	
Wt. of DS (gm)	13.4	10.9	14.0	
Moisture Content (%)	**25.7**	**23.8**	**23.0**	
Number of Blows	**16**	**25**	**33**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	V	S	
Wt. of Tare & WS (gm)	21.86	22.07	
Wt. of Tare & DS (gm)	20.76	20.91	
Wt. of Tare (gm)	15.22	15.16	
Wt. of Water (gm)	1.1	1.2	
Wt. of DS (gm)	5.5	5.8	
Moisture Content (%)	**19.9**	**20.2**	**-0.3**

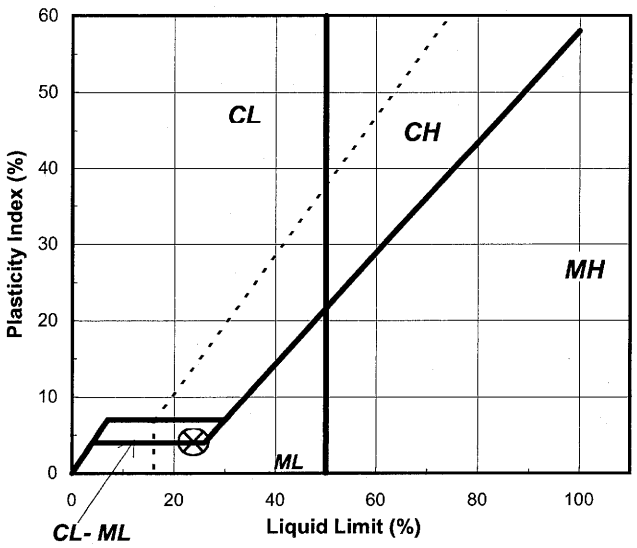
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**24**
Plastic Limit (%)	**20**
Plasticity Index (%)	**4**
USCS Symbol	**CL-ML**

Flow Curve



Plasticity Chart



Tested By SD *Date* 5/26/2010 *Checked By* GCM *Date* 5-27-10

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 14
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-05
Lab ID	2010-652-07-05	Soil Description	**GRAY SILTY CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.

(Minus No. 40 sieve material, Airdried)

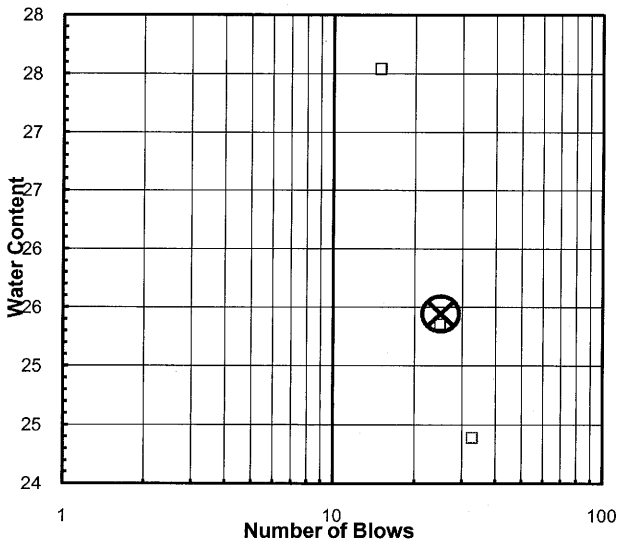
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	I	H	U	**MULTIPOINT**
Wt. of Tare & WS (gm)	28.41	32.27	28.25	
Wt. of Tare & DS (gm)	25.56	28.80	25.68	
Wt. of Tare (gm)	15.21	15.11	15.14	
Wt. of Water (gm)	2.9	3.5	2.6	
Wt. of DS (gm)	10.4	13.7	10.5	
Moisture Content (%)	**27.5**	**25.3**	**24.4**	
Number of Blows	**15**	**25**	**33**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	E	O	
Wt. of Tare & WS (gm)	21.50	21.84	
Wt. of Tare & DS (gm)	20.51	20.77	
Wt. of Tare (gm)	15.25	15.16	
Wt. of Water (gm)	1.0	1.1	
Wt. of DS (gm)	5.3	5.6	
Moisture Content (%)	**18.8**	**19.1**	**-0.3**

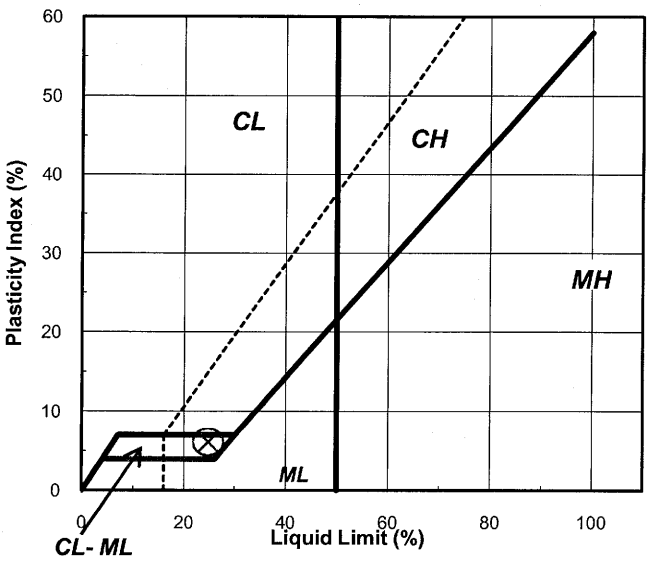
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**25**
Plastic Limit (%)	**19**
Plasticity Index (%)	**6**
USCS Symbol	**CL-ML**

Flow Curve



Plasticity Chart



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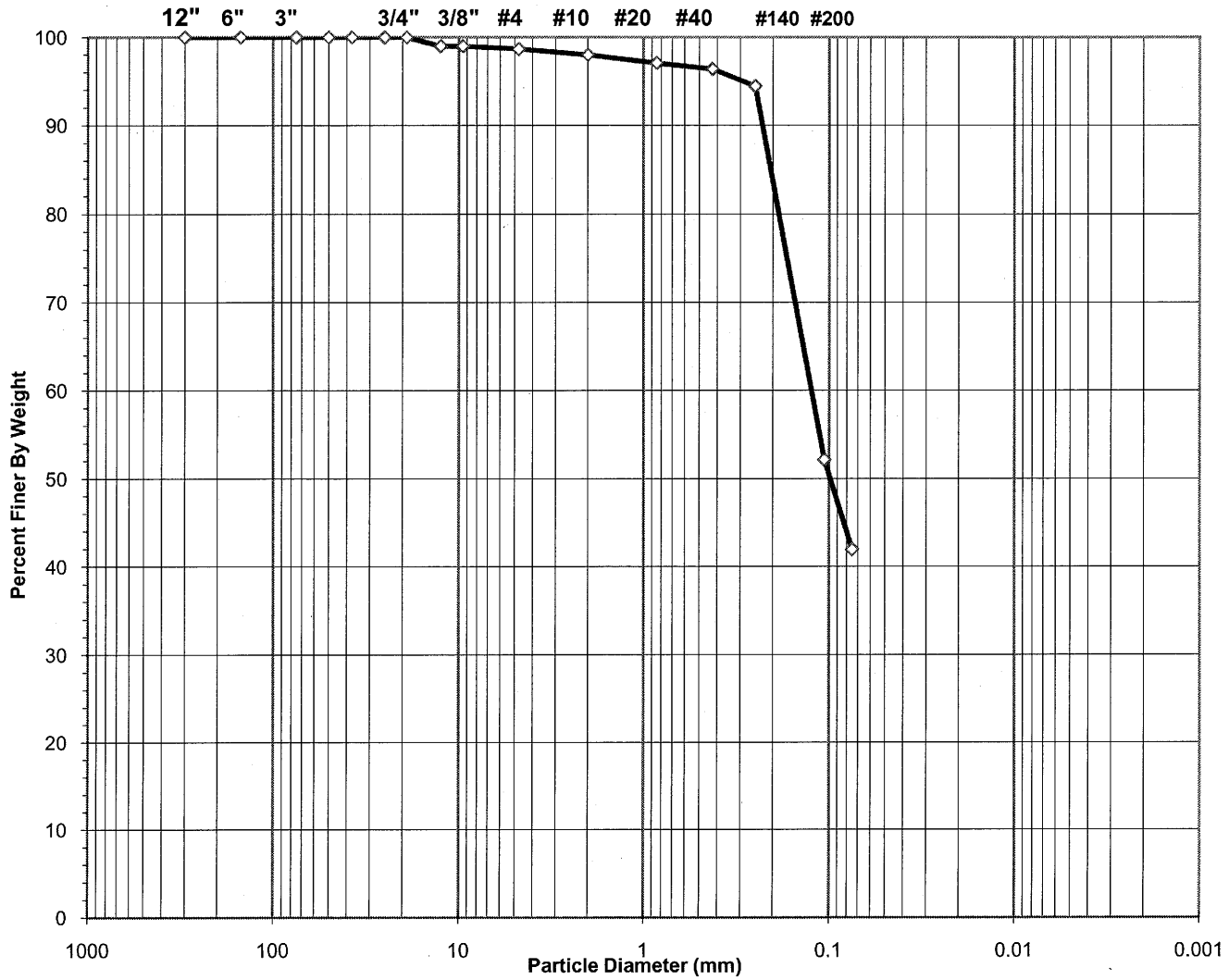
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 2
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-01
Lab ID	2010-652-07-01	Soil Color	**GRAY**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***SC, TESTED***

USCS Classification ***CLAYEY SAND***

Tested By SD Date 5/26/2010 Checked By Gam Date 5-26-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *G:\GLOVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-07-01 SIEVON REV 4.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 2
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-01
Lab ID	2010-652-07-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	212	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	658.65	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	558.47	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.50	Weight of Tare (gm)	NA
Weight of Water (gm)	100.18	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	386.97	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**25.9**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	386.97
Dry Weight - 3/4" Sample (gm)	NA	Weight of minus #200 material (gm)	162.29
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	224.68
Dry Weight + 3/4" Sample (gm)	NA		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	3.87	1.0	1.0	99.0	**99.0**
3/8"	9.50	0.00	0.0	1.0	99.0	**99.0**
#4	4.75	1.22	0.3	1.3	98.7	**98.7**
#10	2.00	2.63	0.7	2.0	98.0	**98.0**
#20	0.850	3.64	0.9	2.9	97.1	**97.1**
#40	0.425	2.64	0.7	3.6	96.4	**96.4**
#60	0.250	7.44	1.9	5.5	94.5	**94.5**
#140	0.106	163.78	42.3	47.9	52.1	**52.1**
#200	0.075	39.46	10.2	58.1	41.9	**41.9**
Pan	-	162.29	41.9	100.0	-	**-**

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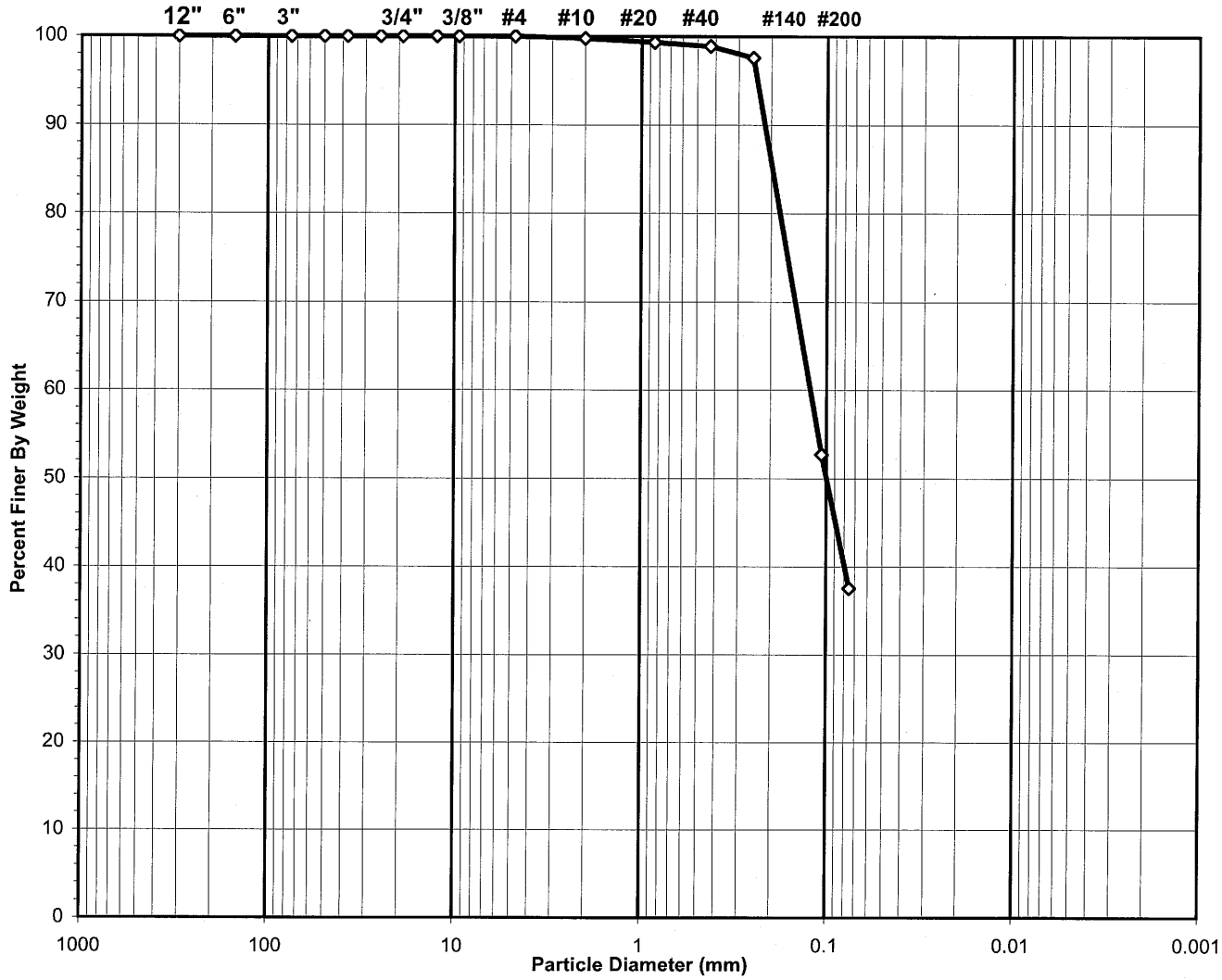
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 10
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-02
Lab ID	2010-652-07-02	Soil Color	**GRAY**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay



USCS Symbol ***SM, TESTED***

USCS Classification ***SILTY SAND***

Tested By SD Date 5/26/2010 Checked By GZM Date 5-26-10

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 10
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-02
Lab ID	2010-652-07-02	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	202	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	724.57	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	653.00	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	197.38	Weight of Tare (gm)	NA
Weight of Water (gm)	71.57	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	455.62	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	455.62
Dry Weight - 3/4" Sample (gm)	NA	Weight of minus #200 material (gm)	170.86
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	284.76
Dry Weight + 3/4" Sample (gm)	NA		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	1.05	0.2	0.2	99.8	**99.8**
#20	0.850	2.08	0.5	0.7	99.3	**99.3**
#40	0.425	1.97	0.4	1.1	98.9	**98.9**
#60	0.250	5.98	1.3	2.4	97.6	**97.6**
#140	0.106	204.61	44.9	47.3	52.7	**52.7**
#200	0.075	69.07	15.2	62.5	37.5	**37.5**
Pan	-	170.86	37.5	100.0	-	-

Tested By SD Date 5/26/2010 Checked By GEM Date 5-26-10

DCN: CT-S3C DATE 6-25-98 REVISIONS *S:\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-07-02 SIEVON REV 4.xls]Sheet1*

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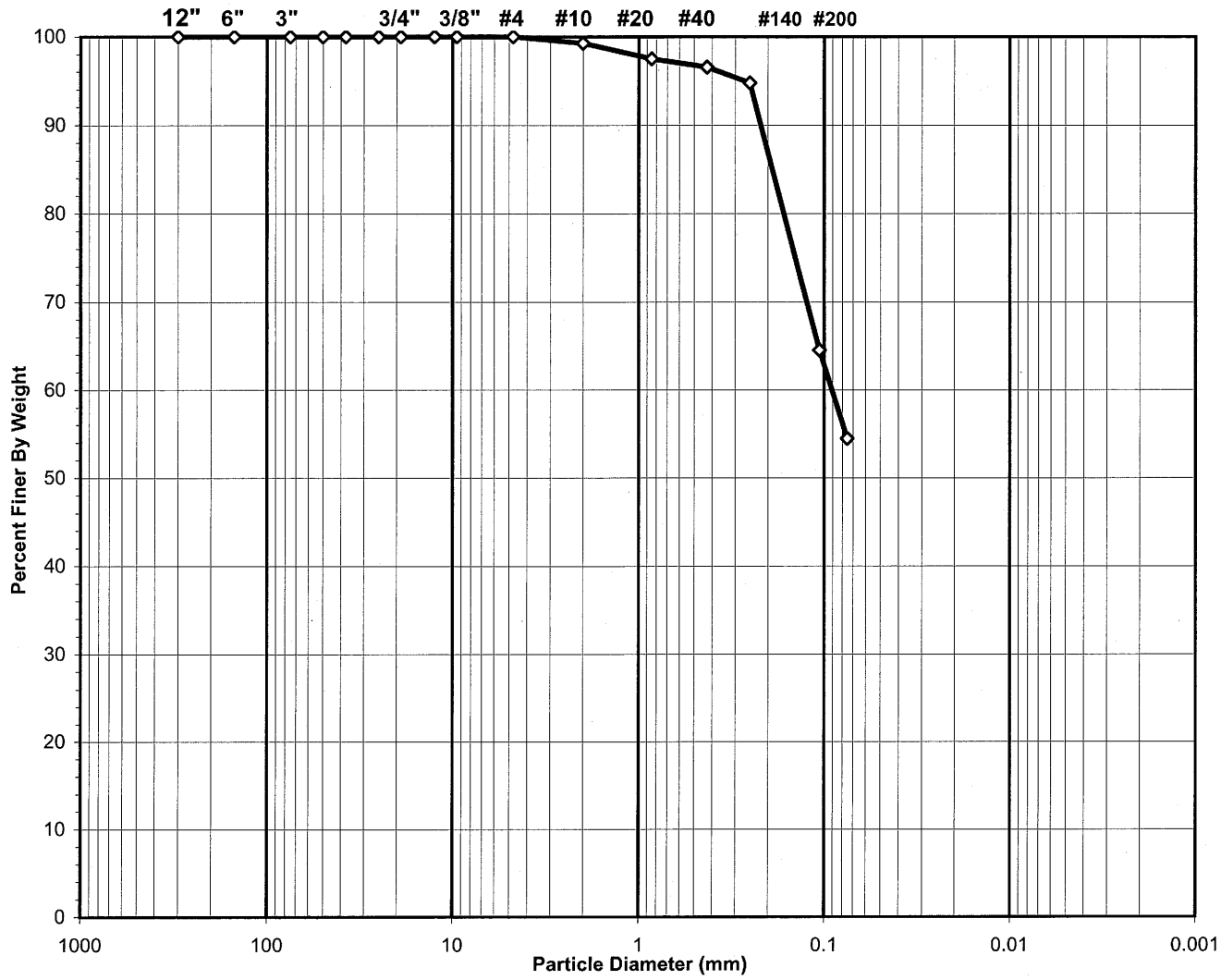
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 7
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-03
Lab ID	2010-652-07-03	Soil Color	**GRAY**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***CL, TESTED***

USCS Classification ***SANDY LEAN CLAY***

Tested By SD Date 5/26/2010 Checked By Gem Date 5-26-10

DCN: CT-S3C DATE 6-25-98 REVISION 3 *S:\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-07-03 SIEVON REV 4.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 7
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-03
Lab ID	2010-652-07-03	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	211	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	658.61	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	593.71	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.16	Weight of Tare (gm)	NA
Weight of Water (gm)	64.90	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	422.55	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	422.55
Dry Weight - 3/4" Sample (gm)	NA	Weight of minus #200 material (gm)	230.03
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	192.52
Dry Weight + 3/4" Sample (gm)	NA		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	3.13	0.7	0.7	99.3	**99.3**
#20	0.850	7.54	1.8	2.5	97.5	**97.5**
#40	0.425	4.01	0.9	3.5	96.5	**96.5**
#60	0.250	7.43	1.8	5.2	94.8	**94.8**
#140	0.106	127.79	30.2	35.5	64.5	**64.5**
#200	0.075	42.62	10.1	45.6	54.4	**54.4**
Pan	-	230.03	54.4	100.0	-	-

Tested By SD Date 5/26/2010 Checked By GM Date 5-26-10

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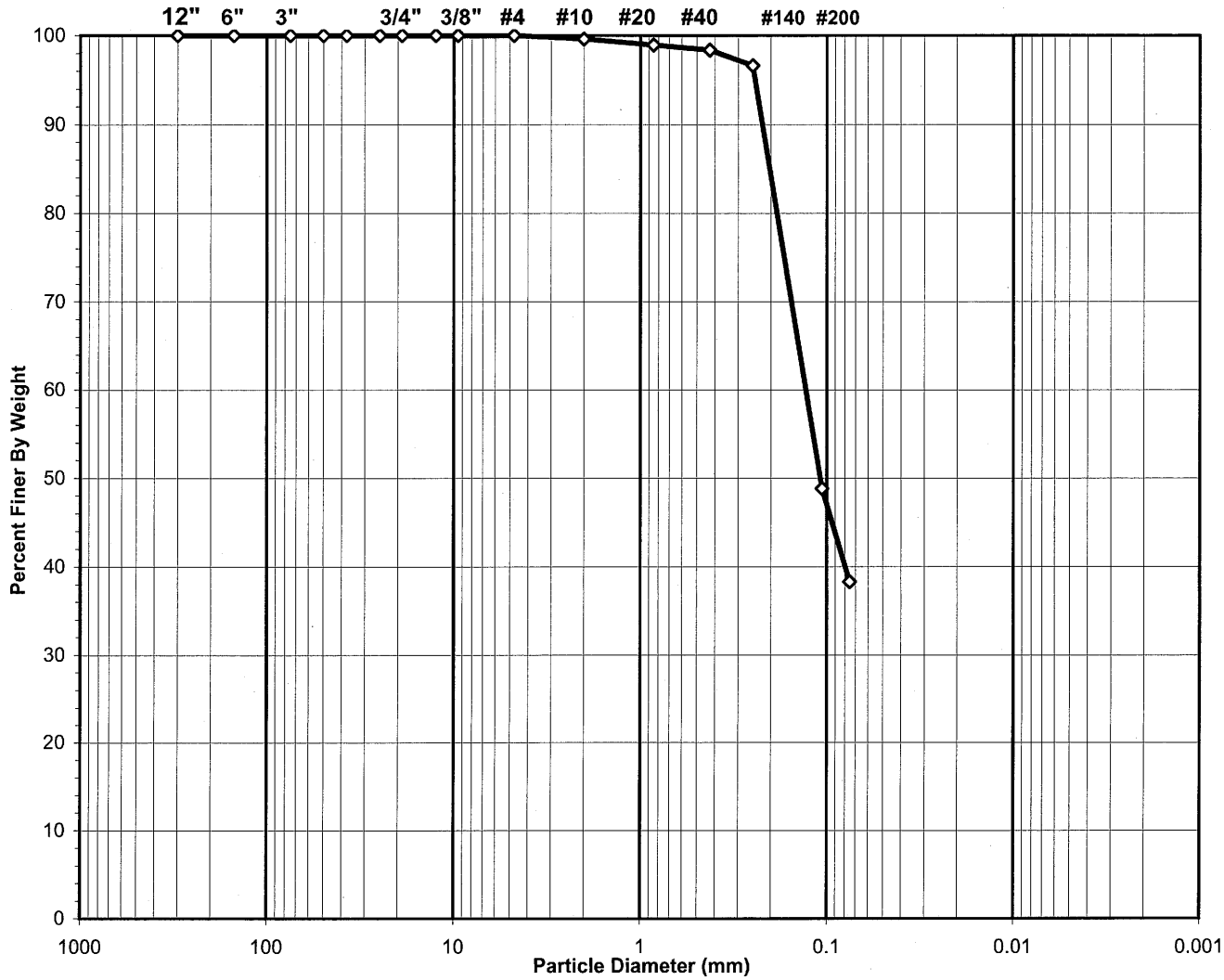
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 6
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-04
Lab ID	2010-652-07-04	Soil Color	**GRAY**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***SC-SM, TESTED***

USCS Classification ***SILTY, CLAYEY SAND***

Tested By SD Date 5/26/2010 Checked By GEM Date 5-27-10

DCN: CT-S3C DATE 6-25-98 REVISION 3 *S:\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-07-04 SIEVON REV 4.xls]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 6
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-04
Lab ID	2010-652-07-04	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	217	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	802.78	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	683.78	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.08	Weight of Tare (gm)	NA
Weight of Water (gm)	119.00	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	512.70	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**23.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	512.70
Dry Weight - 3/4" Sample (gm)	NA	Weight of minus #200 material (gm)	196.33
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	316.37
Dry Weight + 3/4" Sample (gm)	NA		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.04	0.4	0.4	99.6	**99.6**
#20	0.850	3.52	0.7	1.1	98.9	**98.9**
#40	0.425	2.84	0.6	1.6	98.4	**98.4**
#60	0.250	9.06	1.8	3.4	96.6	**96.6**
#140	0.106	245.08	47.8	51.2	48.8	**48.8**
#200	0.075	53.83	10.5	61.7	38.3	**38.3**
Pan	-	196.33	38.3	100.0	-	**-**

Tested By SD Date 5/26/2010 Checked By GEM Date 5-27-10

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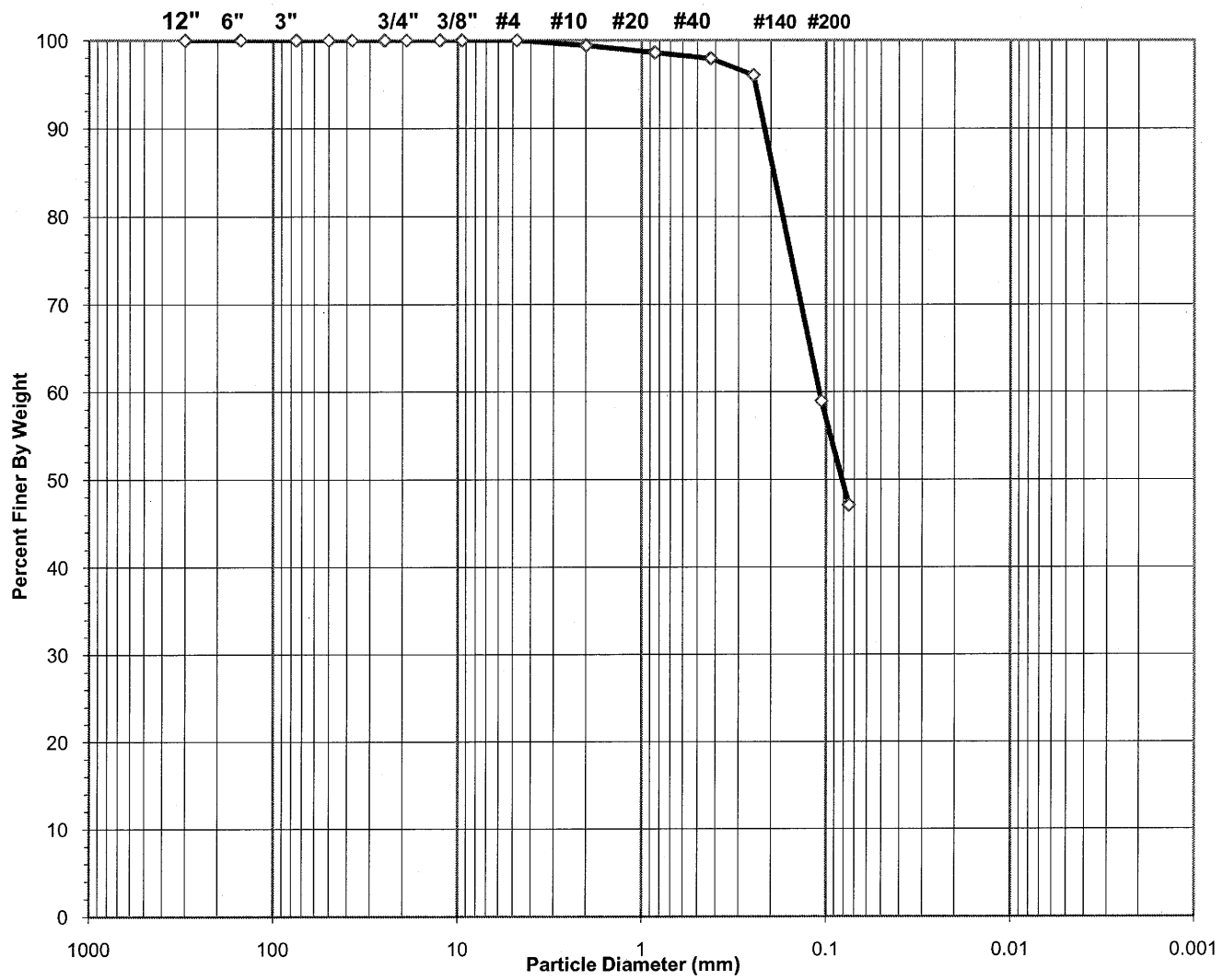
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 14
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-05
Lab ID	2010-652-07-05	Soil Color	**GRAY**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**



USCS Symbol ***SC-SM, TESTED***

USCS Classification ***SILTY, CLAYEY SAND***

Tested By SD Date 5/26/2010 Checked By GEM Date 5-26-10

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 14
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-05
Lab ID	2010-652-07-05	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	P-12	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	662.54	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	564.24	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	196.54	Weight of Tare (gm)	NA
Weight of Water (gm)	98.30	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	367.70	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**26.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	367.70
Dry Weight - 3/4" Sample (gm)	NA	Weight of minus #200 material (gm)	173.15
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	194.55
Dry Weight + 3/4" Sample (gm)	NA		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.15	0.6	0.6	99.4	**99.4**
#20	0.850	2.90	0.8	1.4	98.6	**98.6**
#40	0.425	2.45	0.7	2.0	98.0	**98.0**
#60	0.250	6.95	1.9	3.9	96.1	**96.1**
#140	0.106	136.44	37.1	41.0	59.0	**59.0**
#200	0.075	43.66	11.9	52.9	47.1	**47.1**
Pan	-	173.15	47.1	100.0	-	**-**

Tested By SD Date 5/26/2010 Checked By GEM Date 5-26-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-07-05 SIEVON REV 4.xls]Sheet1*

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INTEGRITY IN TESTING

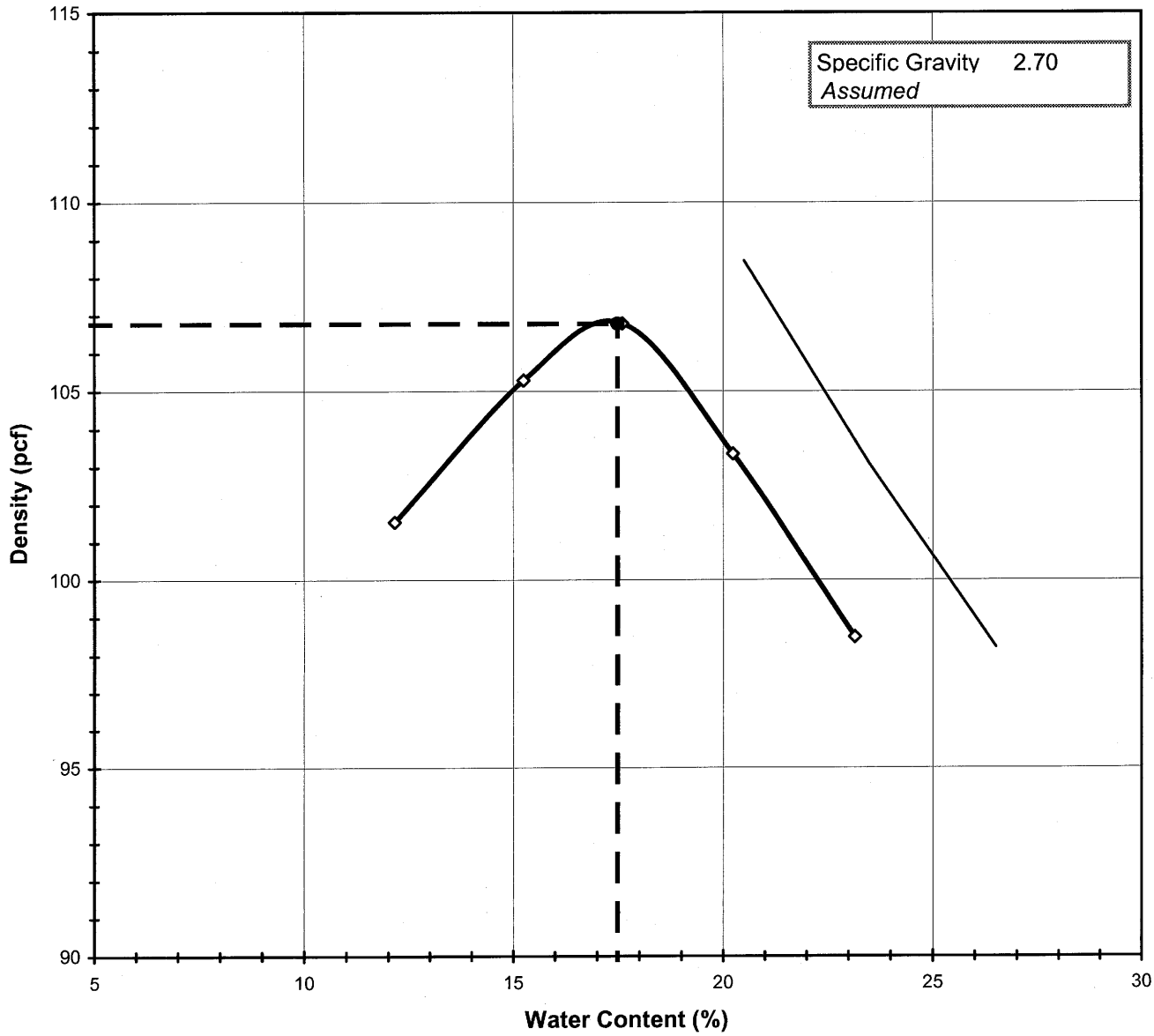
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 2
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-01
Lab ID	2010-652-07-01	Test Method	**STANDARD**

Visual Description GRAY CLAYEY SAND

Optimum Water Content **17.5**
Maximum Dry Density **106.8**



Tested By SD *Date* 5/26/2010 *Checked By* GEM *Date* 5-27-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-07-01 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 2
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-07	Sample No.	UPPER CF-01
Lab ID	2010-652-07-01		

Visual Description GRAY CLAYEY SAND

Total Weight of the Sample (gm)	22921
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4310
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6028	6140	6204	6184	6139
Wt.of Mold (gm)	4310	4310	4310	4310	4310
Wt. of WS	1718	1830	1894	1874	1829
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	311	308	309	317	315
Wt. of Tare & WS (gm)	477.10	505.20	503.60	562.50	552.20
Wt. of Tare & DS (gm)	434.48	453.02	444.64	482.02	469.13
Wt. of Tare (gm)	83.90	110.90	109.60	84.30	110.30
Wt. of Water (gm)	42.62	52.18	58.96	80.48	83.07
Wt. of DS (gm)	350.58	342.12	335.04	397.72	358.83

Wet Density (gm/cc)	1.83	1.94	2.01	1.99	1.94
Wet Density (pcf)	113.9	121.3	125.6	124.3	121.3
Moisture Content (%)	**12.2**	**15.3**	**17.6**	**20.2**	**23.2**
Dry Density (pcf)	**101.5**	**105.3**	**106.8**	**103.3**	**98.5**

Zero Air Voids

Moisture Content (%)	20.5	23.5	26.5
Dry Unit Weight (pcf)	108.5	103.1	98.2

Tested By SD *Date* 5/26/2010 *Checked By* GBM *Date* 5-27-10

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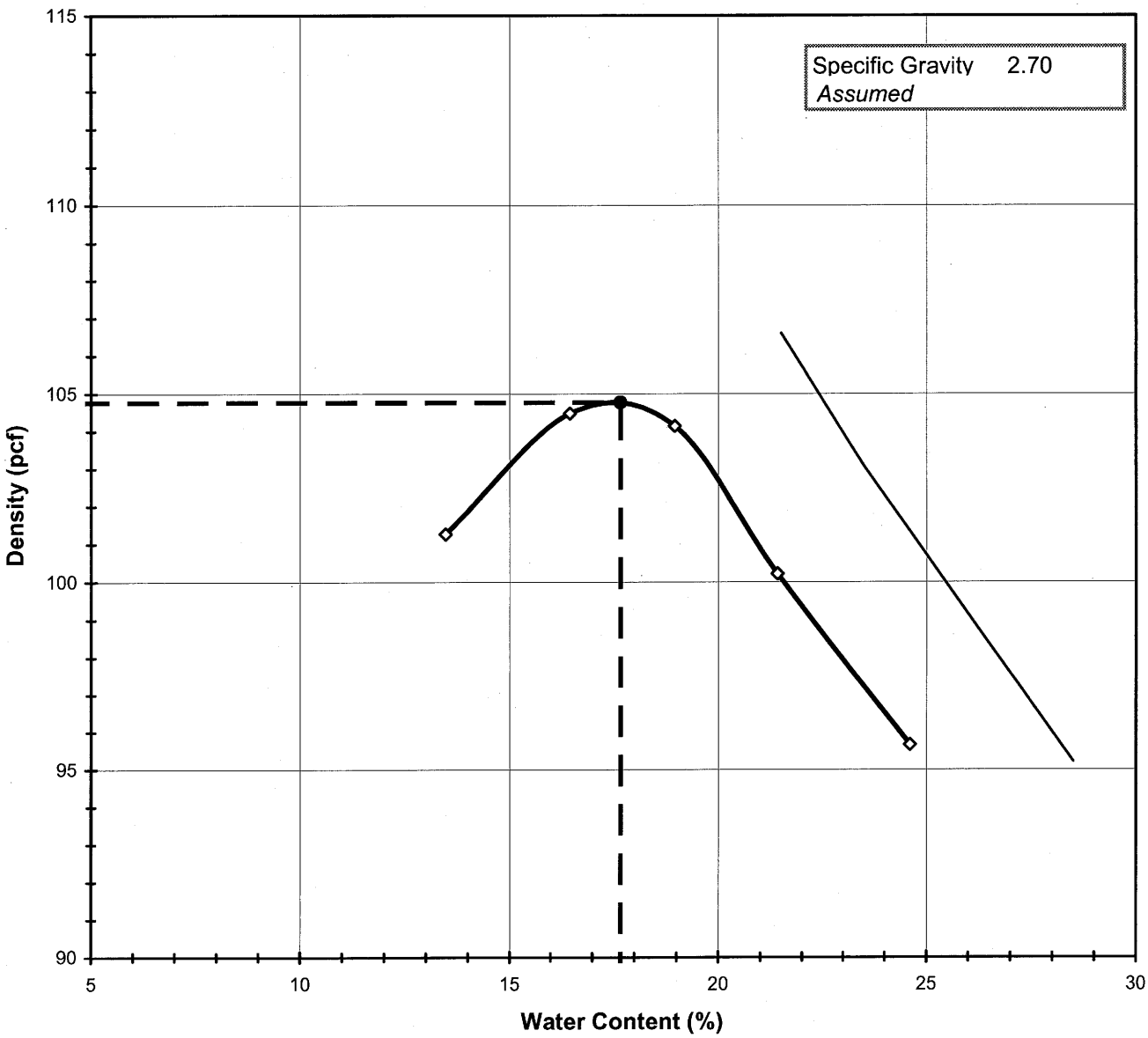
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 14
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-05
Lab ID	2010-652-07-05	Test Method	**STANDARD**

Visual Description GRAY SILTY CLYEY SAND

Optimum Water Content **17.7**
Maximum Dry Density **104.8**



Tested By *SD* *Date* *5/26/2010* *Checked By* GEM *Date* 5-27-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-07-05 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 14
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-07	Sample No.	UPPER CF-05
Lab ID	2010-652-07-05		

Visual Description GRAY SILTY CLYEY SAND

Total Weight of the Sample (gm)	19427
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4310
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6043	6145	6179	6145	6108
Wt.of Mold (gm)	4310	4310	4310	4310	4310
Wt. of WS	1733	1835	1869	1835	1798
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	398	306	301	399	K-7
Wt. of Tare & WS (gm)	409.00	476.40	473.30	512.30	595.10
Wt. of Tare & DS (gm)	370.46	421.57	411.30	437.24	499.62
Wt. of Tare (gm)	84.10	88.50	84.40	86.70	111.60
Wt. of Water (gm)	38.54	54.83	62.00	75.06	95.48
Wt. of DS (gm)	286.36	333.07	326.90	350.54	388.02

Wet Density (gm/cc)	1.84	1.95	1.99	1.95	1.91
Wet Density (pcf)	114.9	121.7	123.9	121.7	119.2
Moisture Content (%)	**13.5**	**16.5**	**19.0**	**21.4**	**24.6**
Dry Density (pcf)	**101.3**	**104.5**	**104.1**	**100.2**	**95.7**

Zero Air Voids

Moisture Content (%)	21.5	23.5	28.5
Dry Unit Weight (pcf)	106.6	103.1	95.2

Tested By SD *Date* 5/26/2010 *Checked By* GEM *Date* 5-27-10

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June 8, 2010

Project No. 2010-652-08

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 3
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-06
Lab ID	2010-652-08-01	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By JBD *Date* 6/7/2010 *Checked By* GEM *Date* 6·8·10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-01 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 11
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-07
Lab ID	2010-652-08-02	Soil Description	**GRAY SILT**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

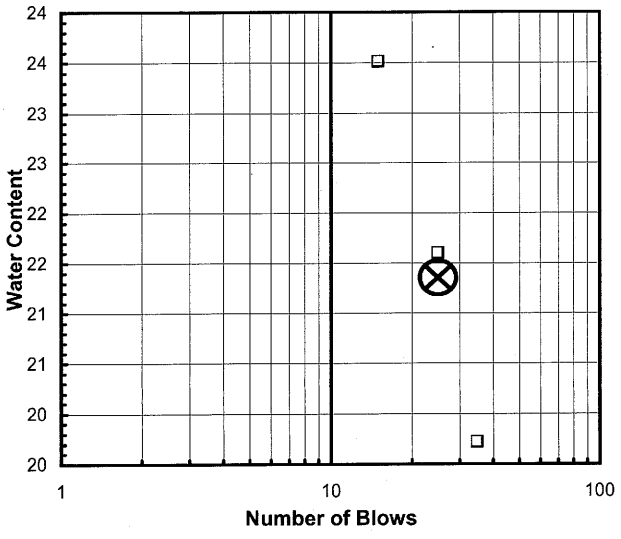
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	G	Y	W	MULTIPOINT
Wt. of Tare & WS (gm)	30.18	33.53	31.37	
Wt. of Tare & DS (gm)	27.30	30.34	28.69	
Wt. of Tare (gm)	15.05	15.57	15.10	
Wt. of Water (gm)	2.9	3.2	2.7	
Wt. of DS (gm)	12.3	14.8	13.6	
Moisture Content (%)	**23.5**	**21.6**	**19.7**	
Number of Blows	**15**	**25**	**35**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	B	T	
Wt. of Tare & WS (gm)	22.69	23.41	
Wt. of Tare & DS (gm)	21.55	22.18	
Wt. of Tare (gm)	15.15	15.18	
Wt. of Water (gm)	1.1	1.2	
Wt. of DS (gm)	6.4	7.0	
Moisture Content (%)	**17.8**	**17.6**	**0.2**

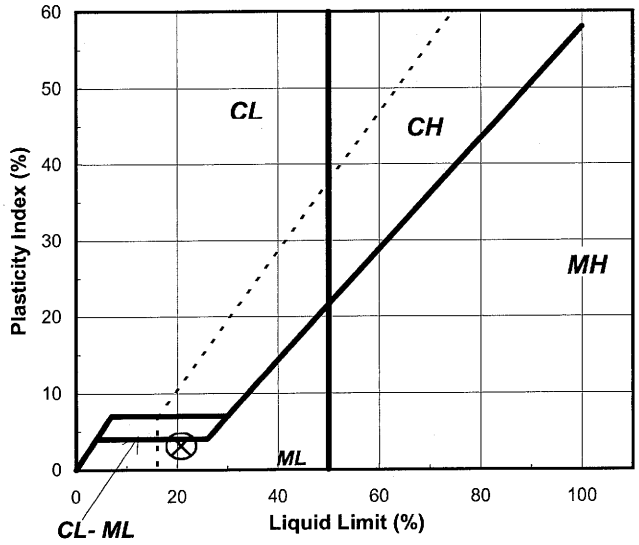
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**21**
Plastic Limit (%)	**18**
Plasticity Index (%)	**3**
USCS Symbol	**ML**

Flow Curve



Plasticity Chart



Tested By JBD *Date* 6/7/2010 *Checked By* GEM *Date* 6-8-10

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 8
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-08	Sample No.	UPPER CF-08
Lab ID	2010-652-08-03	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By JBD *Date* 6/7/2010 *Checked By* GEM *Date* 6-8-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2

\\Server\data drive\2010 PROJECTS\2010-609 R.S.G\[2010-609-08-03 Limit-(NP).xls]Sheet1

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 3
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-06
Lab ID	2010-652-08-01	Soil Color	**GRAY**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By DAW Date 6/4/2010 Checked By GEM Date 6-8-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 3
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-06
Lab ID	2010-652-08-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	829	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	643.66	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	590.38	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	261.63	Weight of Tare (gm)	NA
Weight of Water (gm)	53.28	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	328.75	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	328.75
Dry Weight - 3/4" Sample (gm)	222.2	Weight of minus #200 material (gm)	106.53
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	222.22
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.13	0.0	0.0	100.0	**100.0**
#20	0.850	2.19	0.7	0.7	99.3	**99.3**
#40	0.425	2.35	0.7	1.4	98.6	**98.6**
#60	0.250	11.94	3.6	5.1	94.9	**94.9**
#140	0.106	162.86	49.5	54.6	45.4	**45.4**
#200	0.075	42.75	13.0	67.6	32.4	**32.4**
Pan	-	106.53	32.4	100.0	-	**-**

Tested By DAW Date 6/4/2010 Checked By GCM Date 6-8-10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 11
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-07
Lab ID	2010-652-08-02	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED***

USCS Classification ***SILTY SAND***

Tested By SD Date 6/2/2010 Checked By GEM Date 6-8-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 11
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-07
Lab ID	2010-652-08-02	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	838	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	822.41	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	732.81	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	261.70	Weight of Tare (gm)	NA
Weight of Water (gm)	89.60	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	471.11	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**19.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	471.11
Dry Weight - 3/4" Sample (gm)	267.0	Weight of minus #200 material (gm)	204.11
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	267.00
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.41	0.1	0.1	99.9	**99.9**
#20	0.850	1.63	0.3	0.4	99.6	**99.6**
#40	0.425	1.67	0.4	0.8	99.2	**99.2**
#60	0.250	5.50	1.2	2.0	98.0	**98.0**
#140	0.106	197.34	41.9	43.8	56.2	**56.2**
#200	0.075	60.45	12.8	56.7	43.3	**43.3**
Pan	-	204.11	43.3	100.0	-	**-**

Tested By SD Date 6/2/2010 Checked By GEM Date 6-8-10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 8
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 5
Project No.	2010-652-08	Sample No.	UPPER CF-08
Lab ID	2010-652-08-03	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 6/2/2010 Checked By GZM Date 6-8-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *C:\Documents and Settings\Owner\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-03 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 8
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 5
Project No.	2010-652-08	Sample No.	UPPER CF-08
Lab ID	2010-652-08-03	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	835	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	791.34	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	699.10	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	255.06	Weight of Tare (gm)	NA
Weight of Water (gm)	92.24	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	444.04	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**20.8**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	444.04
Dry Weight - 3/4" Sample (gm)	361.8	Weight of minus #200 material (gm)	82.28
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	361.76
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.92	0.2	0.2	99.8	**99.8**
#20	0.850	1.12	0.3	0.5	99.5	**99.5**
#40	0.425	2.00	0.5	0.9	99.1	**99.1**
#60	0.250	32.40	7.3	8.2	91.8	**91.8**
#140	0.106	275.48	62.0	70.2	29.8	**29.8**
#200	0.075	49.84	11.2	81.5	18.5	**18.5**
Pan	-	82.28	18.5	100.0	-	-

Tested By SD Date 6/2/2010 Checked By GEM Date 6-8-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-03 SIEVON REV 4.XLS]Sheet1*

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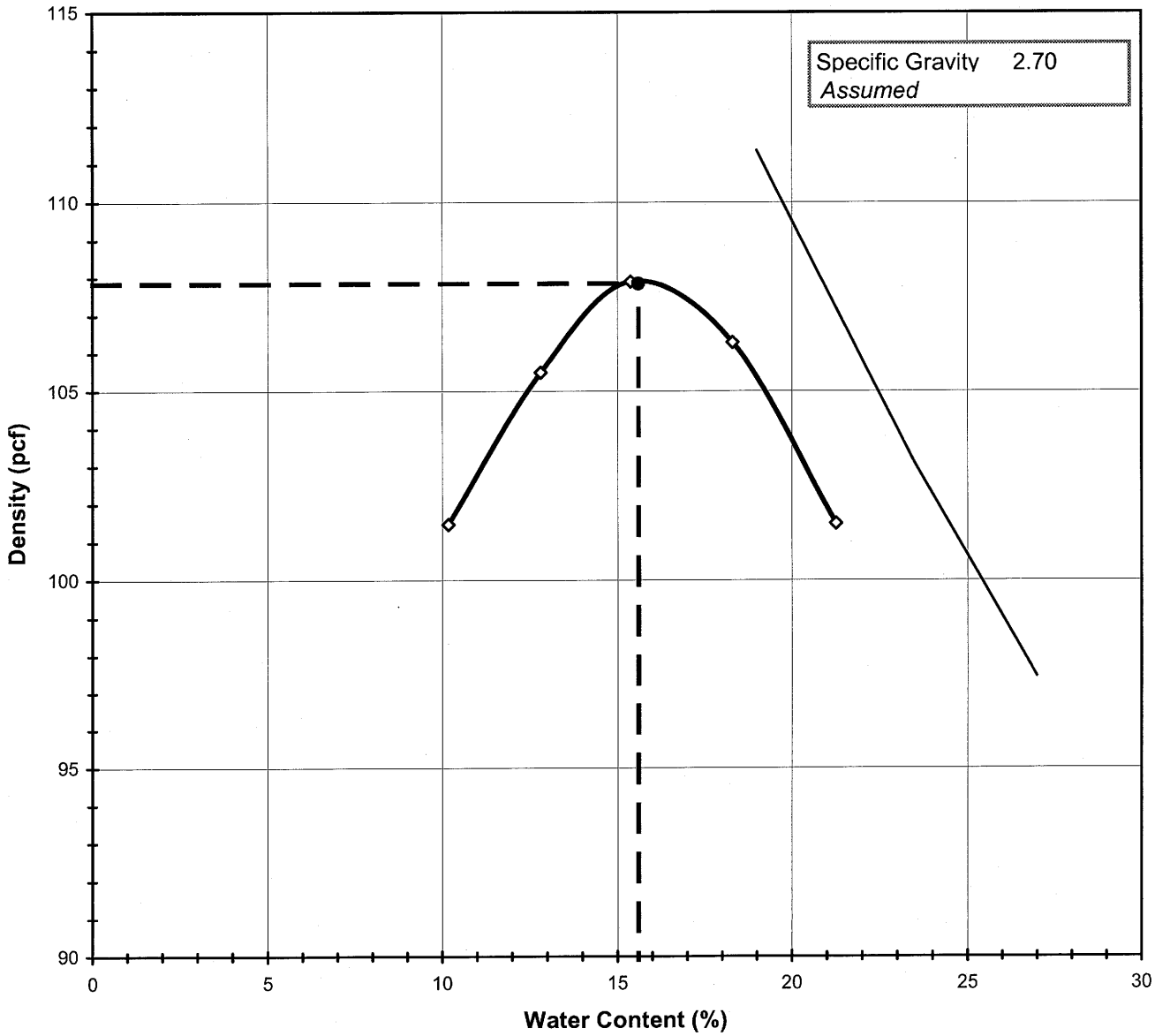
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 3
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-06
Lab ID	2010-652-08-01	Test Method	**STANDARD**

Visual Description GRAY SILTY SAND

Optimum Water Content **15.6**
Maximum Dry Density **107.9**



Tested By SD *Date* 6/3/2010 *Checked By* GEM *Date* 6-14-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-01 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 3
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 4
Project No.	2010-652-08	Sample No.	UPPER CF-06
Lab ID	2010-652-08-01		

Visual Description GRAY SILTY SAND

Total Weight of the Sample (gm)	20813
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4309
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5995	6104	6187	6206	6165
Wt.of Mold (gm)	4309	4309	4309	4309	4309
Wt. of WS	1686	1795	1878	1897	1856
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	398	K-7	311	315	399
Wt. of Tare & WS (gm)	422.30	431.70	476.90	601.70	429.80
Wt. of Tare & DS (gm)	391.08	395.24	424.60	525.65	369.65
Wt. of Tare (gm)	84.40	110.80	84.50	110.20	86.70
Wt. of Water (gm)	31.22	36.46	52.30	76.05	60.15
Wt. of DS (gm)	306.68	284.44	340.10	415.45	282.95

Wet Density (gm/cc)	1.79	1.91	2.00	2.02	1.97
Wet Density (pcf)	111.8	119.0	124.5	125.7	123.1
Moisture Content (%)	**10.2**	**12.8**	**15.4**	**18.3**	**21.3**
Dry Density (pcf)	**101.5**	**105.5**	**107.9**	**106.3**	**101.5**

Zero Air Voids

Moisture Content (%)	19.0	23.5	27.0
Dry Unit Weight (pcf)	111.4	103.1	97.4

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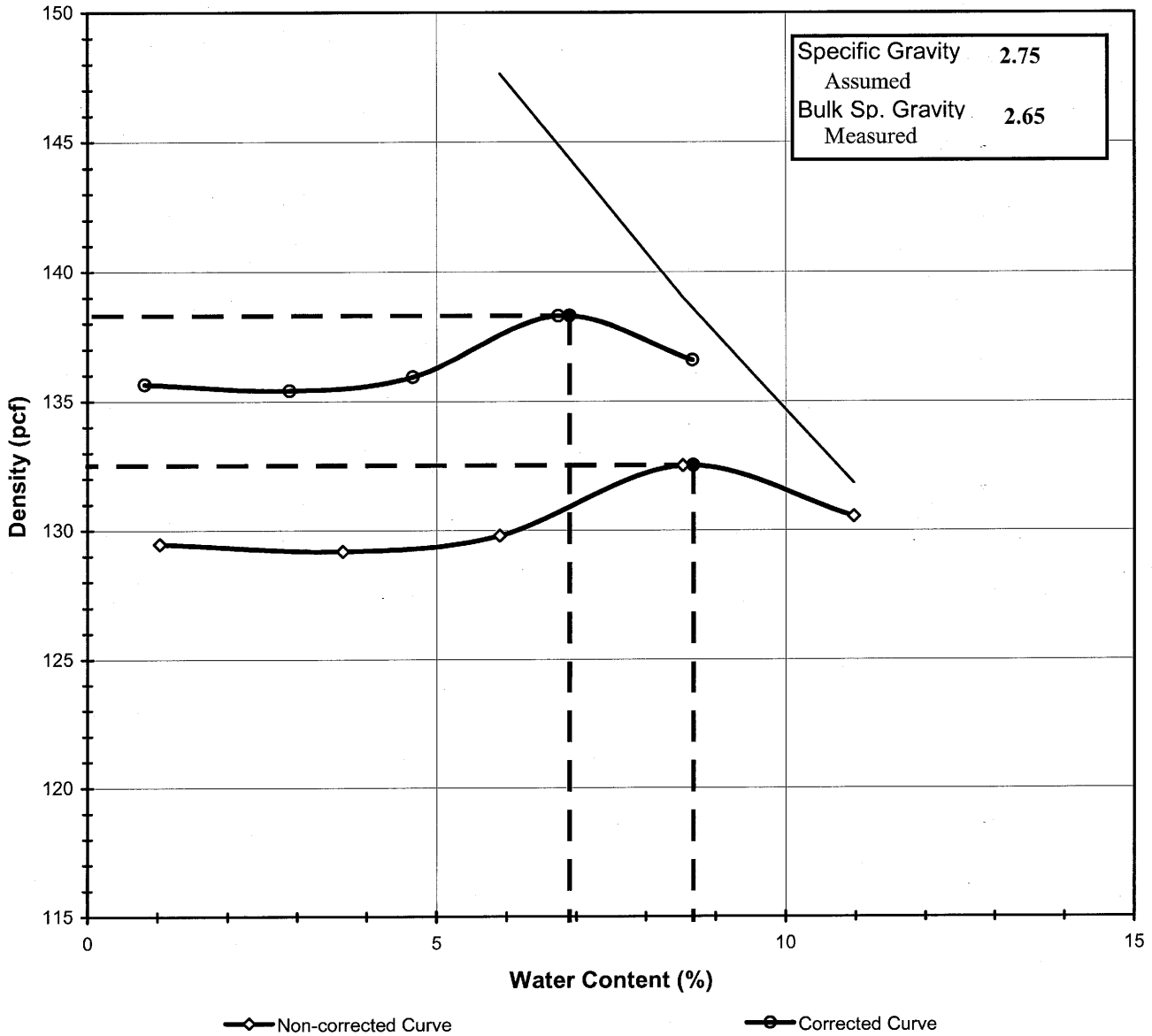
MOISTURE - DENSITY RELATIONSHIP
(Corrected for Oversize Particles)

ASTM D 4718, D 698-91 (SOP-S12,S39)

Client	GLOVER CONSTRUCTION	Boring No.	HANSON
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-08	Sample No.	BASE COURSE-01
Lab ID	2010-652-08-04	Test Method	STANDARD

Visual Description ABC STONE

Optimum Water Content	**8.7**	**Corrected Water Content**	**6.9**
Maximum Dry Density	**132.5**	**Corrected Dry Density**	**138.3**



Tested By SD *Date* 6/7/2010 *Checked By* GEM *Date* 6-14-10

DCN:CT-S 39 DATE:2/28/01 Revision 6 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-04 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP
(Corrected for Oversize Particles)

ASTM D 4718, D 698-91 (SOP-S12,S39)

Client	GLOVER CONSTRUCTION	Boring No.	HANSON
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-08	Sample No.	BASE COURSE-01
Lab ID	2010-652-08-04		

Visual Description: ABC STONE

Total Weight of the Sample (gm)	NA
As Received Water Content(%)	NA
Assumed Specific Gravity(gm/cc)	2.75

Percent Retained on 3/4" (Dry)	21.00
Percent Retained on 3/8" (Dry)	NA
Percent Retained on #4 (Dry)	NA
Oversize Material	Not included
Procedure Used	C

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	G	174
Mold ID	G	173
Mold diameter		6"
Weight of the Mold		5559
Volume Of the Mold		2122

Mold/Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	10007	10113	10234	10450	10485
Wt.of Mold (gm)	5559	5559	5559	5559	5559
Wt. of WS	4448	4554	4675	4891	4926
Mold Volume (cc)	2122	2122	2122	2122	2122

Moisture Content/Density

Tare Number	K-7	G-5	398	399	315
Wt. of Tare & WS (gm)	828.10	909.40	888.60	835.41	1014.20
Wt. of Tare & DS (gm)	820.76	882.57	843.75	776.58	924.88
Wt. of Tare (gm)	111.20	148.40	84.30	86.90	110.70
Wt. of Water (gm)	7.34	26.83	44.85	58.83	89.32
Wt. of DS (gm)	709.56	734.17	759.45	689.68	814.18

Wet Density (gm/cc)	2.10	2.15	2.20	2.30	2.32
Wet Density (pcf)	130.8	133.9	137.5	143.8	144.9
Moisture Content (%)	**1.0**	**3.7**	**5.9**	**8.5**	**11.0**
Dry Density (pcf)	**129.5**	**129.2**	**129.8**	**132.5**	**130.5**

Zero Air Voids

Moisture Content (%)	5.9	8.5	11.0
Dry Unit Weight (pcf)	147.6	139.0	131.8

Tested By SD *Date* 6/10/2010 *Checked By* GBM *Date* 6-14-10

DCN:CT-S 39 DATE:2/28/01 Revision 6 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-08-04 Proctor.XLS]Sheet1*

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INTEGRITY IN TESTING

June 17, 2010

Project No. 2010-652-09

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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INTEGRITY IN TESTING

ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 9
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-09
Lab ID	2010-652-09-01	Soil Description	**GRAY LEAN CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

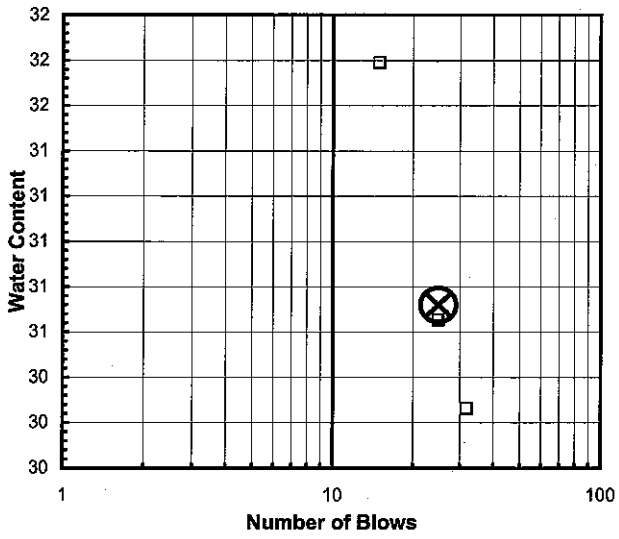
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	J	L	A	MULTIPOINT
Wt. of Tare & WS (gm)	25.06	26.24	25.22	
Wt. of Tare & DS (gm)	22.66	23.65	22.89	
Wt. of Tare (gm)	15.11	15.20	15.19	
Wt. of Water (gm)	2.4	2.6	2.3	
Wt. of DS (gm)	7.6	8.5	7.7	
Moisture Content (%)	**31.8**	**30.7**	**30.3**	
Number of Blows	**15**	**25**	**32**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	U	S	
Wt. of Tare & WS (gm)	21.73	21.38	
Wt. of Tare & DS (gm)	20.78	20.50	
Wt. of Tare (gm)	15.15	15.16	
Wt. of Water (gm)	0.9	0.9	
Wt. of DS (gm)	5.6	5.3	
Moisture Content (%)	**16.9**	**16.5**	**0.4**

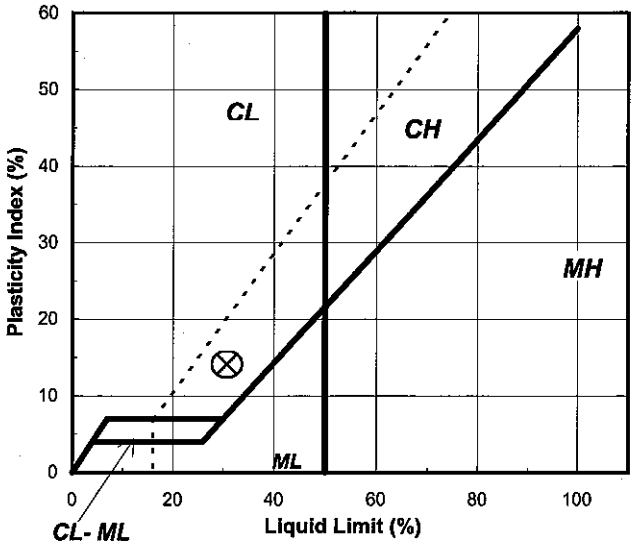
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**31**
Plastic Limit (%)	**17**
Plasticity Index (%)	**14**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



Tested By SD *Date* 6/10/2010 *Checked By* GZM *Date* 6-11-10

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 15
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652-09	Sample No.	UPPER CF-10
Lab ID	2010-652-09-02	Visual Description	**GRAY**

(Minus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 6/11/2010 *Checked By* GZM *Date* 6-14-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 1
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-11
Lab ID	2010-652-09-03	Soil Description	**GRAY LEAN CLAY**

***Note: The* USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description.** (Minus No. 40 sieve material, Airdried)

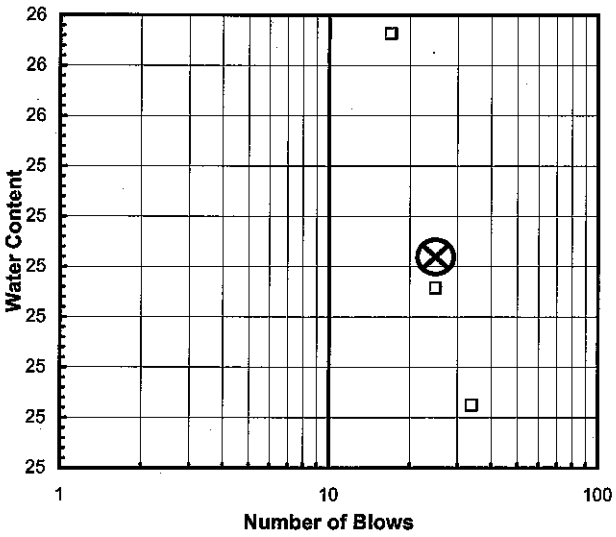
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	B	G	Y	**MULTIPOINT**
Wt. of Tare & WS (gm)	27.49	27.04	27.74	
Wt. of Tare & DS (gm)	24.97	24.62	25.31	
Wt. of Tare (gm)	15.15	15.00	15.56	
Wt. of Water (gm)	2.5	2.4	2.4	
Wt. of DS (gm)	9.8	9.6	9.8	
Moisture Content (%)	**25.7**	**25.2**	**24.9**	
Number of Blows	**17**	**25**	**34**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	T	W	
Wt. of Tare & WS (gm)	21.41	21.13	
Wt. of Tare & DS (gm)	20.56	20.32	
Wt. of Tare (gm)	15.17	15.11	
Wt. of Water (gm)	0.9	0.8	
Wt. of DS (gm)	5.4	5.2	
Moisture Content (%)	**15.8**	**15.5**	**0.2**

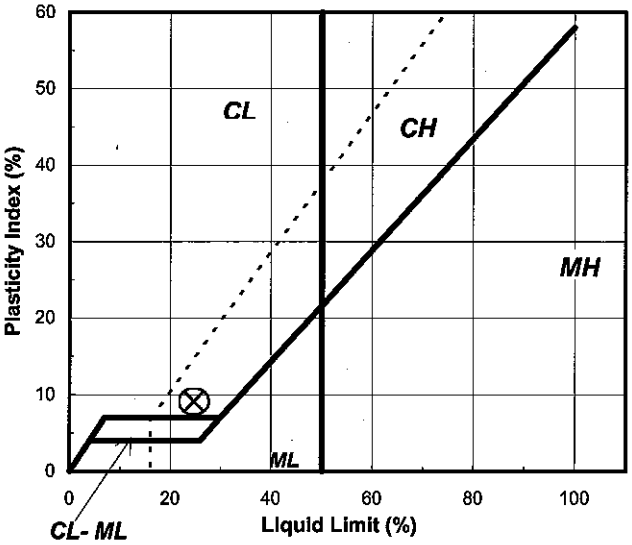
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**25**
Plastic Limit (%)	**16**
Plasticity Index (%)	**9**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



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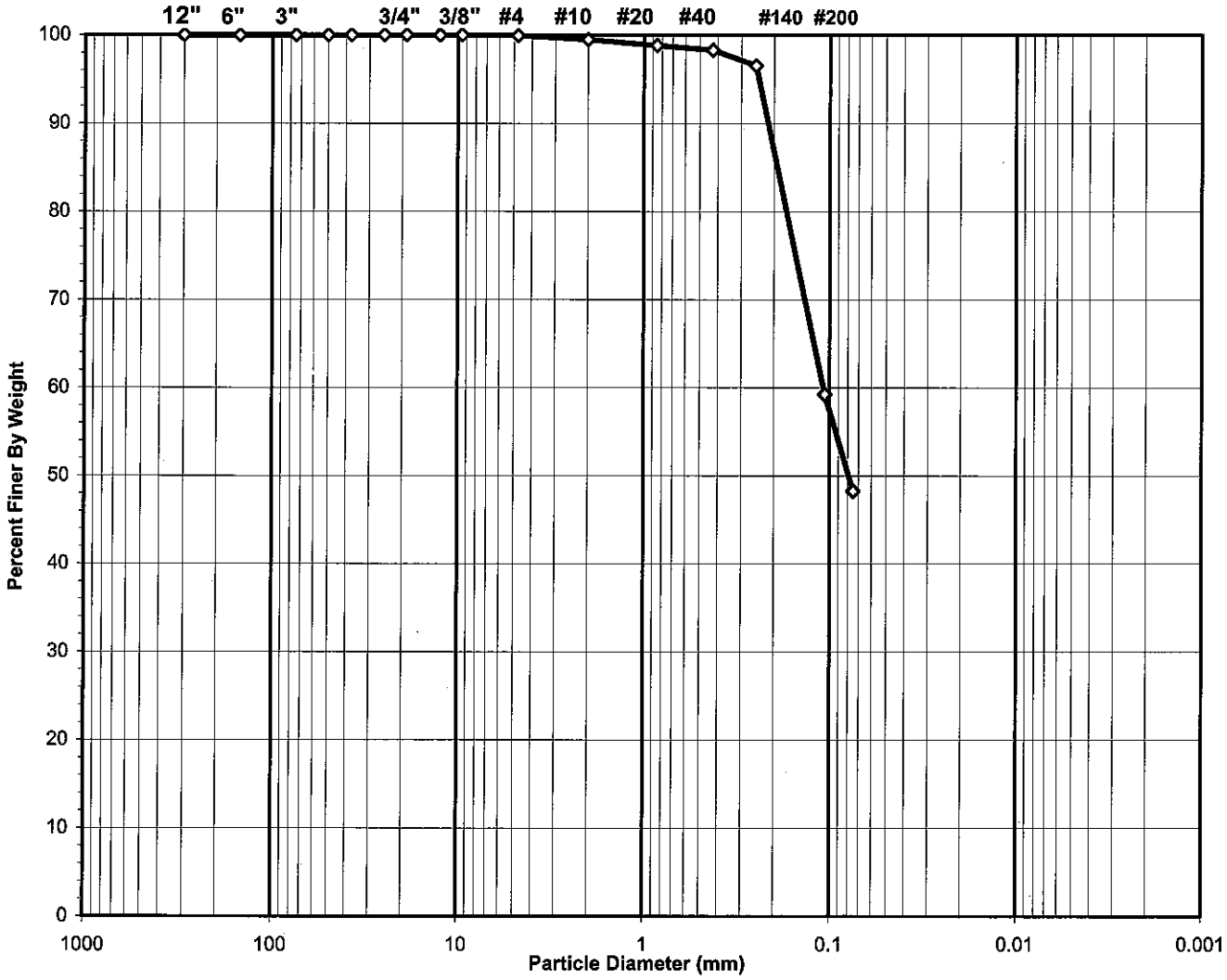
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 9
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-09
Lab ID	2010-652-09-01	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay



USCS Symbol ***SC, TESTED***

USCS Classification ***CLAYEY SAND***

Tested By SD Date 6/9/2010 Checked By GEM Date 6-11-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-09-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 9
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-09
Lab ID	2010-652-09-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	216	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	775.14	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	653.53	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	170.78	Weight of Tare (gm)	NA
Weight of Water (gm)	121.61	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	482.75	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**25.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	482.75
Dry Weight - 3/4" Sample (gm)	249.9	Weight of minus #200 material (gm)	232.86
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	249.89
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.35	0.1	0.1	99.9	**99.9**
#10	2.00	2.19	0.5	0.5	99.5	**99.5**
#20	0.850	3.22	0.7	1.2	98.8	**98.8**
#40	0.425	2.46	0.5	1.7	98.3	**98.3**
#60	0.250	8.55	1.8	3.5	96.5	**96.5**
#140	0.106	180.09	37.3	40.8	59.2	**59.2**
#200	0.075	53.03	11.0	51.8	48.2	**48.2**
Pan	-	232.86	48.2	100.0	-	-

Tested By SD Date 6/9/2010 Checked By GEM Date 6-11-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-09-01 SIEVON REV 4.XLS]Sheet1*

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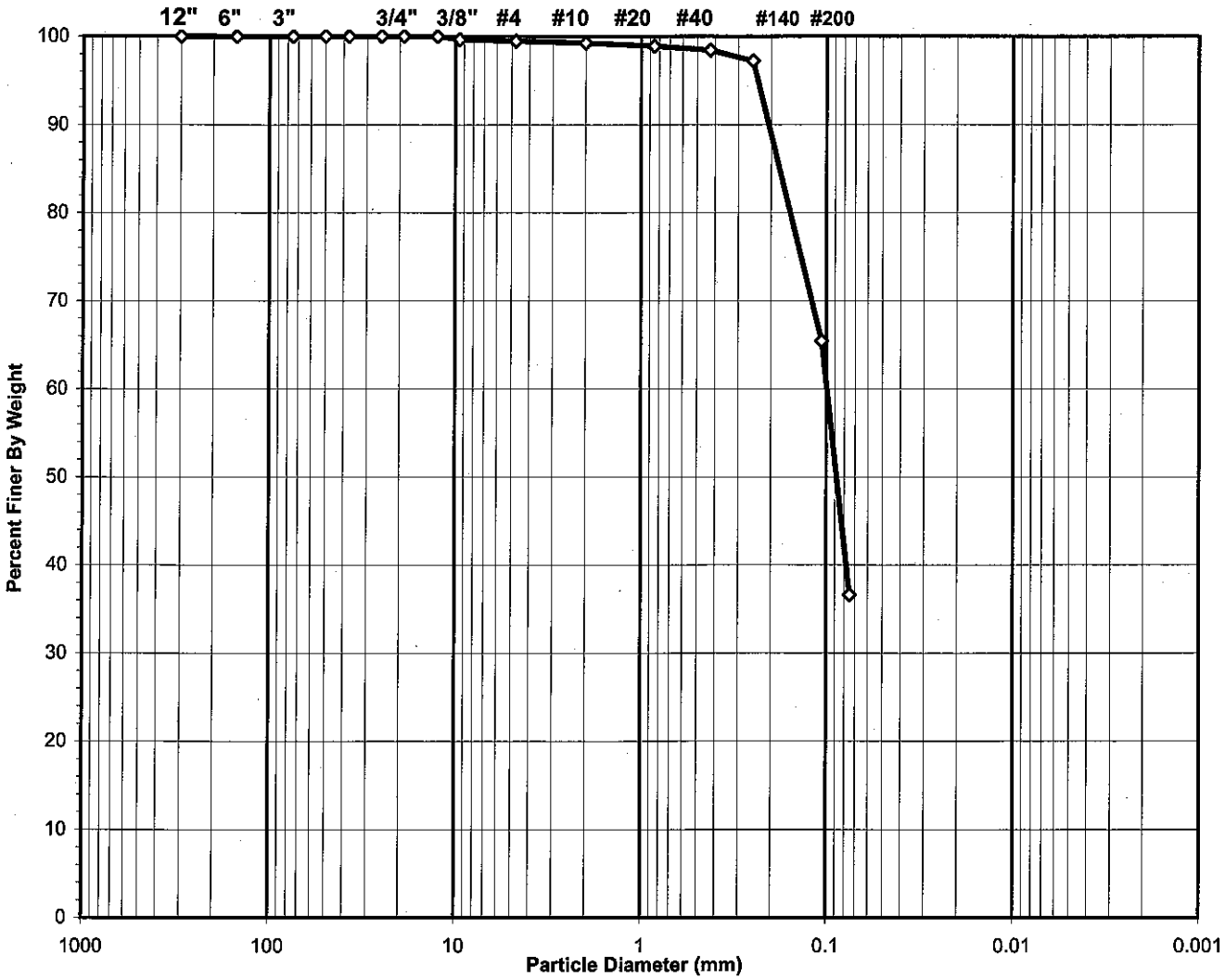
INTEGRITY IN TESTING

SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 15
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652-09	Sample No.	UPPER CF-10
Lab ID	2010-652-09-02	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay



USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 6/10/2010 Checked By GEM Date 6-14-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Harper\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-09-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 15
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652-09	Sample No.	UPPER CF-10
Lab ID	2010-652-09-02	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	839	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	661.38	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	605.07	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	257.91	Weight of Tare (gm)	NA
Weight of Water (gm)	56.31	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	347.16	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	347.16
Dry Weight - 3/4" Sample (gm)	220.1	Weight of minus #200 material (gm)	127.08
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	220.08
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	1.32	0.4	0.4	99.6	**99.6**
#4	4.75	0.49	0.1	0.5	99.5	**99.5**
#10	2.00	0.89	0.3	0.8	99.2	**99.2**
#20	0.850	1.13	0.3	1.1	98.9	**98.9**
#40	0.425	1.63	0.5	1.6	98.4	**98.4**
#60	0.250	4.18	1.2	2.8	97.2	**97.2**
#140	0.106	110.34	31.8	34.6	65.4	**65.4**
#200	0.075	100.10	28.8	63.4	36.6	**36.6**
Pan	-	127.08	36.6	100.0	-	**-**

Tested By SD Date 6/10/2010 Checked By GEM Date 6-14-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-09-02 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 1
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-11
Lab ID	2010-652-09-03	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SC, TESTED***

USCS Classification ***CLAYEY SAND***

Tested By SD Date 6/10/2010 Checked By GM Date 6-16-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-09-03 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 1
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-11
Lab ID	2010-652-09-03	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	829	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	662.54	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	585.34	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	261.58	Weight of Tare (gm)	NA
Weight of Water (gm)	77.20	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	323.76	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**23.8**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	323.76
Dry Weight - 3/4" Sample (gm)	166.0	Weight of minus #200 material (gm)	157.81
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	165.95
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.24	0.1	0.1	99.9	**99.9**
#10	2.00	1.11	0.3	0.4	99.6	**99.6**
#20	0.850	1.74	0.5	1.0	99.0	**99.0**
#40	0.425	1.84	0.6	1.5	98.5	**98.5**
#60	0.250	5.65	1.7	3.3	96.7	**96.7**
#140	0.106	115.04	35.5	38.8	61.2	**61.2**
#200	0.075	40.33	12.5	51.3	48.7	**48.7**
Pan	-	157.81	48.7	100.0	-	-

Tested By SD Date 6/10/2010 Checked By Gem Date 6-16-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *er\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-09-03 SIEVON REV 4.XLS]Sheet1*

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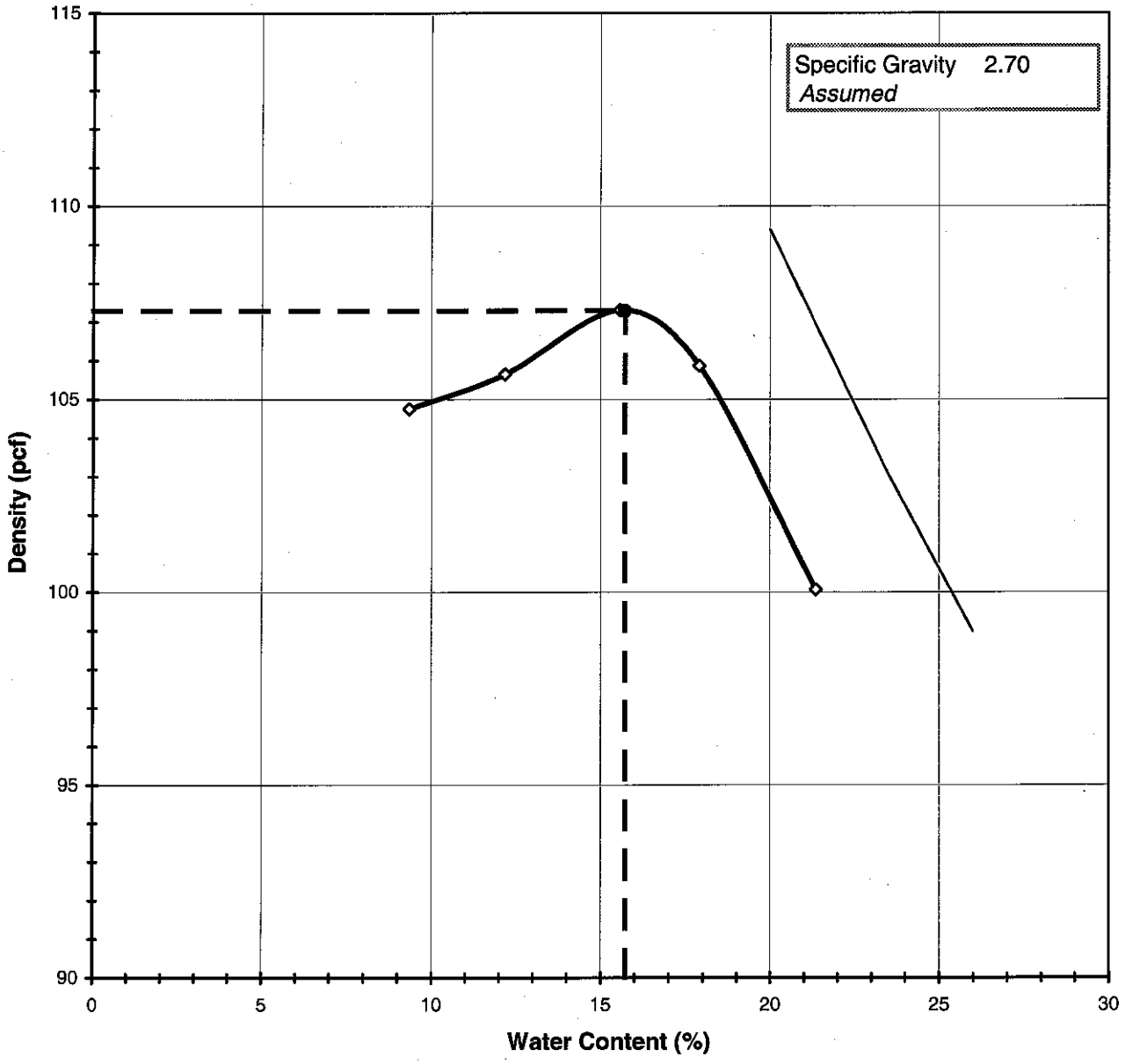
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 15
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652-09	Sample No.	UPPER CF-10
Lab ID	2010-652-09-02	Test Method	**STANDARD**

Visual Description GRAY SILTY SAND

Optimum Water Content **15.7**
Maximum Dry Density **107.3**



Tested By SD *Date* 6/16/2010 *Checked By* GBM *Date* 6-17-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-09-02 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 15
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652-09	Sample No.	UPPER CF-10
Lab ID	2010-652-09-02		

Visual Description GRAY SILTY SAND

Total Weight of the Sample (gm)	21010
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4308
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6036	6096	6179	6191	6140
Wt.of Mold (gm)	4308	4308	4308	4308	4308
Wt. of WS	1728	1788	1871	1883	1832
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	317	305	K-7	309	399
Wt. of Tare & WS (gm)	588.10	446.20	463.10	476.20	584.90
Wt. of Tare & DS (gm)	544.99	406.93	415.55	420.60	497.30
Wt. of Tare (gm)	83.80	84.40	110.40	110.00	87.20
Wt. of Water (gm)	43.11	39.27	47.55	55.60	87.60
Wt. of DS (gm)	461.19	322.53	305.15	310.60	410.10

Wet Density (gm/cc)	1.84	1.90	1.99	2.00	1.95
Wet Density (pcf)	114.5	118.5	124.0	124.8	121.4
Moisture Content (%)	**9.3**	**12.2**	**15.6**	**17.9**	**21.4**
Dry Density (pcf)	**104.8**	**105.7**	**107.3**	**105.9**	**100.1**

Zero Air Voids

Moisture Content (%)	20.0	23.5	26.0
Dry Unit Weight (pcf)	109.4	103.1	99.0

Tested By SD *Date* 6/16/2010 *Checked By* GZM *Date* 6-17-10

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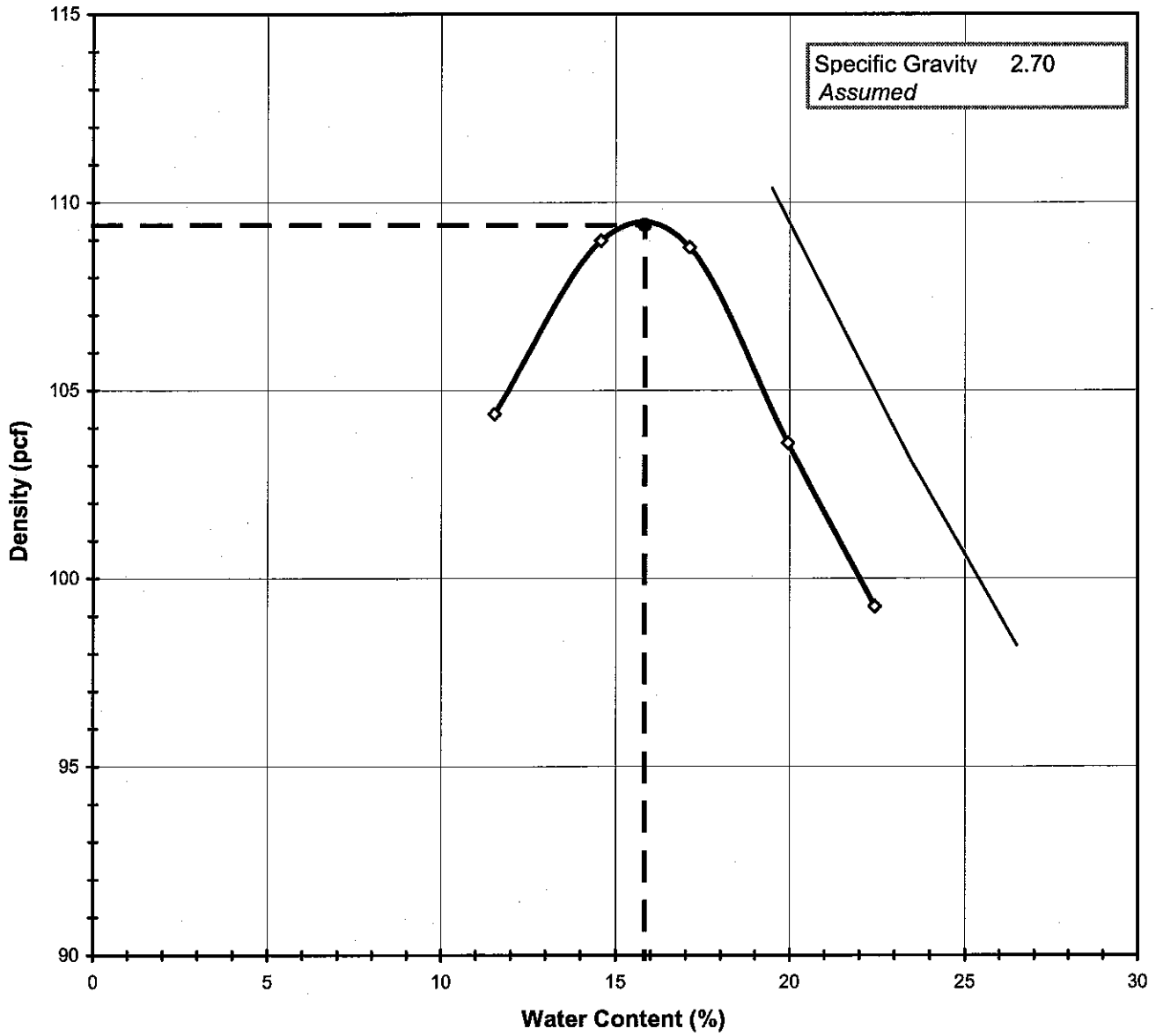
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 1
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-01
Lab ID	2010-652-09-03	Test Method	**STANDARD**

Visual Description GRAY CLAYEY SAND

Optimum Water Content **15.8**
Maximum Dry Density **109.4**



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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 1
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-09	Sample No.	UPPER CF-01
Lab ID	2010-652-09-03		

Visual Description GRAY CLAYEY SAND

Total Weight of the Sample (gm)	22210
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4308
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6064	6191	6230	6182	6141
Wt.of Mold (gm)	4308	4308	4308	4308	4308
Wt. of WS	1756	1883	1922	1874	1833
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	304	311	306	307	315
Wt. of Tare & WS (gm)	477.00	436.60	619.00	575.80	563.10
Wt. of Tare & DS (gm)	439.07	391.70	541.49	498.47	480.20
Wt. of Tare (gm)	110.30	83.90	88.50	110.90	110.90
Wt. of Water (gm)	37.93	44.90	77.51	77.33	82.90
Wt. of DS (gm)	328.77	307.80	452.99	387.57	369.30

Wet Density (gm/cc)	1.87	2.00	2.04	1.99	1.95
Wet Density (pcf)	116.4	124.9	127.4	124.3	121.5
Moisture Content (%)	**11.5**	**14.6**	**17.1**	**20.0**	**22.4**
Dry Density (pcf)	**104.4**	**109.0**	**108.8**	**103.6**	**99.3**

Zero Air Voids

Moisture Content (%)	19.5	23.5	26.5
Dry Unit Weight (pcf)	110.4	103.1	98.2

Tested By SD *Date* 6/15/2010 *Checked By* Gem *Date* 6-15-10

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June 23, 2010

Project No. 2010-652-10

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 4
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-12
Lab ID	2010-652-10-01	Soil Description	**GRAY SILT**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

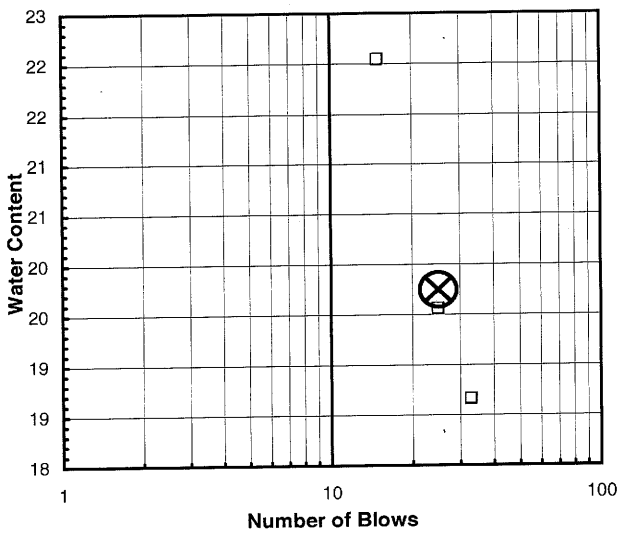
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	K	R	H	MULTIPOINT
Wt. of Tare & WS (gm)	30.15	31.33	31.08	
Wt. of Tare & DS (gm)	27.45	28.68	28.57	
Wt. of Tare (gm)	15.20	15.13	15.12	
Wt. of Water (gm)	2.7	2.7	2.5	
Wt. of DS (gm)	12.3	13.6	13.5	
Moisture Content (%)	**22.0**	**19.6**	**18.7**	
Number of Blows	**15**	**25**	**33**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	C	N	
Wt. of Tare & WS (gm)	21.46	21.88	
Wt. of Tare & DS (gm)	20.56	20.92	
Wt. of Tare (gm)	15.22	15.26	
Wt. of Water (gm)	0.9	1.0	
Wt. of DS (gm)	5.3	5.7	
Moisture Content (%)	**16.9**	**17.0**	**-0.1**

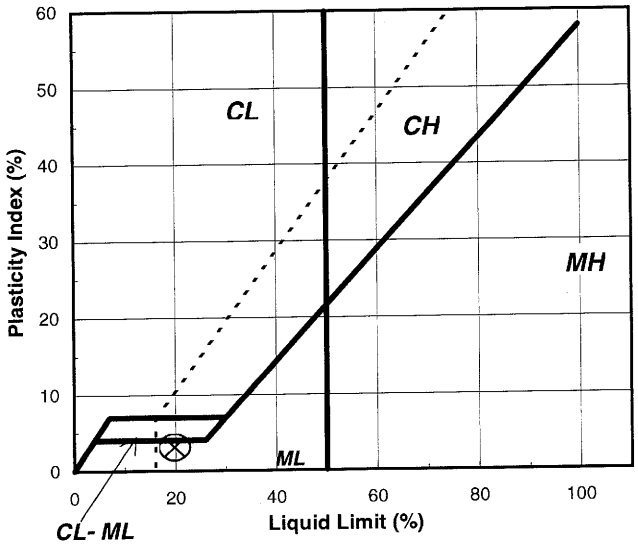
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**20**
Plastic Limit (%)	**17**
Plasticity Index (%)	**3**
USCS Symbol	**ML**

Flow Curve



Plasticity Chart



Tested By SD *Date* 6/17/2010 *Checked By* TMS *Date* 6/21/10

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 5
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-13
Lab ID	2010-652-10-02	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 6/18/2010 *Checked By* [illegible] *Date* 6/21/10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-11-01 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 16
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-10	Sample No.	UPPER CF-14
Lab ID	2010-652-10-03	Soil Description	**GRAY LEAN CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

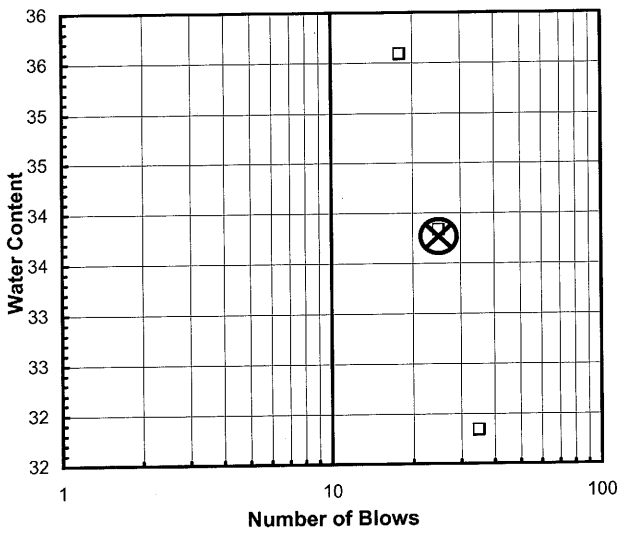
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	I	Q	F	MULTIPOINT
Wt. of Tare & WS (gm)	25.83	25.86	25.35	
Wt. of Tare & DS (gm)	23.04	23.15	22.87	
Wt. of Tare (gm)	15.20	15.14	15.08	
Wt. of Water (gm)	2.8	2.7	2.5	
Wt. of DS (gm)	7.8	8.0	7.8	
Moisture Content (%)	**35.6**	**33.8**	**31.8**	
Number of Blows	**18**	**25**	**35**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	P	M	
Wt. of Tare & WS (gm)	21.53	21.25	
Wt. of Tare & DS (gm)	20.47	20.24	
Wt. of Tare (gm)	15.16	15.13	
Wt. of Water (gm)	1.1	1.0	
Wt. of DS (gm)	5.3	5.1	
Moisture Content (%)	**20.0**	**19.8**	**0.2**

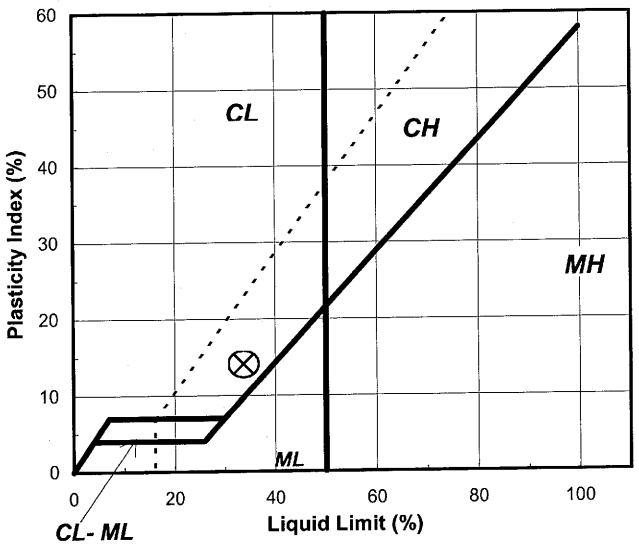
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**34**
Plastic Limit (%)	**20**
Plasticity Index (%)	**14**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 4
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-12
Lab ID	2010-652-10-01	Soil Color	**GRAY**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED***

USCS Classification ***SILTY SAND***

Tested By SD Date 6/18/2010 Checked By GEM Date 6-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 4
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-12
Lab ID	2010-652-10-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	215	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	680.52	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	645.28	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	172.45	Weight of Tare (gm)	NA
Weight of Water (gm)	35.24	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	472.83	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**7.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	472.83
Dry Weight - 3/4" Sample (gm)	326.6	Weight of minus #200 material (gm)	146.27
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	326.56
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	1.86	0.4	0.4	99.6	**99.6**
3/8"	9.50	0.00	0.0	0.4	99.6	**99.6**
#4	4.75	1.41	0.3	0.7	99.3	**99.3**
#10	2.00	2.94	0.6	1.3	98.7	**98.7**
#20	0.850	4.23	0.9	2.2	97.8	**97.8**
#40	0.425	3.72	0.8	3.0	97.0	**97.0**
#60	0.250	23.33	4.9	7.9	92.1	**92.1**
#140	0.106	238.65	50.5	58.4	41.6	**41.6**
#200	0.075	50.42	10.7	69.1	30.9	**30.9**
Pan	-	146.27	30.9	100.0	-	-

Tested By SD Date 6/18/2010 Checked By GEM Date 6-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-01 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 5
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-13
Lab ID	2010-652-10-02	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 6/17/2010 Checked By GEM Date 6-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 5
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-13
Lab ID	2010-652-10-02	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	202	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	898.65	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	808.78	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	197.40	Weight of Tare (gm)	NA
Weight of Water (gm)	89.87	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	611.38	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.7**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	611.38
Dry Weight - 3/4" Sample (gm)	439.4	Weight of minus #200 material (gm)	171.96
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	439.42
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.73	0.1	0.1	99.9	**99.9**
#4	4.75	3.49	0.6	0.7	99.3	**99.3**
#10	2.00	3.96	0.6	1.3	98.7	**98.7**
#20	0.850	5.38	0.9	2.2	97.8	**97.8**
#40	0.425	7.32	1.2	3.4	96.6	**96.6**
#60	0.250	50.16	8.2	11.6	88.4	**88.4**
#140	0.106	312.96	51.2	62.8	37.2	**37.2**
#200	0.075	55.42	9.1	71.9	28.1	**28.1**
Pan	-	171.96	28.1	100.0	-	-

Tested By SD Date 6/17/2010 Checked By GEM Date 6-21-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-02 SIEVON REV 4.XLS]Sheet1*

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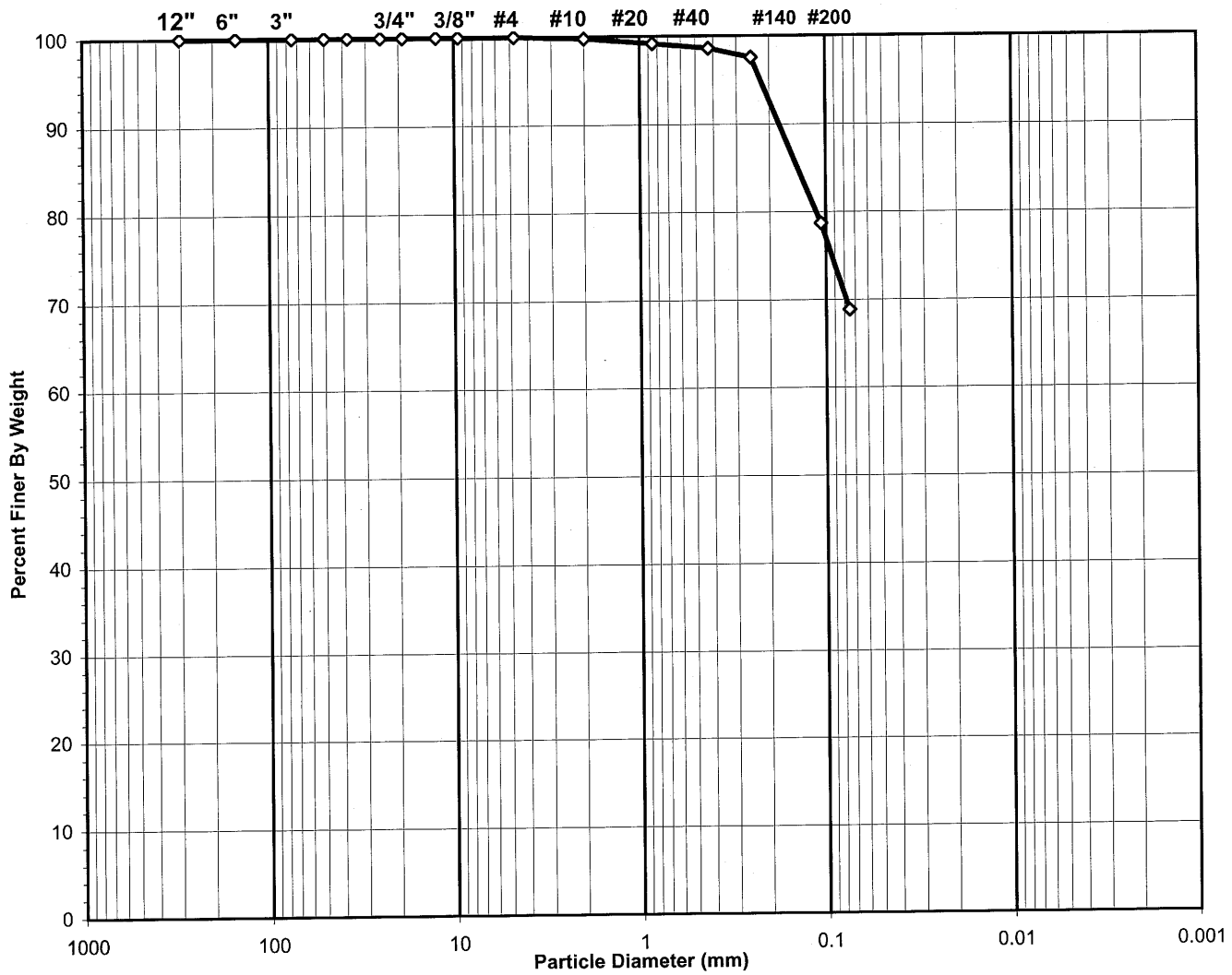
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 16
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 5
Project No.	2010-652-10	Sample No.	UPPER CF-14
Lab ID	2010-652-10-03	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay



USCS Symbol ***CL, TESTED***

USCS Classification ***SANDY LEAN CLAY***

Tested By SD Date 6/21/2010 Checked By GEM Date 6-22-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *S:\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-03 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 16
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 5
Project No.	2010-652-10	Sample No.	UPPER CF-14
Lab ID	2010-652-10-03	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	839	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	705.44	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	613.07	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	258.14	Weight of Tare (gm)	NA
Weight of Water (gm)	92.37	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	354.93	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**26.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	354.93
Dry Weight - 3/4" Sample (gm)	110.6	Weight of minus #200 material (gm)	244.37
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	110.56
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.83	0.2	0.2	99.8	**99.8**
#20	0.850	2.18	0.6	0.8	99.2	**99.2**
#40	0.425	1.97	0.6	1.4	98.6	**98.6**
#60	0.250	3.70	1.0	2.4	97.6	**97.6**
#140	0.106	66.91	18.9	21.3	78.7	**78.7**
#200	0.075	34.97	9.9	31.1	68.9	**68.9**
Pan	-	244.37	68.9	100.0	-	**-**

Tested By SD Date 6/21/2010 Checked By GEM Date 6-22-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-03 SIEVON REV 4.XLS]Sheet1*

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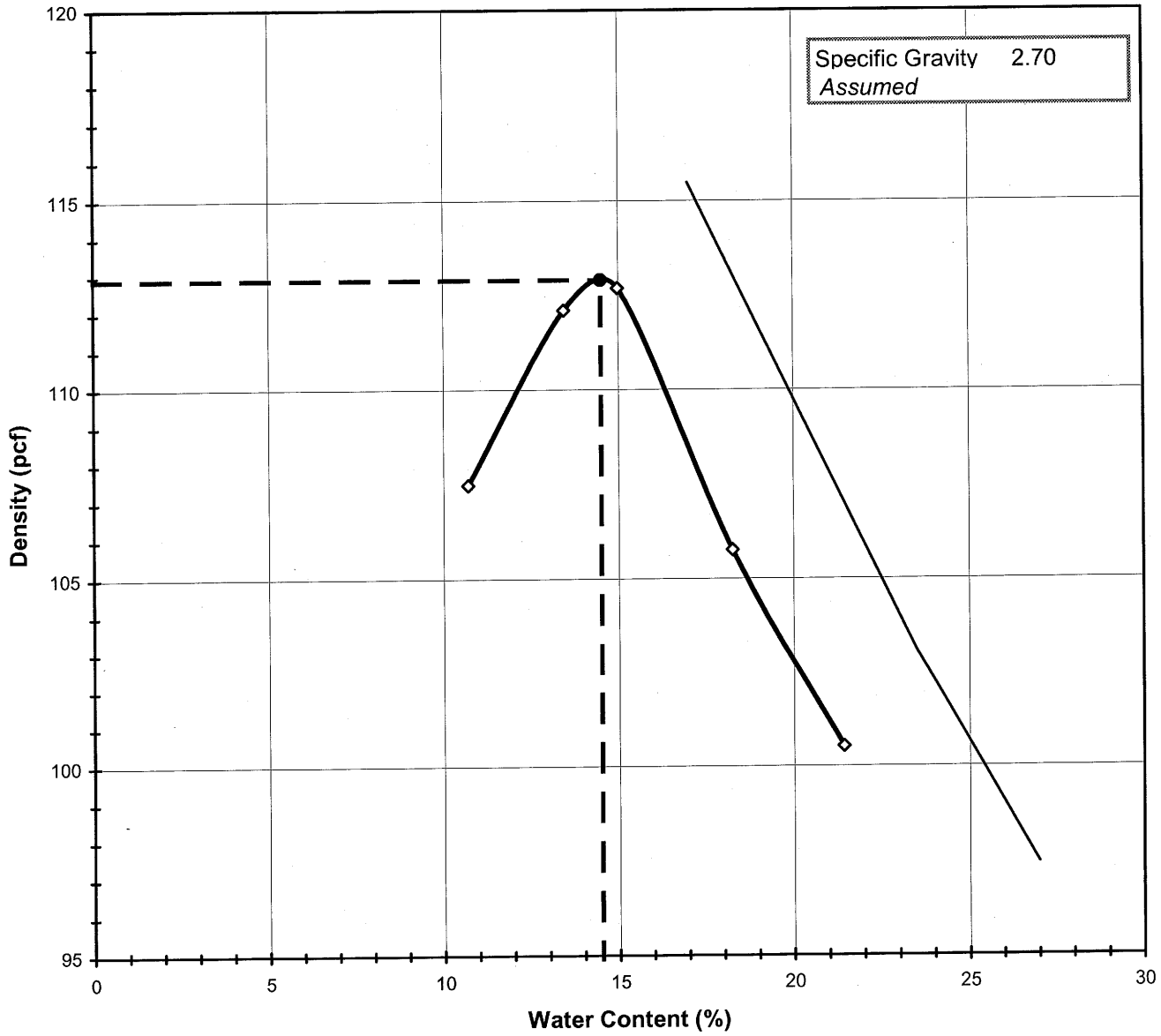
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 4
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-12
Lab ID	2010-652-10-01	Test Method	**STANDARD**

Visual Description GRAY SILTY SAND

Optimum Water Content **14.5**
Maximum Dry Density **112.9**



Tested By SD *Date* 6/17/2010 *Checked By* TMS *Date* 6-21-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-01 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 4
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-10	Sample No.	UPPER CF-12
Lab ID	2010-652-10-01		

Visual Description GRAY SILTY SAND

Total Weight of the Sample (gm)	16299
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4308
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6103	6226	6262	6194	6149
Wt.of Mold (gm)	4308	4308	4308	4308	4308
Wt. of WS	1795	1918	1954	1886	1841
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	A-1	825	815	819	826
Wt. of Tare & WS (gm)	371.40	528.90	637.50	688.40	587.60
Wt. of Tare & DS (gm)	344.84	482.53	572.14	603.08	508.23
Wt. of Tare (gm)	96.70	137.60	136.10	135.80	137.70
Wt. of Water (gm)	26.56	46.37	65.36	85.32	79.37
Wt. of DS (gm)	248.14	344.93	436.04	467.28	370.53

Wet Density (gm/cc)	1.91	2.04	2.08	2.00	1.96
Wet Density (pcf)	119.0	127.2	129.6	125.1	122.1
Moisture Content (%)	**10.7**	**13.4**	**15.0**	**18.3**	**21.4**
Dry Density (pcf)	**107.5**	**112.1**	**112.7**	**105.8**	**100.5**

Zero Air Voids

Moisture Content (%)	17.0	23.5	27.0
Dry Unit Weight (pcf)	115.5	103.1	97.4

Tested By SD *Date* 6/17/2010 *Checked By* TMS *Date* 6-21-10

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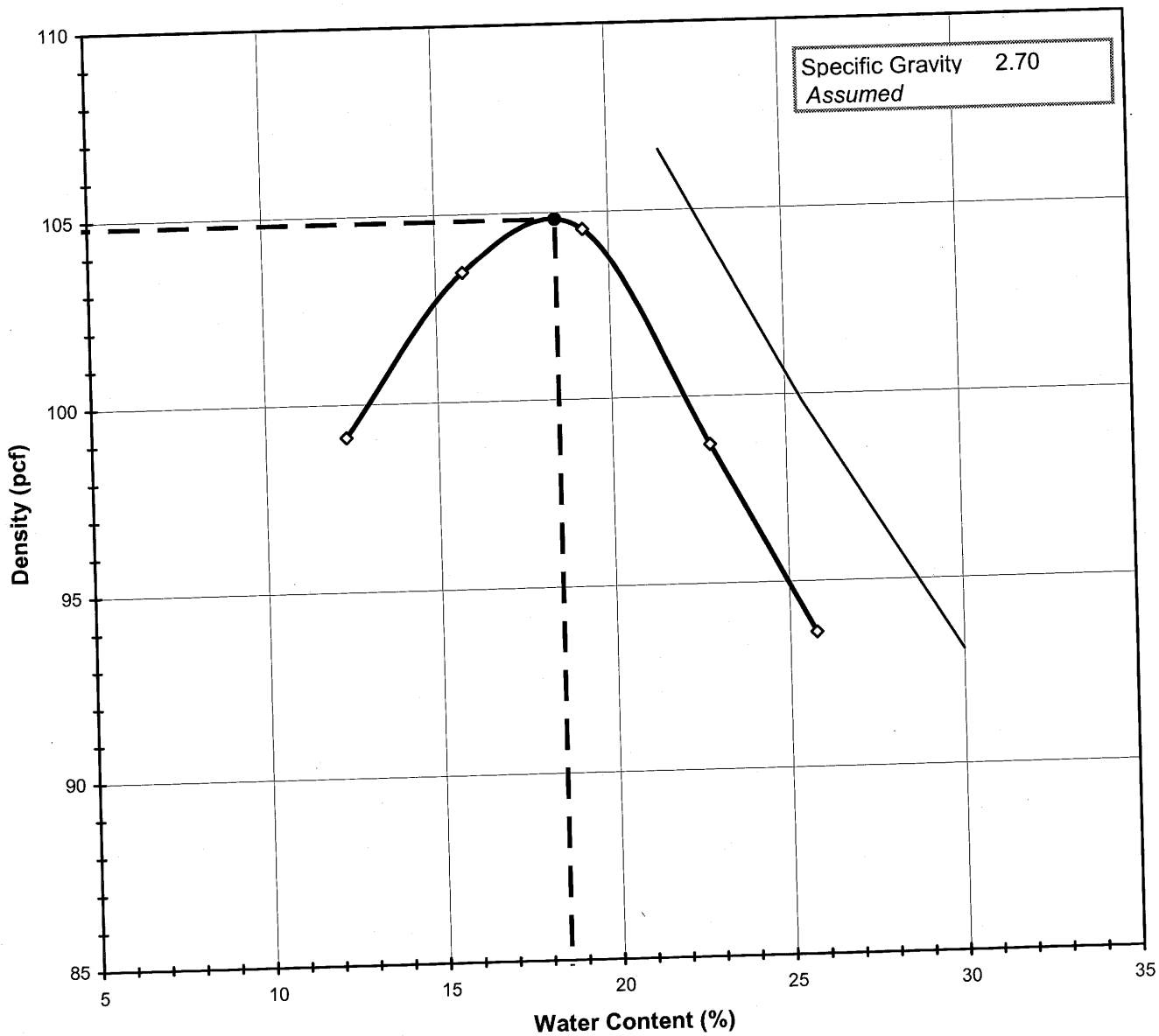
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 16
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-10	Sample No.	UPPER CF-14
Lab ID	2010-652-10-03	Test Method	**STANDARD**

Visual Description GRAY SANDY LEAN CLAY

Optimum Water Content **18.5**
Maximum Dry Density **104.8**



Tested By SD *Date* 6/22/2010 *Checked By* GAM *Date* 6-23-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-03 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 16
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 5
Project No.	2010-652-10	Sample No.	UPPER CF-14
Lab ID	2010-652-10-03		

Visual Description: GRAY SANDY LEAN CLAY

Total Weight of the Sample (gm)	23481
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4307
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5987	6114	6187	6135	6083
Wt.of Mold (gm)	4307	4307	4307	4307	4307
Wt. of WS	1680	1807	1880	1828	1776
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	303	308	310	398	311
Wt. of Tare & WS (gm)	422.50	461.60	613.30	552.00	495.20
Wt. of Tare & DS (gm)	388.31	413.90	532.00	465.08	411.01
Wt. of Tare (gm)	111.10	111.60	110.10	84.10	84.30
Wt. of Water (gm)	34.19	47.70	81.30	86.92	84.19
Wt. of DS (gm)	277.21	302.30	421.90	380.98	326.71

Wet Density (gm/cc)	1.78	1.92	2.00	1.94	1.89
Wet Density (pcf)	111.3	119.8	124.7	121.2	117.8
Moisture Content (%)	**12.3**	**15.8**	**19.3**	**22.8**	**25.8**
Dry Density (pcf)	**99.1**	**103.4**	**104.5**	**98.7**	**93.6**

Zero Air Voids

Moisture Content (%)	21.5	25.5	30.0
Dry Unit Weight (pcf)	106.6	99.8	93.1

Tested By SD *Date* 6/22/2010 *Checked By* Gam *Date* 6-23-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-10-03 Proctor.XLS]Sheet1

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June 24, 2010

Project No. 2010-652-11

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 12
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPER CF_15
Lab ID	2010-652-11-01	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 6/18/2010 *Checked By* TMS *Date* 6/21/10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\SERVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-11-01 Limit-(NP).xls]Sheet1*

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INTEGRITY IN TESTING

ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 13
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPER CF-16
Lab ID	2010-652-11-02	Soil Description	**GRAY LEAN CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

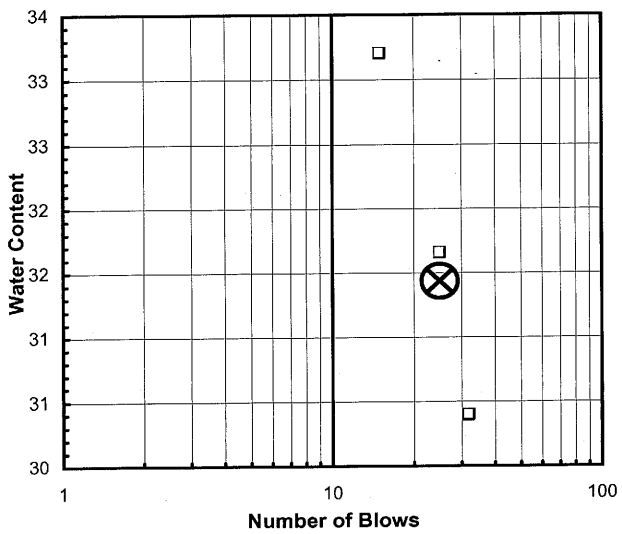
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	A-M	A-O	A-T	MULTIPOINT
Wt. of Tare & WS (gm)	24.83	25.32	25.63	
Wt. of Tare & DS (gm)	22.62	22.93	23.12	
Wt. of Tare (gm)	15.35	15.38	15.56	
Wt. of Water (gm)	2.2	2.4	2.5	
Wt. of DS (gm)	7.3	7.6	7.6	
Moisture Content (%)	**30.4**	**31.7**	**33.2**	
Number of Blows	**32**	**25**	**15**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	A-L	A-Q	
Wt. of Tare & WS (gm)	21.87	21.48	
Wt. of Tare & DS (gm)	21.00	20.68	
Wt. of Tare (gm)	15.49	15.46	
Wt. of Water (gm)	0.9	0.8	
Wt. of DS (gm)	5.5	5.2	
Moisture Content (%)	**15.8**	**15.3**	**0.5**

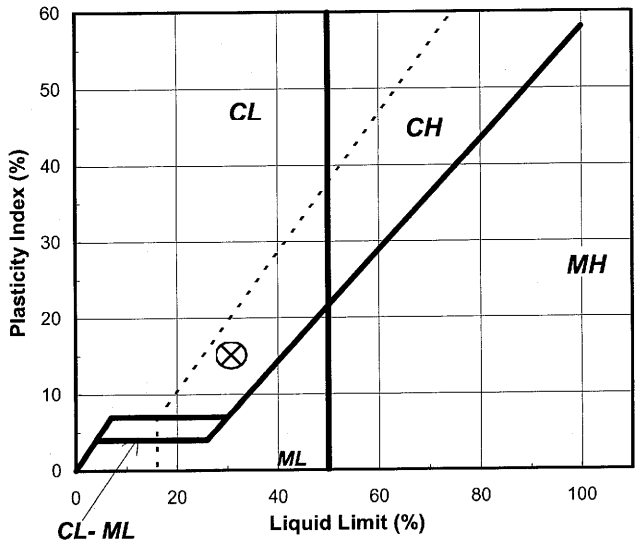
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**31**
Plastic Limit (%)	**16**
Plasticity Index (%)	**15**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



Tested By SD *Date* 6/23/2010 *Checked By* GEM *Date* 6-24-10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 12
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPPER CF-15
Lab ID	2010-652-11-01	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***ML, TESTED***

USCS Classification ***SANDY SILT (NON-PLASTIC)***

Tested By SD Date 6/18/2010 Checked By TMS Date 6/21/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *S:\DRIVER\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-11-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 12
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPPER CF-15
Lab ID	2010-652-11-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	211	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	784.25	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	697.83	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.17	Weight of Tare (gm)	NA
Weight of Water (gm)	86.42	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	526.66	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	526.66
Dry Weight - 3/4" Sample (gm)	232.4	Weight of minus #200 material (gm)	294.31
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	232.35
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	1.86	0.4	0.4	99.6	**99.6**
3/8"	9.50	0.00	0.0	0.4	99.6	**99.6**
#4	4.75	1.41	0.3	0.6	99.4	**99.4**
#10	2.00	1.34	0.3	0.9	99.1	**99.1**
#20	0.850	1.92	0.4	1.2	98.8	**98.8**
#40	0.425	3.17	0.6	1.8	98.2	**98.2**
#60	0.250	11.49	2.2	4.0	96.0	**96.0**
#140	0.106	123.50	23.4	27.5	72.5	**72.5**
#200	0.075	87.66	16.6	44.1	55.9	**55.9**
Pan	-	294.31	55.9	100.0	-	-

Tested By SD Date 6/18/2010 Checked By TMS Date 6/21/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *R:\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-11-01 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 13
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPER CF-16
Lab ID	2010-652-11-02	Soil Color	**GRAY**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay

USCS Symbol ***CL, TESTED***

USCS Classification ***SANDY LEAN CLAY***

Tested By SD Date 6/23/2010 Checked By GEM Date 6-24-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Shared\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-11-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 13
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPER CF-16
Lab ID	2010-652-11-02	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	839	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	688.48	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	615.12	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	258.11	Weight of Tare (gm)	NA
Weight of Water (gm)	73.36	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	357.01	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**20.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	357.01
Dry Weight - 3/4" Sample (gm)	158.9	Weight of minus #200 material (gm)	198.09
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	158.92
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.20	0.1	0.1	99.9	**99.9**
#10	2.00	2.75	0.8	0.8	99.2	**99.2**
#20	0.850	3.37	0.9	1.8	98.2	**98.2**
#40	0.425	3.19	0.9	2.7	97.3	**97.3**
#60	0.250	8.81	2.5	5.1	94.9	**94.9**
#140	0.106	89.54	25.1	30.2	69.8	**69.8**
#200	0.075	51.06	14.3	44.5	55.5	**55.5**
Pan	-	198.09	55.5	100.0	-	-

Tested By SD Date 6/23/2010 Checked By GEM Date 6-24-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-11-02 SIEVON REV 4.XLS]Sheet1*

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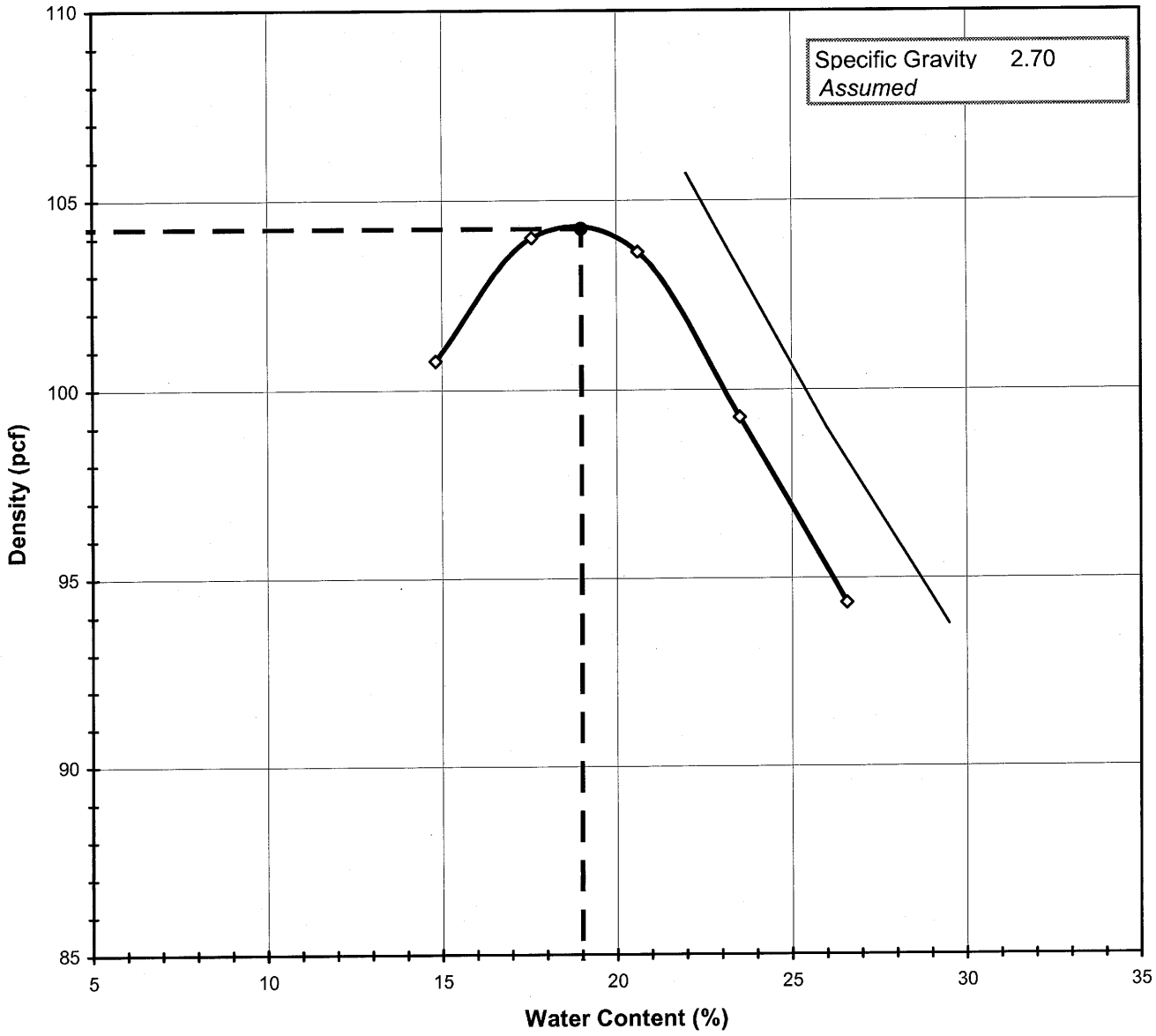
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 13
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPER CF-16
Lab ID	2010-652-11-02	Test Method	**STANDARD**

Visual Description GRAY SANDY LEAN CLAY

Optimum Water Content	**19.0**
Maximum Dry Density	**104.3**



Tested By SD *Date* 6/23/2010 *Checked By* GEM *Date* 6-24-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-11-02 Proctor.XLS]Sheet1*

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	ACRE 13
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 6
Project No.	2010-652-11	Sample No.	UPPER CF-16
Lab ID	2010-652-11-02		

Visual Description GRAY SANDY LEAN CLAY

Total Weight of the Sample (gm)	25814
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4308
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	6053	6152	6193	6157	6109
Wt.of Mold (gm)	4308	4308	4308	4308	4308
Wt. of WS	1745	1845	1886	1850	1801
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	312	318	301	314	300
Wt. of Tare & WS (gm)	358.40	455.20	619.70	503.70	626.40
Wt. of Tare & DS (gm)	322.97	400.07	528.24	423.94	518.18
Wt. of Tare (gm)	83.90	86.50	84.70	84.90	110.90
Wt. of Water (gm)	35.43	55.13	91.46	79.76	108.22
Wt. of DS (gm)	239.07	313.57	443.54	339.04	407.28

Wet Density (gm/cc)	1.85	1.96	2.00	1.97	1.91
Wet Density (pcf)	115.7	122.3	125.0	122.6	119.4
Moisture Content (%)	**14.8**	**17.6**	**20.6**	**23.5**	**26.6**
Dry Density (pcf)	**100.8**	**104.0**	**103.6**	**99.3**	**94.3**

Zero Air Voids

Moisture Content (%)		22.0	26.0	29.5
Dry Unit Weight (pcf)		105.7	99.0	93.8

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INTEGRITY IN TESTING

June 21, 2010

Project No. 2010-652-12

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMITS

ASTM D 4318-05 / AASHTO T89 (SOP - S4A)

Client	GLOVER CONSTRUCTION	Boring No.	COMP. ACRE 7 & 13
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-12	Sample No.	UPPER CF-17
Lab ID	2010-652-12-01	Soil Description	**GRAY LEAN CLAY**

Note: The USCS symbol used with this test refers only to the minus No. 40 sieve material. See the "Sieve and Hydrometer Analysis" graph page for the complete material description. (Minus No. 40 sieve material, Airdried)

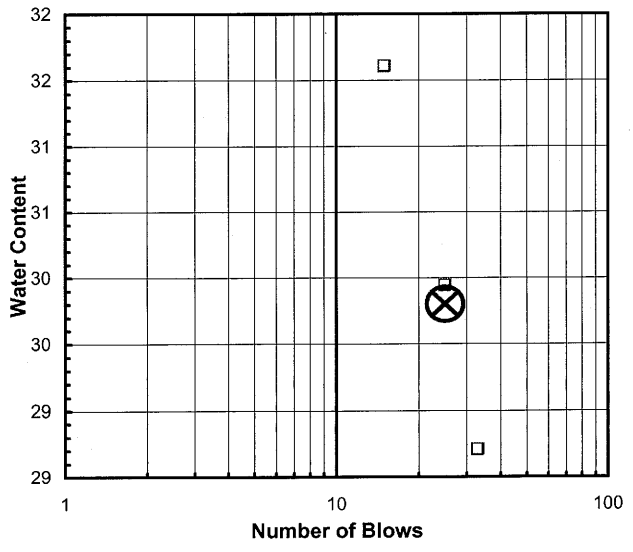
Liquid Limit Test	**1**	**2**	**3**	
Tare Number	I	Q	F	MULTIPOINT
Wt. of Tare & WS (gm)	26.11	25.98	26.10	
Wt. of Tare & DS (gm)	23.49	23.48	23.64	
Wt. of Tare (gm)	15.20	15.13	15.07	
Wt. of Water (gm)	2.6	2.5	2.5	
Wt. of DS (gm)	8.3	8.4	8.6	
Moisture Content (%)	**31.6**	**29.9**	**28.7**	
Number of Blows	**15**	**25**	**33**	

Plastic Limit Test	**1**	**2**	**Range**
Tare Number	M	P	
Wt. of Tare & WS (gm)	21.75	21.16	
Wt. of Tare & DS (gm)	20.80	20.31	
Wt. of Tare (gm)	15.10	15.15	
Wt. of Water (gm)	0.9	0.9	
Wt. of DS (gm)	5.7	5.2	
Moisture Content (%)	**16.7**	**16.5**	**0.2**

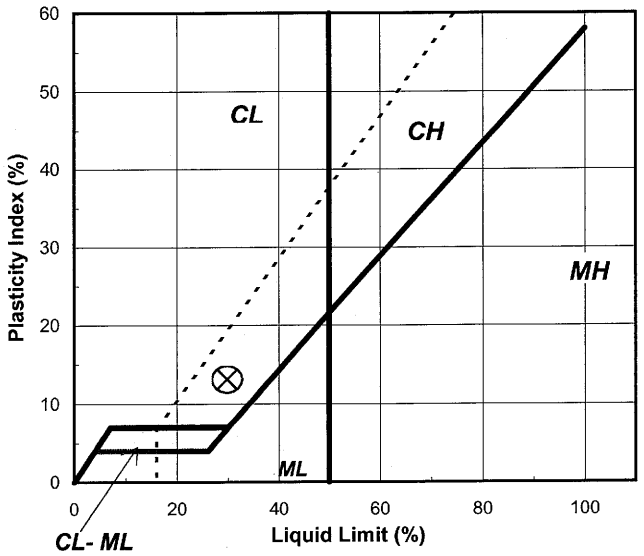
Note: The acceptable range of the two Moisture contents is ± 2.6

Test Results	
Liquid Limit (%)	**30**
Plastic Limit (%)	**17**
Plasticity Index (%)	**13**
USCS Symbol	**CL**

Flow Curve



Plasticity Chart



Tested By SD *Date* 6/18/2010 *Checked By* TMS *Date* 6/21/10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	COMP. ACRE 7 & 13
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-12	Sample No.	UPPER CF-17
Lab ID	2010-652-12-01	Soil Color	**GRAY**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***CL, TESTED***

USCS Classification ***SANDY LEAN CLAY***

Tested By SD Date 6/21/2010 Checked By TMS Date 6/21/10

DCN: CT-S3C DATE 6-25-98 REVISION 12 *G:\DATA\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-12-01 SIEVON REV 4.XLS]Sheet1*

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INTEGRITY IN TESTING

WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	COMP. ACRE 7 & 13
Client Reference	DARE CO. C&D LF.	Depth (ft)	LIFT 3
Project No.	2010-652-12	Sample No.	UPPER CF-17
Lab ID	2010-652-12-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	210	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	728.27	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	689.03	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	172.87	Weight of Tare (gm)	NA
Weight of Water (gm)	39.24	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	516.16	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**7.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	516.16
Dry Weight - 3/4" Sample (gm)	254.9	Weight of minus #200 material (gm)	261.23
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	254.93
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	1.31	0.3	0.3	99.7	**99.7**
#20	0.850	5.21	1.0	1.3	98.7	**98.7**
#40	0.425	3.47	0.7	1.9	98.1	**98.1**
#60	0.250	9.90	1.9	3.9	96.1	**96.1**
#140	0.106	180.90	35.0	38.9	61.1	**61.1**
#200	0.075	54.14	10.5	49.4	50.6	**50.6**
Pan	-	261.23	50.6	100.0	-	**-**

Tested By SD Date 6/21/2010 Checked By TMS Date 6/21/10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *S:\DRIVE\Data Drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-12-01 SIEVON REV 4.XLS]Sheet1*

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INTEGRITY IN TESTING

MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	COMP. ACRE 7 & 13
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652	Sample No.	UPPER CF-17
Lab ID	2010-652-12-01		

Visual Description GRAY SANDY LEAN CLAY

Total Weight of the Sample (gm)	0
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4308
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5910	5998	6058	6052	6012
Wt.of Mold (gm)	4308	4308	4308	4308	4308
Wt. of WS	1602	1690	1750	1744	1704
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	312	JB-01	JB-01	818	317
Wt. of Tare & WS (gm)	318.56	291.90	311.70	284.84	350.06
Wt. of Tare & DS (gm)	290.31	262.90	277.00	259.62	308.20
Wt. of Tare (gm)	84.14	87.10	87.10	137.55	135.57
Wt. of Water (gm)	28.25	29.00	34.70	25.22	41.86
Wt. of DS (gm)	206.17	175.80	189.90	122.07	172.63

Wet Density (gm/cc)	1.70	1.80	1.86	1.85	1.81
Wet Density (pcf)	106.2	112.0	116.0	115.6	113.0
Moisture Content (%)	**13.7**	**16.5**	**18.3**	**20.7**	**24.2**
Dry Density (pcf)	**93.4**	**96.2**	**98.1**	**95.8**	**90.9**

Zero Air Voids

Moisture Content (%)	25.0	28.0	32.0
Dry Unit Weight (pcf)	100.6	95.9	90.4

Tested By JRB *Date* 6.16.10 *Checked By* GEM *Date* 6-21-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-12-01 Proctor.XLS]Sheet1

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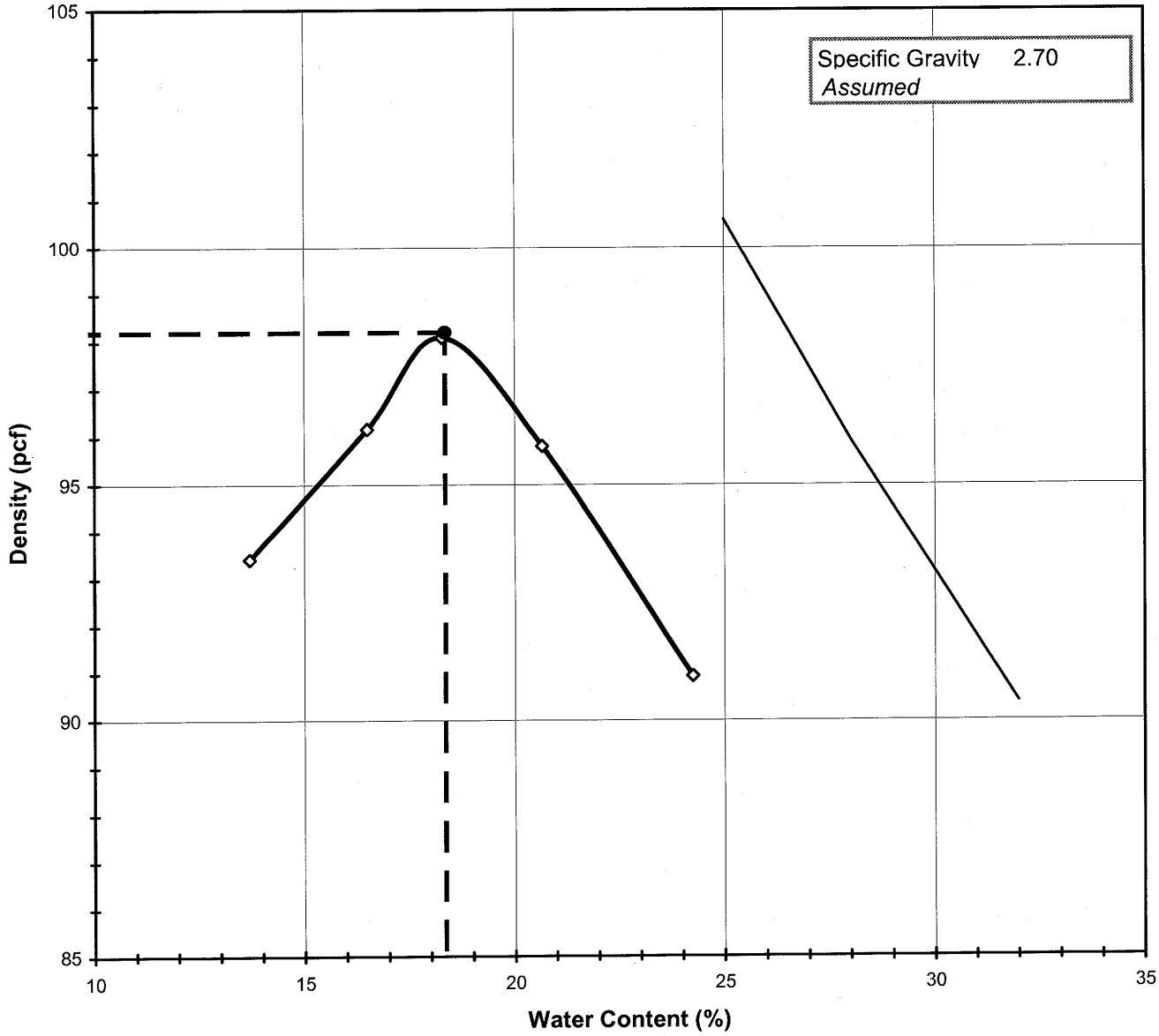
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	COMP. ACRE 7 & 13
Client Reference	DARE CO. C&D LF	Depth (ft)	LIFT 3
Project No.	2010-652	Sample No.	UPPER CF-17
Lab ID	2010-652-12-01	Test Method	**STANDARD**

Visual Description GRAY SANDY LEAN CLAY

Optimum Water Content	**18.4**
Maximum Dry Density	**98.2**



Tested By JRB *Date* 6.16.10 *Checked By* GZM *Date* 6-21-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-12-01 Proctor.XLS]Sheet1*

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July 15, 2010

Project No. 2010-652-13

Mr. Ed Marks
Glover Construction
PO Box 40
Pleasant Hill, NC 27866

Transmittal
Laboratory Test Results
Dare County C&D Landfill

Please find attached the laboratory test results for the above referenced project. The tests were outlined on the Project Verification Form that was faxed to your firm prior to the testing. The testing was performed in general accordance with the methods listed on the enclosed data sheets. The test results are believed to be representative of the samples that were submitted for testing and are indicative only of the specimens which were evaluated. We have no direct knowledge of the origin of the samples and imply no position with regard to the nature of the test results, i.e. pass/fail and no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization by our Client. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please contact our office.

Respectively submitted,
Geotechnics, Inc.

Michael P. Smith
Regional Manger

We understand that you have a choice in your laboratory services and we thank you for choosing Geotechnics.

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-5
Lab ID	2010-652-13-01	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/8/2010 *Checked By* GEM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2

\\Server\data drive\Data Sheets\[Limit-(NP).xls]Sheet1

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-6
Lab ID	2010-652-13-02	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By *SD* *Date* *7/8/2010* *Checked By* GM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-01 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-7
Lab ID	2010-652-13-03	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/8/2010 *Checked By* GM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-02 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-8
Lab ID	2010-652-13-04	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/8/2010 *Checked By* GBM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-03 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-9
Lab ID	2010-652-13-05	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/8/2010 *Checked By* GAM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-04 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-10
Lab ID	2010-652-13-06	Visual Description	**GRAY**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/8/2010 *Checked By* GEM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-05 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-11
Lab ID	2010-652-13-07	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-06 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-12
Lab ID	2010-652-13-08	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-07 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-13
Lab ID	2010-652-13-09	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-08 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-14
Lab ID	2010-652-13-10	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-09 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-15
Lab ID	2010-652-13-11	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-10 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-16
Lab ID	2010-652-13-12	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GZM *Date* 7-9-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-11 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-17
Lab ID	2010-652-13-13	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GLM *Date* 7-12-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-11 Limit-(NP).xls]Sheet1*

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ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-18
Lab ID	2010-652-13-14	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-12-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-13 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-19
Lab ID	2010-652-13-15	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GBM *Date* 7-12-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-14 Limit-(NP).xls]Sheet1*

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ATTERBERG LIMIT

ASTM D 4318-00 (SOP - S4)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-20
Lab ID	2010-652-13-16	Visual Description	**GRAYISH BROWN**
			(MInus No. 40 sieve material, Wet Method)

NON - PLASTIC MATERIAL

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-12-10

DCN: CT-S4C DATE: 7-11-97 REVISION : 2 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-15 Limit-(NP).xls]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-5
Lab ID	2010-652-13-01	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-5
Lab ID	2010-652-13-01	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	820	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	687.29	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	623.20	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	208.05	Weight of Tare (gm)	NA
Weight of Water (gm)	64.09	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	415.15	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	415.15
Dry Weight - 3/4" Sample (gm)	361.7	Weight of minus #200 material (gm)	53.48
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	361.67
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.46	0.1	0.1	99.9	**99.9**
#20	0.850	1.37	0.3	0.4	99.6	**99.6**
#40	0.425	2.26	0.5	1.0	99.0	**99.0**
#60	0.250	58.14	14.0	15.0	85.0	**85.0**
#140	0.106	264.10	63.6	78.6	21.4	**21.4**
#200	0.075	35.34	8.5	87.1	12.9	**12.9**
Pan	-	53.48	12.9	100.0	-	-

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-6
Lab ID	2010-652-13-02	Soil Color	**GRAY**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay

USCS Symbol ***SP-SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***POORLY GRADED SAND WITH SILT***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-02 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-6
Lab ID	2010-652-13-02	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	210	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	645.56	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	578.31	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	172.85	Weight of Tare (gm)	NA
Weight of Water (gm)	67.25	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	405.46	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	405.46
Dry Weight - 3/4" Sample (gm)	361.8	Weight of minus #200 material (gm)	43.69
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	361.77
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	0.82	0.2	0.2	99.8	**99.8**
#20	0.850	1.61	0.4	0.6	99.4	**99.4**
#40	0.425	2.79	0.7	1.3	98.7	**98.7**
#60	0.250	64.39	15.9	17.2	82.8	**82.8**
#140	0.106	258.96	63.9	81.0	19.0	**19.0**
#200	0.075	33.20	8.2	89.2	10.8	**10.8**
Pan	-	43.69	10.8	100.0	-	-

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-02 SIEVON REV 4.XLS]Sheet1*

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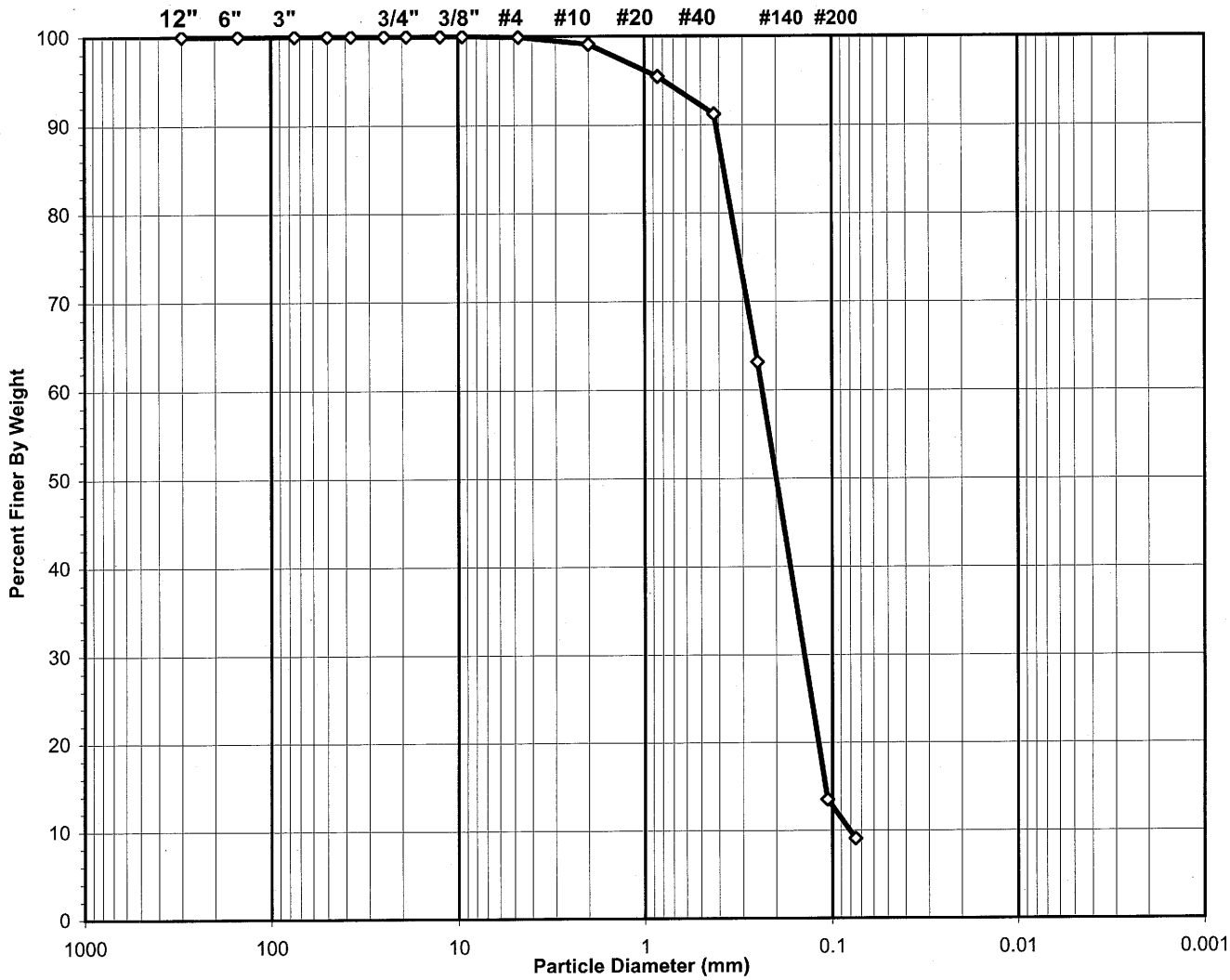
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-7
Lab ID	2010-652-13-03	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay



USCS Symbol	***SP-SM, TESTED (NON PLASTIC FINES)***	**D60 =**	**0.2**	**CC =**	**1.0**
USCS Classification	***POORLY GRADED SAND WITH SILT***	**D30 =**	**0.1**	**CU =**	**2.9**
		D10 =	**0.1**		

Tested By SD Date 7/8/2010 Checked By GM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-03 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-7
Lab ID	2010-652-13-03	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	216	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	693.84	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	632.00	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	170.72	Weight of Tare (gm)	NA
Weight of Water (gm)	61.84	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	461.28	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**13.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	461.28
Dry Weight - 3/4" Sample (gm)	419.6	Weight of minus #200 material (gm)	41.67
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	419.61
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.53	0.1	0.1	99.9	**99.9**
#10	2.00	3.72	0.8	0.9	99.1	**99.1**
#20	0.850	16.67	3.6	4.5	95.5	**95.5**
#40	0.425	19.55	4.2	8.8	91.2	**91.2**
#60	0.250	129.43	28.1	36.8	63.2	**63.2**
#140	0.106	228.98	49.6	86.5	13.5	**13.5**
#200	0.075	20.73	4.5	91.0	9.0	**9.0**
Pan	-	41.67	9.0	100.0	-	**-**

Tested By SD Date 7/8/2010 Checked By GM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *S:\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-03 SIEVON REV 4.XLS]Sheet1*

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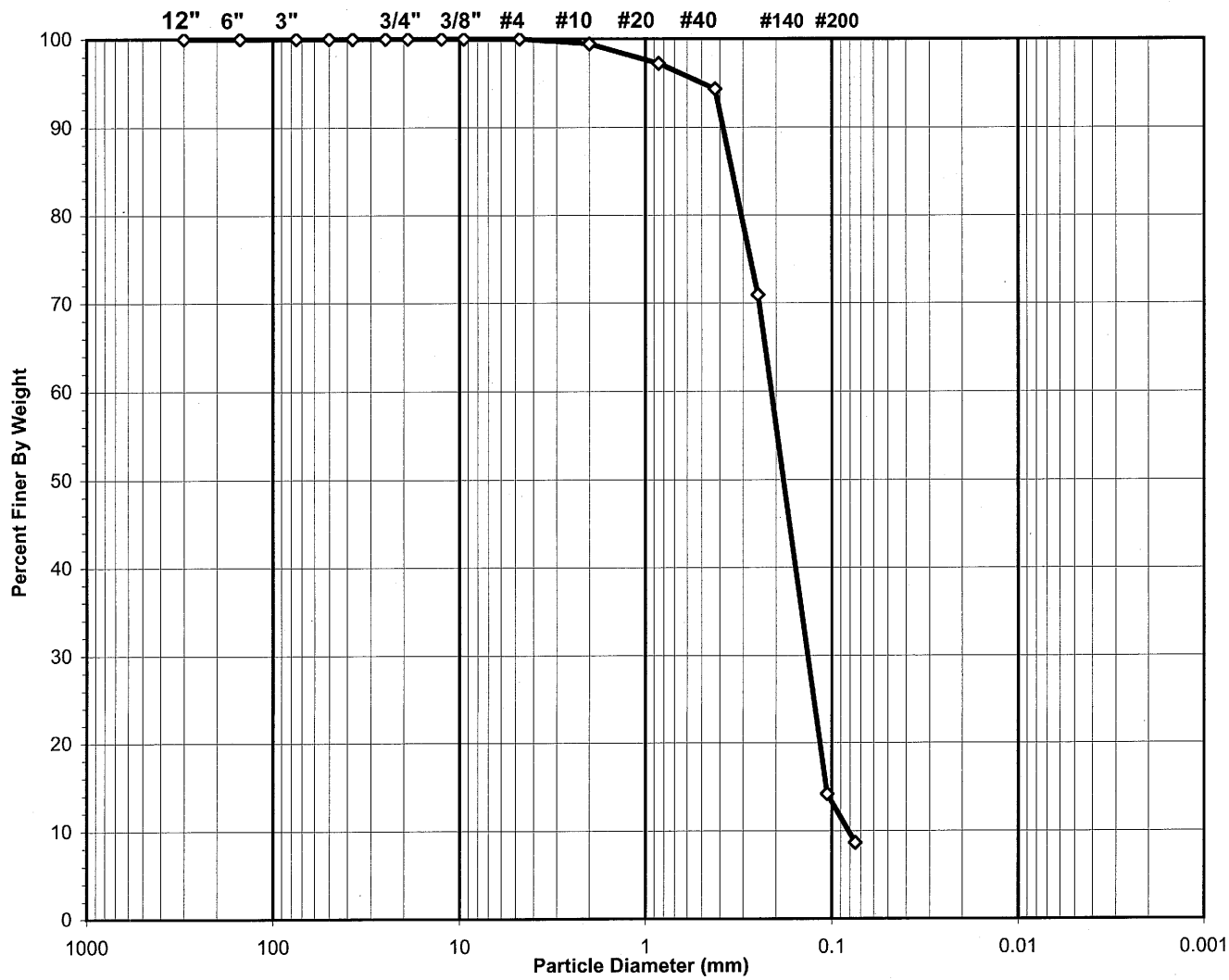
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-8
Lab ID	2010-652-13-04	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay



USCS Symbol	***SP-SM, TESTED (NON PLASTIC FINES)***	**D60 =**	**0.2**	**CC =**	**1.0**
USCS Classification	***POORLY GRADED SAND WITH SILT***	**D30 =**	**0.1**	**CU =**	**2.6**
		D10 =	**0.1**		

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-04 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-8
Lab ID	2010-652-13-04	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	833	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	711.22	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	664.61	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	259.20	Weight of Tare (gm)	NA
Weight of Water (gm)	46.61	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	405.41	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**11.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	405.41
Dry Weight - 3/4" Sample (gm)	370.4	Weight of minus #200 material (gm)	35.05
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	370.36
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.26	0.6	0.6	99.4	**99.4**
#20	0.850	9.09	2.2	2.8	97.2	**97.2**
#40	0.425	11.65	2.9	5.7	94.3	**94.3**
#60	0.250	94.91	23.4	29.1	70.9	**70.9**
#140	0.106	230.13	56.8	85.8	14.2	**14.2**
#200	0.075	22.32	5.5	91.4	8.6	**8.6**
Pan	-	35.05	8.6	100.0	-	**-**

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-9
Lab ID	2010-652-13-05	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol	***SP-SM, TESTED (NON PLASTIC FINES)***	**D60 =**	**0.2**	**CC =**	**1.0**
USCS Classification	***POORLY GRADED SAND WITH SILT***	**D30 =**	**0.1**	**CU =**	**2.6**
		D10 =	**0.1**		

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-9
Lab ID	2010-652-13-05	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	839	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	817.40	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	745.33	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	258.10	Weight of Tare (gm)	NA
Weight of Water (gm)	72.07	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	487.23	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**14.8**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	487.23
Dry Weight - 3/4" Sample (gm)	449.7	Weight of minus #200 material (gm)	37.53
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	449.70
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	3.09	0.6	0.6	99.4	**99.4**
#20	0.850	12.72	2.6	3.2	96.8	**96.8**
#40	0.425	18.33	3.8	7.0	93.0	**93.0**
#60	0.250	144.04	29.6	36.6	63.4	**63.4**
#140	0.106	250.06	51.3	87.9	12.1	**12.1**
#200	0.075	21.46	4.4	92.3	7.7	**7.7**
Pan	-	37.53	7.7	100.0	-	**-**

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-05 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-10
Lab ID	2010-652-13-06	Soil Color	**GRAY**

	SIEVE ANALYSIS		HYDROMETER
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By Gem Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-06 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-10
Lab ID	2010-652-13-06	Soil Color	**GRAY**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	841	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	799.18	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	720.20	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	258.92	Weight of Tare (gm)	NA
Weight of Water (gm)	78.98	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	461.28	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.1**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	461.28
Dry Weight - 3/4" Sample (gm)	401.6	Weight of minus #200 material (gm)	59.72
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	401.56
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	1.80	0.4	0.4	99.6	**99.6**
#20	0.850	3.43	0.7	1.1	98.9	**98.9**
#40	0.425	4.52	1.0	2.1	97.9	**97.9**
#60	0.250	92.47	20.0	22.2	77.8	**77.8**
#140	0.106	263.54	57.1	79.3	20.7	**20.7**
#200	0.075	35.80	7.8	87.1	12.9	**12.9**
Pan	-	59.72	12.9	100.0	-	**-**

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-06 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-11
Lab ID	2010-652-13-07	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

 DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-07 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-11
Lab ID	2010-652-13-07	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	212	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	768.93	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	677.09	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.51	Weight of Tare (gm)	NA
Weight of Water (gm)	91.84	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	505.58	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**18.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	505.58
Dry Weight - 3/4" Sample (gm)	413.1	Weight of minus #200 material (gm)	92.53
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	413.05
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.65	0.5	0.5	99.5	**99.5**
#20	0.850	6.48	1.3	1.8	98.2	**98.2**
#40	0.425	6.03	1.2	3.0	97.0	**97.0**
#60	0.250	72.28	14.3	17.3	82.7	**82.7**
#140	0.106	284.81	56.3	73.6	26.4	**26.4**
#200	0.075	40.80	8.1	81.7	18.3	**18.3**
Pan	-	92.53	18.3	100.0	-	-

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *\\server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-07 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-12
Lab ID	2010-652-13-08	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-08 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-12
Lab ID	2010-652-13-08	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	P-12	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	743.04	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	661.91	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	196.46	Weight of Tare (gm)	NA
Weight of Water (gm)	81.13	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	465.45	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	465.45
Dry Weight - 3/4" Sample (gm)	390.9	Weight of minus #200 material (gm)	74.55
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	390.90
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.33	0.5	0.5	99.5	**99.5**
#20	0.850	5.41	1.2	1.7	98.3	**98.3**
#40	0.425	5.37	1.2	2.8	97.2	**97.2**
#60	0.250	69.24	14.9	17.7	82.3	**82.3**
#140	0.106	270.60	58.1	75.8	24.2	**24.2**
#200	0.075	37.95	8.2	84.0	16.0	**16.0**
Pan	-	74.55	16.0	100.0	-	**-**

Tested By SD Date 7/8/2010 Checked By GDM Date 7-9-10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-13
Lab ID	2010-652-13-09	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-09 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-13
Lab ID	2010-652-13-09	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	214	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	648.03	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	578.67	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.31	Weight of Tare (gm)	NA
Weight of Water (gm)	69.36	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	407.36	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	407.36
Dry Weight - 3/4" Sample (gm)	341.6	Weight of minus #200 material (gm)	65.80
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	341.56
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.84	0.7	0.7	99.3	**99.3**
#20	0.850	5.43	1.3	2.0	98.0	**98.0**
#40	0.425	5.58	1.4	3.4	96.6	**96.6**
#60	0.250	56.09	13.8	17.2	82.8	**82.8**
#140	0.106	236.94	58.2	75.3	24.7	**24.7**
#200	0.075	34.68	8.5	83.8	16.2	**16.2**
Pan	-	65.80	16.2	100.0	-	-

Tested By SD Date 7/8/2010 Checked By GZM Date 7-9-10

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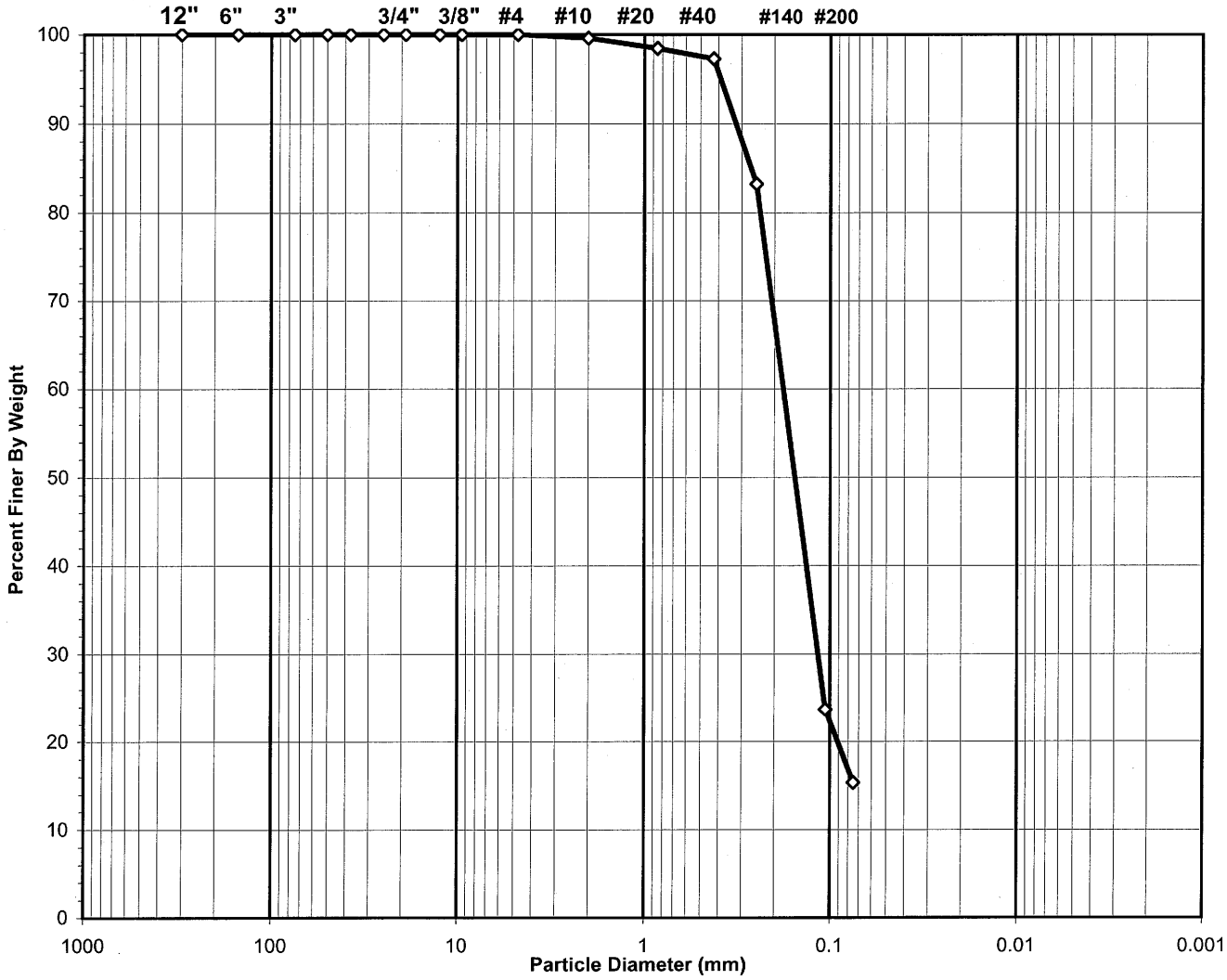
SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-14
Lab ID	2010-652-13-10	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay



USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-10 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-14
Lab ID	2010-652-13-10	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	209	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	657.42	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	589.32	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.69	Weight of Tare (gm)	NA
Weight of Water (gm)	68.10	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	417.63	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	417.63
Dry Weight - 3/4" Sample (gm)	353.6	Weight of minus #200 material (gm)	64.04
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	353.59
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	1.73	0.4	0.4	99.6	**99.6**
#20	0.850	4.67	1.1	1.5	98.5	**98.5**
#40	0.425	4.97	1.2	2.7	97.3	**97.3**
#60	0.250	58.64	14.0	16.8	83.2	**83.2**
#140	0.106	248.60	59.5	76.3	23.7	**23.7**
#200	0.075	34.98	8.4	84.7	15.3	**15.3**
Pan	-	64.04	15.3	100.0	-	**-**

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-15
Lab ID	2010-652-13-11	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GSM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *S:\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-11 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-15
Lab ID	2010-652-13-11	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	201	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	646.73	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	579.13	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	170.70	Weight of Tare (gm)	NA
Weight of Water (gm)	67.60	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	408.43	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.6**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	408.43
Dry Weight - 3/4" Sample (gm)	351.2	Weight of minus #200 material (gm)	57.27
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	351.16
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.13	0.5	0.5	99.5	**99.5**
#20	0.850	5.42	1.3	1.8	98.2	**98.2**
#40	0.425	5.71	1.4	3.2	96.8	**96.8**
#60	0.250	59.89	14.7	17.9	82.1	**82.1**
#140	0.106	243.59	59.6	77.6	22.4	**22.4**
#200	0.075	34.42	8.4	86.0	14.0	**14.0**
Pan	-	57.27	14.0	100.0	-	**-**

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-16
Lab ID	2010-652-13-12	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GOM Date 7-9-10

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-16
Lab ID	2010-652-13-12	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	215	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	723.95	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	642.24	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	172.42	Weight of Tare (gm)	NA
Weight of Water (gm)	81.71	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	469.82	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.4**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	469.82
Dry Weight - 3/4" Sample (gm)	387.8	Weight of minus #200 material (gm)	82.07
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	387.75
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	3.07	0.7	0.7	99.3	**99.3**
#20	0.850	5.79	1.2	1.9	98.1	**98.1**
#40	0.425	5.57	1.2	3.1	96.9	**96.9**
#60	0.250	65.10	13.9	16.9	83.1	**83.1**
#140	0.106	270.09	57.5	74.4	25.6	**25.6**
#200	0.075	38.13	8.1	82.5	17.5	**17.5**
Pan	-	82.07	17.5	100.0	-	-

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-12 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-17
Lab ID	2010-652-13-13	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *C:\Documents and Settings\Owner\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-01 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-17
Lab ID	2010-652-13-13	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	217	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	694.41	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	614.56	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.08	Weight of Tare (gm)	NA
Weight of Water (gm)	79.85	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	443.48	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**18.0**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	443.48
Dry Weight - 3/4" Sample (gm)	357.8	Weight of minus #200 material (gm)	85.73
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	357.75
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	1.39	0.3	0.3	99.7	**99.7**
#20	0.850	3.94	0.9	1.2	98.8	**98.8**
#40	0.425	4.49	1.0	2.2	97.8	**97.8**
#60	0.250	54.67	12.3	14.5	85.5	**85.5**
#140	0.106	254.49	57.4	71.9	28.1	**28.1**
#200	0.075	38.77	8.7	80.7	19.3	**19.3**
Pan	-	85.73	19.3	100.0	-	-

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-13 SIEVON REV 4.XLS]Sheet1*

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-18
Lab ID	2010-652-13-14	Soil Color	**GRAYISH BROWN**

USCS	SIEVE ANALYSIS		HYDROMETER
	gravel	sand	silt and clay

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-14 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-18
Lab ID	2010-652-13-14	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	213	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	673.53	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	603.59	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	173.17	Weight of Tare (gm)	NA
Weight of Water (gm)	69.94	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	430.42	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**16.2**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	430.42
Dry Weight - 3/4" Sample (gm)	359.4	Weight of minus #200 material (gm)	71.02
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	359.40
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	1.79	0.4	0.4	99.6	**99.6**
#20	0.850	4.31	1.0	1.4	98.6	**98.6**
#40	0.425	4.82	1.1	2.5	97.5	**97.5**
#60	0.250	57.83	13.4	16.0	84.0	**84.0**
#140	0.106	252.59	58.7	74.7	25.3	**25.3**
#200	0.075	38.06	8.8	83.5	16.5	**16.5**
Pan	-	71.02	16.5	100.0	-	**-**

Tested By SD Date 7/8/2010 Checked By GBM Date 7-9-10

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-19
Lab ID	2010-652-13-15	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		*HYDROMETER*
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLATIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GEM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-15 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-19
Lab ID	2010-652-13-15	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	202	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	753.80	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	671.61	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	197.33	Weight of Tare (gm)	NA
Weight of Water (gm)	82.19	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	474.28	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**17.3**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	474.28
Dry Weight - 3/4" Sample (gm)	394.7	Weight of minus #200 material (gm)	79.63
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	394.65
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.56	0.5	0.5	99.5	**99.5**
#20	0.850	5.82	1.2	1.8	98.2	**98.2**
#40	0.425	6.02	1.3	3.0	97.0	**97.0**
#60	0.250	67.71	14.3	17.3	82.7	**82.7**
#140	0.106	274.37	57.8	75.2	24.8	**24.8**
#200	0.075	38.17	8.0	83.2	16.8	**16.8**
Pan	-	79.63	16.8	100.0	-	**-**

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SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-20
Lab ID	2010-652-13-16	Soil Color	**GRAYISH BROWN**

	SIEVE ANALYSIS		HYDROMETER
USCS	**gravel**	**sand**	**silt and clay**

USCS Symbol ***SM, TESTED (NON PLASTIC FINES)***

USCS Classification ***SILTY SAND***

Tested By SD Date 7/8/2010 Checked By GM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-16 SIEVON REV 4.XLS]Sheet1*

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WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-20
Lab ID	2010-652-13-16	Soil Color	**GRAYISH BROWN**

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	203	Tare No.	NA
Wgt.Tare + Wet Specimen (gm)	737.03	Wgt.Tare + Wet Specimen (gm)	NA
Wgt.Tare + Dry Specimen (gm)	661.27	Wgt.Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	171.03	Weight of Tare (gm)	NA
Weight of Water (gm)	75.76	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	490.24	Weight of Dry Soil (gm)	NA
Moisture Content (%)	**15.5**	**Moisture Content (%)**	**NA**

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	490.24
Dry Weight - 3/4" Sample (gm)	424.4	Weight of minus #200 material (gm)	65.86
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	424.38
Dry Weight + 3/4" Sample (gm)	0.00		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt.of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	**Accumulated Percent Finer (%)**
12"	300	0.00	0.0	0.0	100.0	**100.0**
6"	150	0.00	0.0	0.0	100.0	**100.0**
3"	75	0.00	0.0	0.0	100.0	**100.0**
2"	50	0.00	0.0	0.0	100.0	**100.0**
1 1/2"	37.5	0.00	0.0	0.0	100.0	**100.0**
1"	25.0	0.00	0.0	0.0	100.0	**100.0**
3/4"	19.0	0.00	0.0	0.0	100.0	**100.0**
1/2"	12.50	0.00	0.0	0.0	100.0	**100.0**
3/8"	9.50	0.00	0.0	0.0	100.0	**100.0**
#4	4.75	0.00	0.0	0.0	100.0	**100.0**
#10	2.00	2.38	0.5	0.5	99.5	**99.5**
#20	0.850	5.29	1.1	1.6	98.4	**98.4**
#40	0.425	5.66	1.2	2.7	97.3	**97.3**
#60	0.250	82.92	16.9	19.6	80.4	**80.4**
#140	0.106	290.86	59.3	79.0	21.0	**21.0**
#200	0.075	37.27	7.6	86.6	13.4	**13.4**
Pan	-	65.86	13.4	100.0	-	-

Tested By SD Date 7/8/2010 Checked By GAM Date 7-9-10

DCN: CT-S3C DATE 6-25-98 REVISION 2 *Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-16 SIEVON REV 4.XLS]Sheet1*

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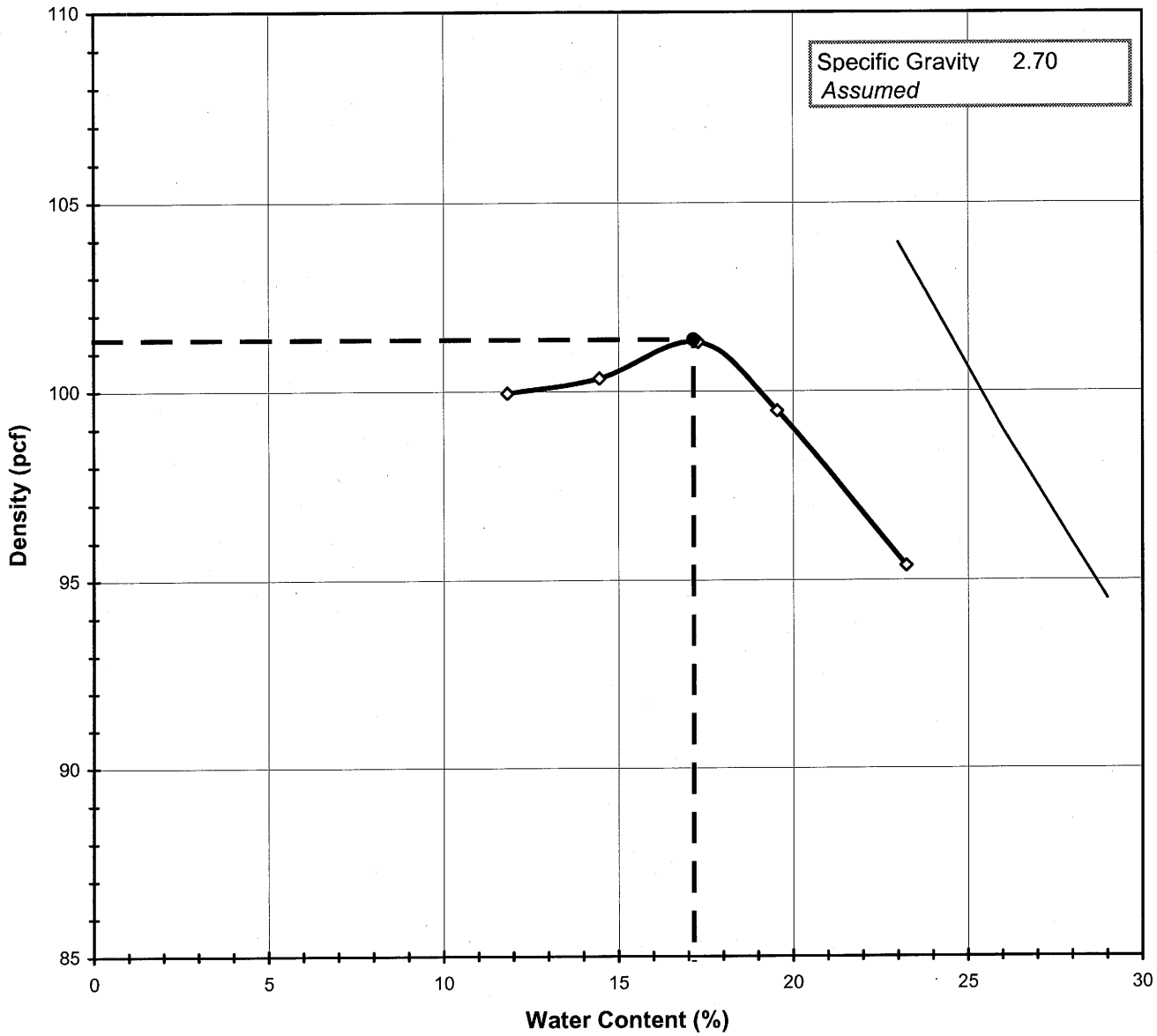
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-5
Lab ID	2010-652-13-01	Test Method	**STANDARD**

Visual Description GRAY SILTY SAND

Optimum Water Content **17.2**
Maximum Dry Density **101.4**



Tested By SD *Date* 7/12/2010 *Checked By* GEM *Date* 7-13-10

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MOISTURE - DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-5
Lab ID	2010-652-13-01		

Visual Description GRAY SILTY SAND

Total Weight of the Sample (gm)	24500
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4307
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5993	6040	6099	6101	6080
Wt.of Mold (gm)	4307	4307	4307	4307	4307
Wt. of WS	1686	1732	1792	1794	1773
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	812	807	814	803	802
Wt. of Tare & WS (gm)	355.20	392.50	450.60	398.50	455.30
Wt. of Tare & DS (gm)	328.92	356.13	400.67	350.29	388.95
Wt. of Tare (gm)	106.80	104.70	111.90	103.70	103.40
Wt. of Water (gm)	26.28	36.37	49.93	48.21	66.35
Wt. of DS (gm)	222.12	251.43	288.77	246.59	285.55

Wet Density (gm/cc)	1.79	1.84	1.90	1.91	1.88
Wet Density (pcf)	111.8	114.9	118.8	118.9	117.5
Moisture Content (%)	**11.8**	**14.5**	**17.3**	**19.6**	**23.2**
Dry Density (pcf)	**99.9**	**100.3**	**101.3**	**99.5**	**95.4**

Zero Air Voids

Moisture Content (%)	23.0	26.0	29.0
Dry Unit Weight (pcf)	103.9	99.0	94.5

Tested By SD *Date* 7/12/2010 *Checked By* GEM *Date* 7-13-10

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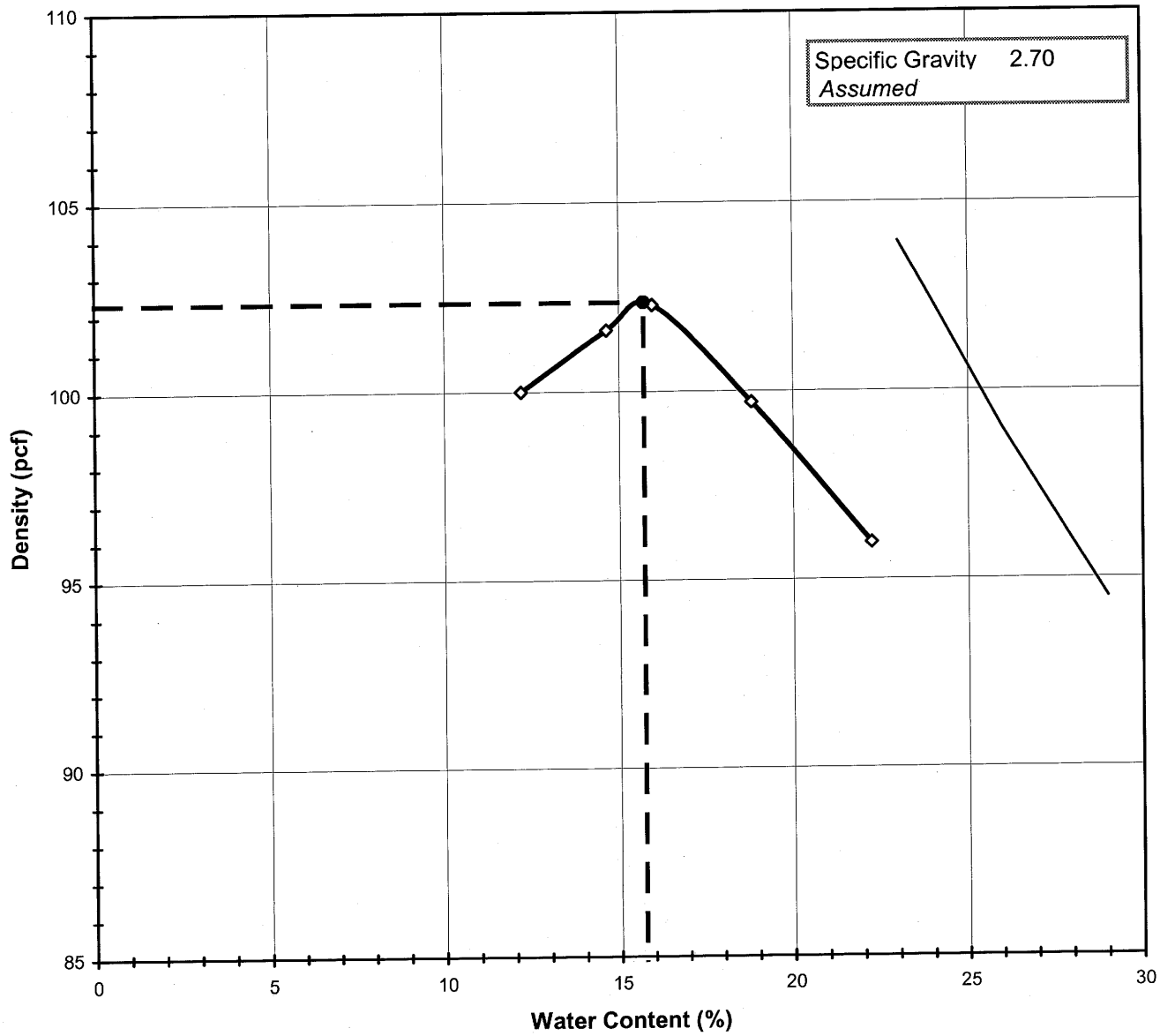
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-6
Lab ID	2010-652-13-02	Test Method	**STANDARD**

Visual Description GRAY POORLY GRADED SAND WITH SILT

Optimum Water Content **15.7**
Maximum Dry Density **102.3**



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ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-6
Lab ID	2010-652-13-02		

Visual Description GRAY POORLY GRADED SAND WITH SILT

Total Weight of the Sample (gm)	23823
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4306
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5999	6063	6095	6093	6076
Wt.of Mold (gm)	4306	4306	4306	4306	4306
Wt. of WS	1692	1757	1789	1787	1769
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	399	307	306	315	Y-3
Wt. of Tare & WS (gm)	535.90	387.20	458.60	436.70	478.60
Wt. of Tare & DS (gm)	487.18	351.97	407.63	385.10	409.49
Wt. of Tare (gm)	87.50	111.30	88.50	111.00	98.50
Wt. of Water (gm)	48.72	35.23	50.97	51.60	69.11
Wt. of DS (gm)	399.68	240.67	319.13	274.10	310.99

Wet Density (gm/cc)	1.80	1.87	1.90	1.90	1.88
Wet Density (pcf)	112.2	116.5	118.6	118.5	117.3
Moisture Content (%)	**12.2**	**14.6**	**16.0**	**18.8**	**22.2**
Dry Density (pcf)	**100.0**	**101.6**	**102.3**	**99.7**	**96.0**

Zero Air Voids

Moisture Content (%)	23.0	26.0	29.0
Dry Unit Weight (pcf)	103.9	99.0	94.5

Tested By SD *Date* 7/12/2010 *Checked By* GAM *Date* 7-13-10

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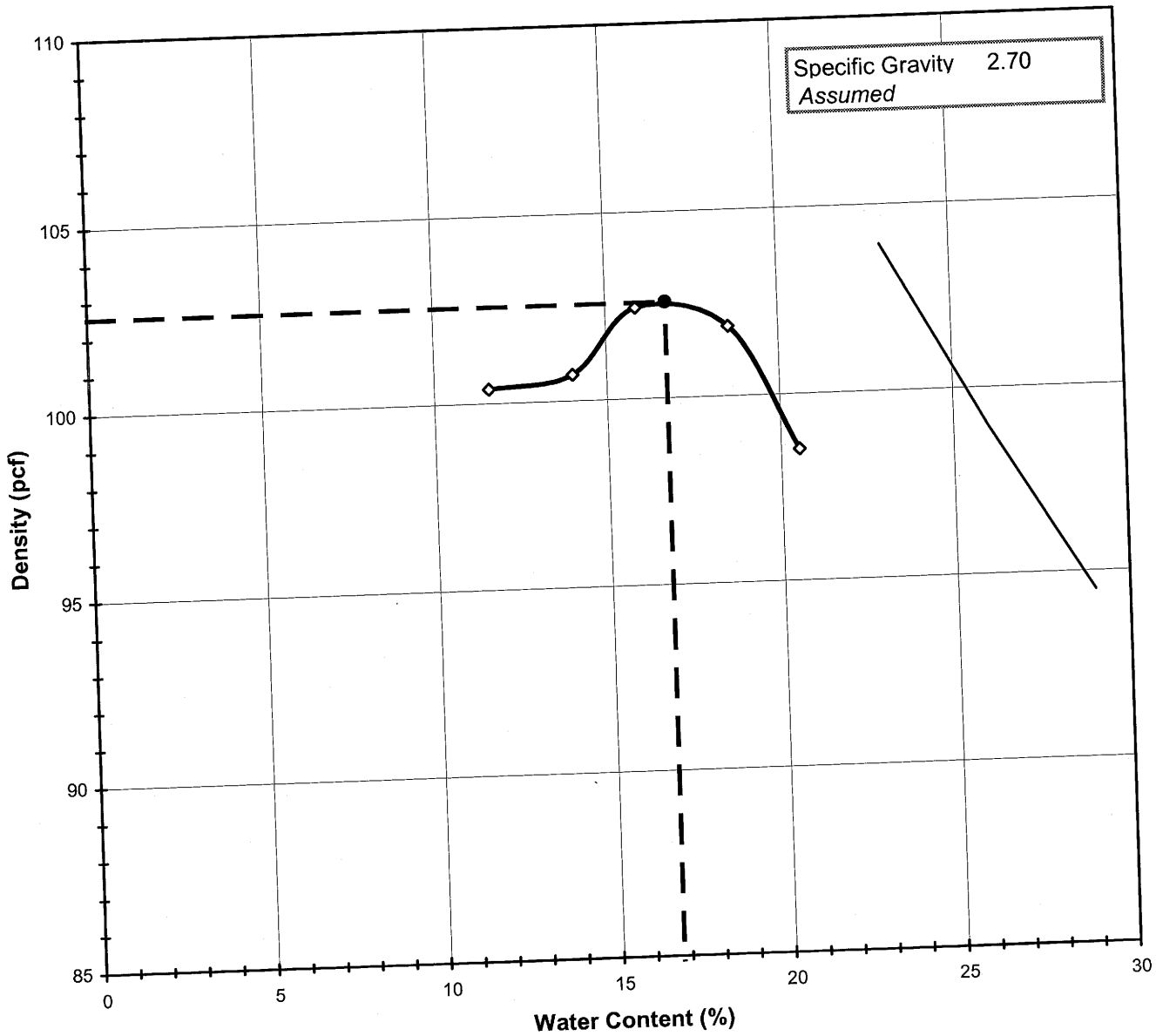
MOISTURE DENSITY RELATIONSHIP

ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-7
Lab ID	2010-652-13-03	Test Method	**STANDARD**

Visual Description GRAY POORLY GRADED SAND WITH SILT

Optimum Water Content **16.8**
Maximum Dry Density **102.6**



Tested By SD *Date* 7/14/2010 *Checked By* GEM *Date* 7-15-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-03 Proctor.XLS]Sheet1

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ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-7
Lab ID	2010-652-13-03		

Visual Description GRAY POORLY GRADED SAND WITH SILT

Total Weight of the Sample (gm)	26061
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4306
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5996	6038	6097	6128	6097
Wt.of Mold (gm)	4306	4306	4306	4306	4306
Wt. of WS	1689	1732	1790	1822	1791
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	311	317	304	303	308
Wt. of Tare & WS (gm)	388.70	502.80	511.30	463.70	563.30
Wt. of Tare & DS (gm)	357.13	451.32	456.42	408.59	486.32
Wt. of Tare (gm)	84.70	84.20	110.70	111.60	111.40
Wt. of Water (gm)	31.57	51.48	54.88	55.11	76.98
Wt. of DS (gm)	272.43	367.12	345.72	296.99	374.92

Wet Density (gm/cc)	1.79	1.84	1.90	1.94	1.90
Wet Density (pcf)	112.0	114.8	118.7	120.8	118.7
Moisture Content (%)	**11.6**	**14.0**	**15.9**	**18.6**	**20.5**
Dry Density (pcf)	**100.4**	**100.7**	**102.4**	**101.9**	**98.5**

Zero Air Voids

Moisture Content (%)	23.0	26.0	29.0
Dry Unit Weight (pcf)	103.9	99.0	94.5

Tested By SD *Date* 7/14/2010 *Checked By* GM *Date* 7-15-10

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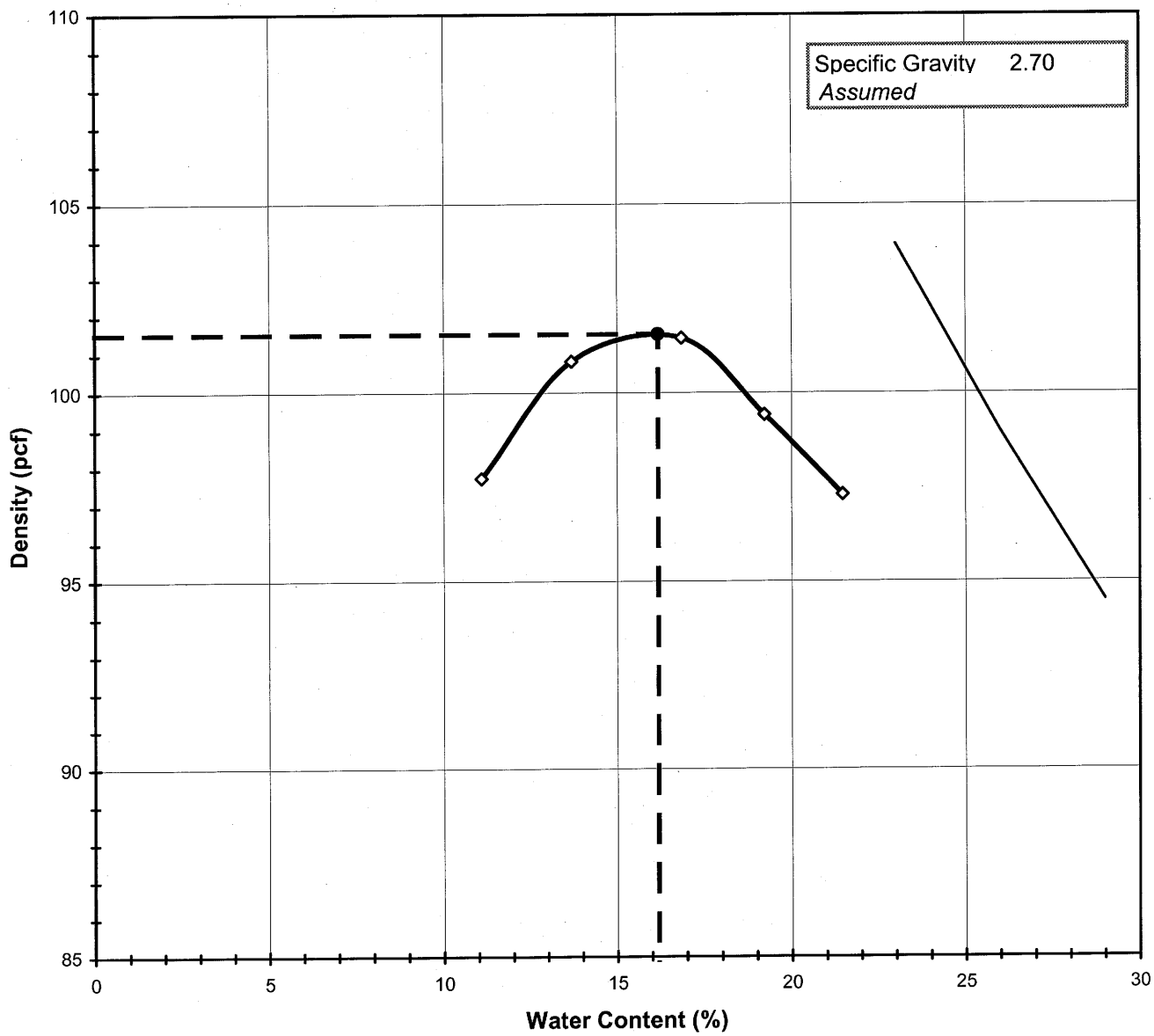
ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-8
Lab ID	2010-652-13-04	Test Method	**STANDARD**

Visual Description GRAYISH BROWN POORLY GRADED SAND WITH SILT

Optimum Water Content **16.2**
Maximum Dry Density **101.5**



Tested By SD *Date* 7/12/2010 *Checked By* GM *Date* 7-13-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 *\\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-04 Proctor.XLS]Sheet1*

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ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-8
Lab ID	2010-652-13-04		

Visual Description GRAYISH BROWN POORLY GRADED SAND WITH SILT

Total Weight of the Sample (gm)	23599
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4306
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5944	6035	6094	6094	6089
Wt.of Mold (gm)	4306	4306	4306	4306	4306
Wt. of WS	1638	1729	1788	1788	1783
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	398	303	304	311	305
Wt. of Tare & WS (gm)	432.90	394.90	460.60	497.10	540.80
Wt. of Tare & DS (gm)	398.12	360.72	410.15	430.60	460.21
Wt. of Tare (gm)	84.40	111.20	110.80	84.70	84.90
Wt. of Water (gm)	34.78	34.18	50.45	66.50	80.59
Wt. of DS (gm)	313.72	249.52	299.35	345.90	375.31

Wet Density (gm/cc)	1.74	1.84	1.90	1.90	1.89
Wet Density (pcf)	108.6	114.6	118.5	118.5	118.2
Moisture Content (%)	**11.1**	**13.7**	**16.9**	**19.2**	**21.5**
Dry Density (pcf)	**97.7**	**100.8**	**101.4**	**99.4**	**97.3**

Zero Air Voids

Moisture Content (%)	23.0	26.0	29.0
Dry Unit Weight (pcf)	103.9	99.0	94.5

Tested By SD *Date* 7/12/2010 *Checked By* GEM *Date* 7-13-10

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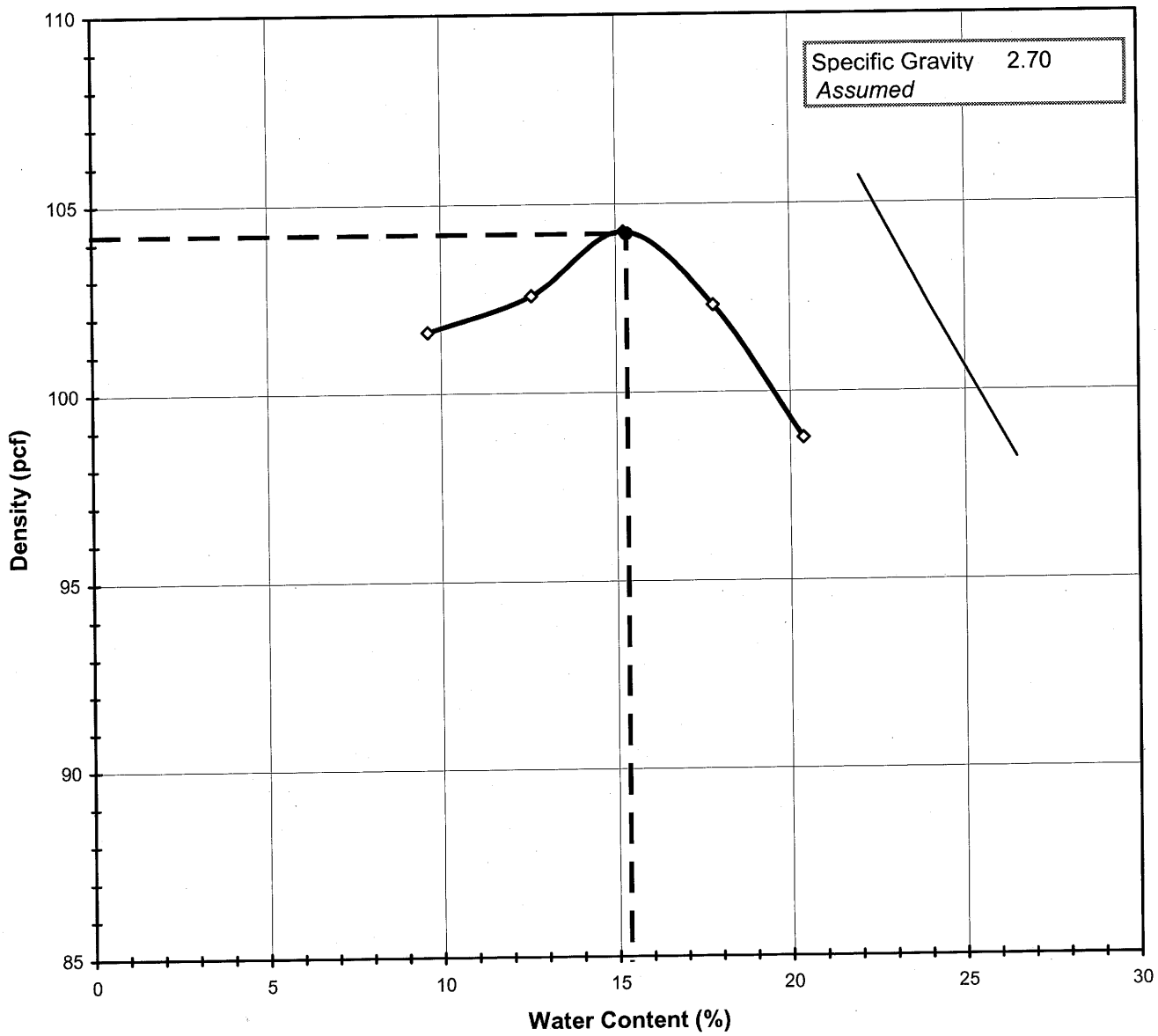
ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-9
Lab ID	2010-652-13-05	Test Method	**STANDARD**

Visual Description GRAY POORLY GRADED SAND WITH SILT

Optimum Water Content **15.3**
Maximum Dry Density **104.2**



Tested By SD *Date* 7/12/2010 *Checked By* GEM *Date* 7-13-10

 DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-05 Proctor.XLS]Sheet1

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Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-9
Lab ID	2010-652-13-05		

Visual Description GRAY POORLY GRADED SAND WITH SILT

Total Weight of the Sample (gm)	25692
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4306
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5987	6048	6118	6124	6100
Wt.of Mold (gm)	4306	4306	4306	4306	4306
Wt. of WS	1680	1742	1812	1818	1794
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	310	318	309	300	312
Wt. of Tare & WS (gm)	487.50	407.00	482.60	358.40	508.90
Wt. of Tare & DS (gm)	454.37	371.19	433.35	321.00	436.99
Wt. of Tare (gm)	110.00	86.70	109.90	110.90	84.20
Wt. of Water (gm)	33.13	35.81	49.25	37.40	71.91
Wt. of DS (gm)	344.37	284.49	323.45	210.10	352.79

Wet Density (gm/cc)	1.79	1.85	1.93	1.93	1.91
Wet Density (pcf)	111.4	115.5	120.1	120.5	118.9
Moisture Content (%)	**9.6**	**12.6**	**15.2**	**17.8**	**20.4**
Dry Density (pcf)	**101.6**	**102.6**	**104.3**	**102.3**	**98.8**

Zero Air Voids

Moisture Content (%)	22.0	24.0	26.5
Dry Unit Weight (pcf)	105.7	102.2	98.2

Tested By SD *Date* 7/12/2010 *Checked By* GEM *Date* 7-13-10

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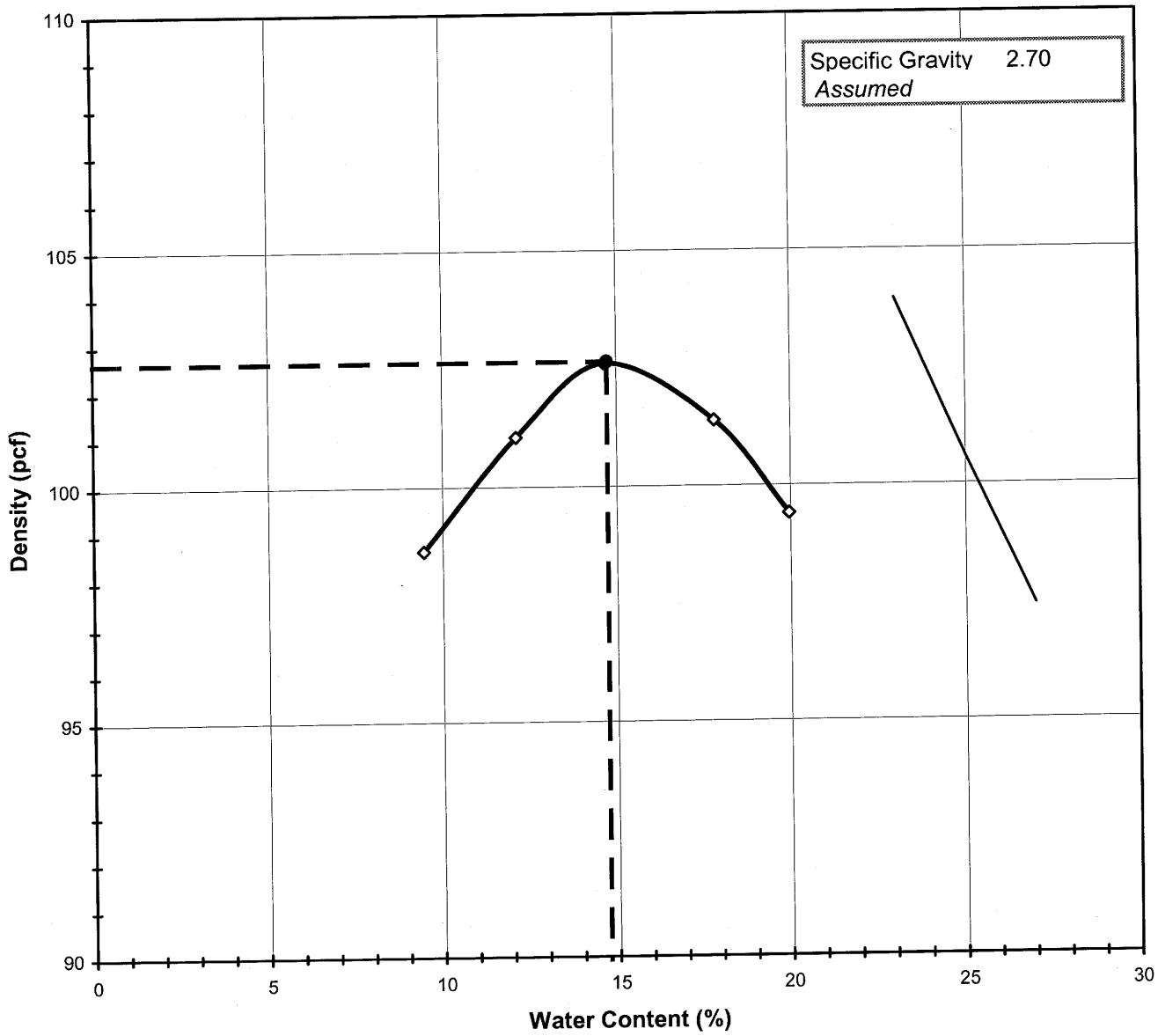
ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-10
Lab ID	2010-652-13-06	Test Method	**STANDARD**

Visual Description GRAY SILTY SAND

Optimum Water Content **14.7**
Maximum Dry Density **102.6**



Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-12-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-06 SIEVON REV 4.XLS]Sheet1

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ASTM D698-91 SOP-S12

Client	GLOVER CONSTRUCTION	Boring No.	BORROW PIT
Client Reference	DARE CO. C&D LF	Depth (ft)	NA
Project No.	2010-652-13	Sample No.	S-10
Lab ID	2010-652-13-06		

Visual Description GRAY SILTY SAND

Total Weight of the Sample (gm)	25502
As Received Water Content(%)	NA
Assumed Specific Gravity	2.70
Percent Retained on 3/4"	NA
Percent Retained on 3/8"	NA
Percent Retained on #4	NA
Oversize Material	Not included
Procedure Used	A

TestType		**STANDARD**
Rammer Weight (lbs)		5.5
Rammer Drop (in)		12
Rammer Type		MECHANICAL
Machine ID	R	174
Mold ID	R	172
Mold diameter		4"
Weight of the Mold		4306
Volume of the Mold(cc)		941

Mold / Specimen

Point No.	**1**	**2**	**3**	**4**	**5**
Wt. of Mold & WS (gm)	5935	6015	6081	6108	6105
Wt.of Mold (gm)	4306	4306	4306	4306	4306
Wt. of WS	1628	1709	1774	1802	1799
Mold Volume (cc)	941	941	941	941	941

Moisture Content / Density

Tare Number	308	318	314	K-7	309
Wt. of Tare & WS (gm)	493.00	469.10	420.00	484.70	478.80
Wt. of Tare & DS (gm)	460.04	427.77	377.15	428.09	417.38
Wt. of Tare (gm)	111.30	86.90	84.60	110.30	109.60
Wt. of Water (gm)	32.96	41.33	42.85	56.61	61.42
Wt. of DS (gm)	348.74	340.87	292.55	317.79	307.78

Wet Density (gm/cc)	1.73	1.82	1.89	1.91	1.91
Wet Density (pcf)	108.0	113.3	117.6	119.4	119.2
Moisture Content (%)	**9.5**	**12.1**	**14.6**	**17.8**	**20.0**
Dry Density (pcf)	**98.6**	**101.1**	**102.6**	**101.4**	**99.4**

Zero Air Voids

Moisture Content (%)	23.0	25.0	27.0
Dry Unit Weight (pcf)	103.9	100.6	97.4

Tested By SD *Date* 7/9/2010 *Checked By* GEM *Date* 7-12-10

DCN:CT-S12 DATE:12/11/00 REVISION 5 \\Server\data drive\2010 PROJECTS\2010-652 GLOVER DARE CO\[2010-652-13-06 SIEVON REV 4.XLS]Sheet1

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Appendix A-7

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase No. 4
Project Number : 2010-652

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Field Density Report

Report Number : **CFFDR-01**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 10
Date (s) : **4.5. - 4.16.10**	Reviewed By : MMB	Date : 4-23-10

Contractor : Glover Construction	Borrow Source : On-Site Stockpile

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 01	ACRE 1	BRIDGE LIFT	8"	652-01-03	101.7	16.2	**111.0**	**10.9**	**100.1**	**98.4%**	**95.0%**	
SC - 01	ACRE 1	BRIDGE LIFT	NA	652-01-03	101.7	16.2	**109.1**	**11.2**	**98.1**	**96.5%**	**95.0%**	
ND - 02	ACRE 1	BRIDGE LIFT	8"	652-01-03	101.7	16.2	**112.5**	**11.2**	**101.2**	**99.5%**	**95.0%**	
ND - 03	ACRE 1	BRIDGE LIFT	8"	652-01-03	101.7	16.2	**111.4**	**9.9**	**101.4**	**99.7%**	**95.0%**	
ND - 04	ACRE 1	BRIDGE LIFT	8"	652-01-03	101.7	16.2	**113.3**	**14.9**	**98.6**	**97.0%**	**95.0%**	
ND - 05	ACRE 2	BRIDGE LIFT	8"	652-01-03	101.7	16.2	**113.9**	**11.1**	**102.5**	**100.8%**	**95.0%**	
ND - 06	ACRE 2	BRIDGE LIFT	8"	1pt.-02	110.1	14.2	**122.7**	**14.2**	**107.4**	**97.6%**	**95.0%**	
SC - 02	ACRE 2	BRIDGE LIFT	NA	1pt.-02	110.1	14.2	**119.9**	**12.4**	**106.7**	**96.9%**	**95.0%**	
ND - 07	ACRE 2	BRIDGE LIFT	8"	652-01-03	101.7	16.2	**112.7**	**11.6**	**101.0**	**99.3%**	**95.0%**	
ND - 08	ACRE 2	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**118.5**	**12.7**	**105.1**	**97.5%**	**95.0%**	
ND - 09	ACRE 3	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**117.7**	**12.7**	**104.4**	**96.9%**	**95.0%**	
ND - 10	ACRE 3	BRIDGE LIFT	8"	1pt.-02	110.1	14.2	**122.3**	**11.3**	**109.9**	**99.8%**	**95.0%**	
ND - 11	ACRE 3	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**118.1**	**11.9**	**105.5**	**97.9%**	**95.0%**	
ND - 12	ACRE 3	BRIDGE LIFT	8"	1pt.-02	110.1	14.2	**124.5**	**10.2**	**113.0**	**102.6%**	**95.0%**	
ND - 13	ACRE 4	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**118.1**	**13.5**	**104.1**	**96.5%**	**95.0%**	
ND - 14	ACRE 4	BRIDGE LIFT	8"	1pt.-02	110.1	14.2	**119.9**	**10.0**	**109.0**	**99.0%**	**95.0%**	
ND - 15	ACRE 4	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**116.2**	**11.6**	**104.1**	**96.6%**	**95.0%**	
ND - 16	ACRE 4	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**118.3**	**12.8**	**104.9**	**97.3%**	**95.0%**	
ND - 17	ACRE 1	LIFT 1	6"	652-02-02	107.8	13.5	**121.0**	**11.3**	**108.7**	**100.8%**	**95.0%**	
ND - 18	ACRE 1	LIFT 1	6"	652-02-02	107.8	13.5	**117.1**	**11.0**	**105.5**	**97.9%**	**95.0%**	
ND - 19	ACRE 1	LIFT 1	6"	652-02-02	107.8	13.5	**118.8**	**11.1**	**106.9**	**99.2%**	**95.0%**	
ND - 20	ACRE 1	LIFT 1	6"	652-02-02	107.8	13.5	**117.0**	**11.1**	**105.3**	**97.7%**	**95.0%**	
ND - 21	ACRE 2	LIFT 1	6"	652-02-02	107.8	13.5	**118.6**	**11.5**	**106.4**	**98.7%**	**95.0%**	
ND - 22	ACRE 2	LIFT 1	6"	652-02-02	107.8	13.5	**115.5**	**10.5**	**104.5**	**97.0%**	**95.0%**	
ND - 23	ACRE 2	LIFT 1	6"	652-02-02	107.8	13.5	**118.4**	**12.8**	**105.0**	**97.4%**	**95.0%**	
ND - 24	ACRE 2	LIFT 1	6"	652-02-02	107.8	13.5	**121.3**	**12.9**	**107.4**	**99.7%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase No. 4
Project Number : 2010-652

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Field Density Report

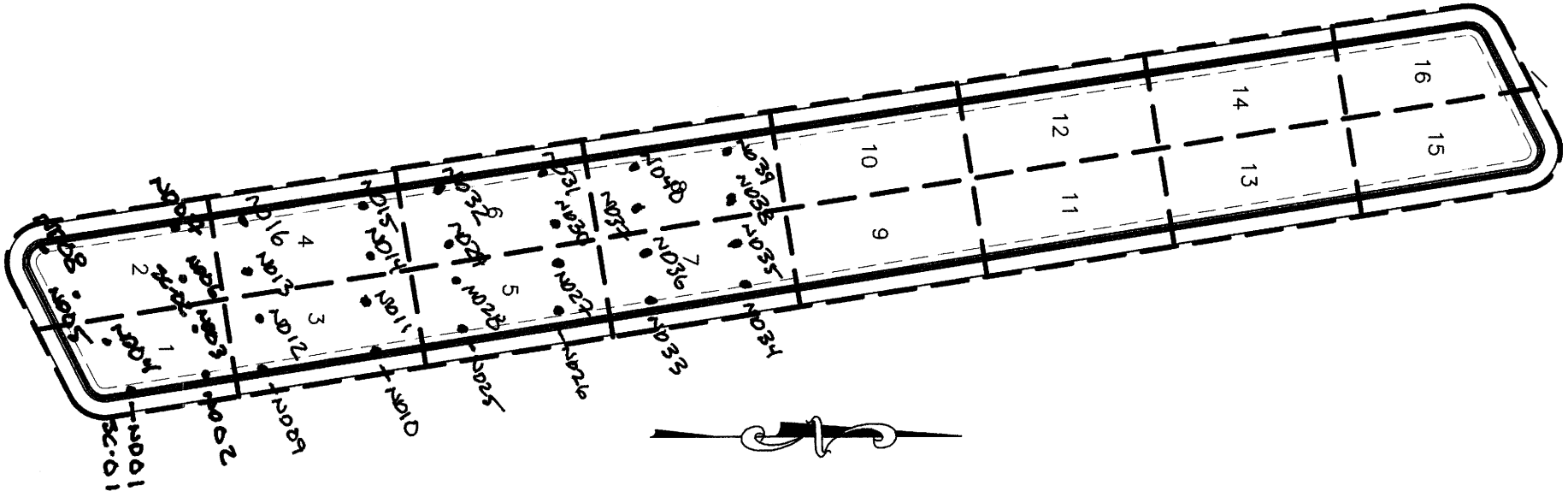
Report Number : **CFFDR-01**	Geotechnics Representative : Jacob R. Buda	Page : 2 of 10
Date (s) : **4.5. - 4.16.10**	Reviewed By : MPS	Date : 4-23-10

Contractor : Glover Construction	Borrow Source : On-Site Stockpile

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller

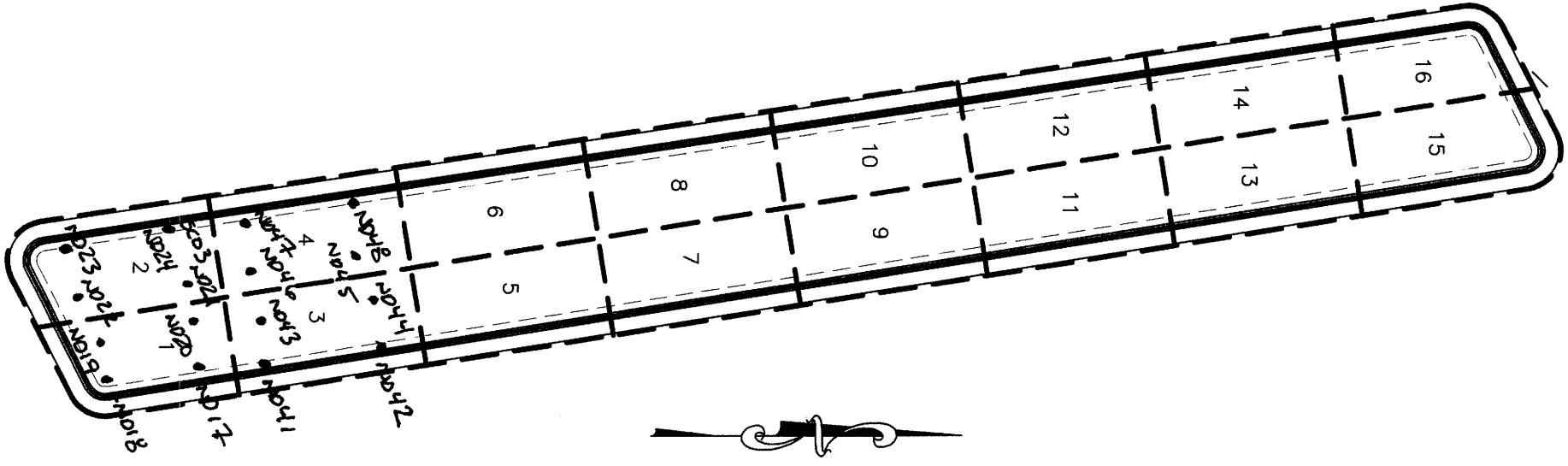
Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
SC - 03	ACRE 2	LIFT 1	NA	652-02-02	107.8	13.5	**121.9**	**14.2**	**106.7**	**99.0%**	**95.0%**	
ND - 25	ACRE 5	BRIDGE LIFT	8"	1pt.-02	110.1	14.2	**123.7**	**13.3**	**109.2**	**99.2%**	**95.0%**	
ND - 26	ACRE 5	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**115.9**	**11.8**	**103.7**	**96.2%**	**95.0%**	
ND - 27	ACRE 5	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**114.3**	**9.6**	**104.3**	**96.7%**	**95.0%**	
ND - 28	ACRE 5	BRIDGE LIFT	8"	1pt.-02	110.1	14.2	**117.4**	**7.6**	**109.1**	**99.1%**	**95.0%**	
ND - 29	ACRE 6	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**113.2**	**9.0**	**103.9**	**96.3%**	**95.0%**	
ND - 30	ACRE 6	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**115.7**	**8.1**	**107.0**	**99.3%**	**95.0%**	
ND - 31	ACRE 6	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**116.1**	**8.9**	**106.6**	**98.9%**	**95.0%**	
ND - 32	ACRE 6	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**117.7**	**13.4**	**103.8**	**96.3%**	**95.0%**	
ND - 33	ACRE 7	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**119.6**	**14.4**	**104.5**	**97.0%**	**95.0%**	
ND - 34	ACRE 7	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**117.7**	**12.7**	**104.4**	**96.9%**	**95.0%**	
ND - 35	ACRE 7	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**119.2**	**12.9**	**105.6**	**97.9%**	**95.0%**	
ND - 36	ACRE 7	BRIDGE LIFT	8"	1pt.-02	110.1	14.2	**121.6**	**11.1**	**109.5**	**99.4%**	**95.0%**	
ND - 37	ACRE 8	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**118.7**	**12.9**	**105.1**	**97.5%**	**95.0%**	
ND - 38	ACRE 8	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**116.5**	**11.4**	**104.6**	**97.0%**	**95.0%**	
ND - 39	ACRE 8	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**120.2**	**15.6**	**104.0**	**96.5%**	**95.0%**	
ND - 40	ACRE 8	BRIDGE LIFT	8"	652-02-02	107.8	13.5	**119.0**	**13.2**	**105.1**	**97.5%**	**95.0%**	
ND - 41	ACRE 3	LIFT 1	8"	1pt.-02	110.1	14.2	**122.4**	**10.9**	**110.4**	**100.2%**	**95.0%**	
ND - 42	ACRE 3	LIFT 1	8"	1pt.-02	110.1	14.2	**118.8**	**9.2**	**108.8**	**98.8%**	**95.0%**	
ND - 43	ACRE 3	LIFT 1	8"	1pt.-02	110.1	14.2	**121.4**	**9.7**	**110.7**	**100.5%**	**95.0%**	
ND - 44	ACRE 3	LIFT 1	8"	652-01-01	105.2	17.1	**116.4**	**10.4**	**105.4**	**100.2%**	**95.0%**	
ND - 45	ACRE 4	LIFT 1	8"	652-01-01	105.2	17.1	**115.8**	**11.6**	**103.8**	**98.6%**	**95.0%**	
ND - 46	ACRE 4	LIFT 1	8"	652-01-01	105.2	17.1	**115.9**	**11.1**	**104.3**	**99.2%**	**95.0%**	
ND - 47	ACRE 4	LIFT 1	8"	652-01-01	105.2	17.1	**116.4**	**10.5**	**105.3**	**100.1%**	**95.0%**	
ND - 48	ACRE 4	LIFT 1	8"	652-01-01	105.2	17.1	**112.8**	**11.1**	**101.5**	**96.5%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440



APPROX. CQC DENSITY TEST LOCATIONS

CFFDR-01



APPROX. CQC DENSITY TEST LOCATION

CFFDK-01

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase No. 4
Project Number : 2010-652

Report Number : **CFFDR-01**
Date (s) : 4.5. - 4.16.10

Sand Cone - ASTM D 1556

Test Information

Test Number :	SC-01	SC-02	SC-03
Nuclear Test Number :	ND-01	ND-06	ND-24
Location:	ACRE 1	ACRE 2	ACRE 2
Depth (ft):	BRIDGE LIFT	BRIDGE LIFT	LIFT 1
Date :	4.6.10	4.7.10	4.8.10

Volume Of Cone and Hole

Cone ID	A-2	A-2	A-2
Density Sand Lot #	JB-10-01	JB-10-01	JB-10-01
Wt. of Sand & Cone Before (lbs.)	15.91	15.14	15.08
Wt. of Sand & Cone After (lbs.)	7.36	6.73	6.93
Wt. of Sand In Hole & Cone (lbs.)	8.55	8.41	8.15
Bulk Density of Sand (pcf)	95.20	95.20	95.20
Volume of Hole & Cone ($ft.^3$)	0.090	0.088	0.086
Volume of Cone($ft.^3$)	0.037	0.037	0.037
Volume of Hole ($ft.^3$)	**0.053**	**0.051**	**0.049**

WEIGHT OF SOIL

Container ID	B-3	B-3	B-3
Wt. of Wet Soil & Tare (lbs.)	6.38	6.88	6.48
Wt. of Tare (lbs.)	0.62	0.62	0.65
Wt. of Wet Soil (lbs.)	**5.76**	**6.26**	**5.83**

MOISTURE / DENSITY

Tare Number	JB-01	JB-04	JB-01
Wt. of Tare & WS (gm)	291.30	305.80	317.20
Wt. of Tare & DS (gm)	270.80	278.60	291.90
Wt. of Tare (gm)	87.10	86.70	87.20
Wt. of Water (gm)	20.50	27.20	25.30
Wt. of DS (gm)	183.70	191.90	204.70
Wet Density (pcf)	109.1	121.9	119.9
Moisture Content %	**11.2**	**14.2**	**12.4**
Dry Density (pcf)	**98.1**	**106.8**	**106.7**

Geotechnics Representative : Jacob R. Buda MPS

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-01**
Date (s) :	4.5. - 4.16.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Description : LIGHT BROWN / GRAY SILTY SAND

Test Information

Test Number :	1pt.-01
Location:	ACRE 1 / ND-01
Depth (ft):	BRIDGE LIFT
Date :	4.6.10

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.13
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	3.81
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	319.20
Wt. of Tare & DS (gm)	290.60
Wt. of Tare (gm)	86.90
Wt. of Water (gm)	28.60
Wt. of DS (gm)	203.70
Wet Density (pcf)	115.5
Moisture Content %	**14.0**
Dry Density (pcf)	**101.2**

Geotechnics Representative : Jacob R. Buda

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Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase No. 4
Project Number : 2010-652

Report Number : **CFFDR-01**
Date (s) : 4.5. - 4.16.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Description : DARK GRAY SILTY SAND

Test Information

Test Number :	1pt.-02
Location:	ACRE 2 / ND-06
Depth (ft):	BRIDGE LIFT
Date :	4.7.10

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.47
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	4.15
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	305.80
Wt. of Tare & DS (gm)	278.60
Wt. of Tare (gm)	86.90
Wt. of Water (gm)	27.20
Wt. of DS (gm)	191.70
Wet Density (pcf)	125.8
Moisture Content %	**14.2**
Dry Density (pcf)	**110.1**

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

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INTEGRITY IN TESTING

Report Number :	**CFFDR-01**
Date (s) :	4.5. - 4.16.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Description : DARK GRAY SILTY SAND

Test Information

Test Number :	1pt.-03
Location:	ACRE 2 / ND-24
Depth (ft):	LIFT 1
Date :	2.22.08

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.29
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	3.97
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-01
Wt. of Tare & WS (gm)	317.20
Wt. of Tare & DS (gm)	291.90
Wt. of Tare (gm)	87.20
Wt. of Water (gm)	25.30
Wt. of DS (gm)	204.70
Wet Density (pcf)	120.3
Moisture Content %	**12.4**
Dry Density (pcf)	**107.1**

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-01**
Date (s) :	4.5. - 4.16.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Description : LIGHT BROWN / GRAY SILTY SAND

Test Information

Test Number :	1pt.-04
Location:	ACRE 4 / ND-48
Depth (ft):	LIFT 1
Date :	4.14.10

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.26
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	3.94
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-01
Wt. of Tare & WS (gm)	284.40
Wt. of Tare & DS (gm)	259.20
Wt. of Tare (gm)	87.10
Wt. of Water (gm)	25.20
Wt. of DS (gm)	172.10
Wet Density (pcf)	119.4
Moisture Content %	**14.6**
Dry Density (pcf)	**104.1**

Geotechnics Representative : Jacob R. Buda

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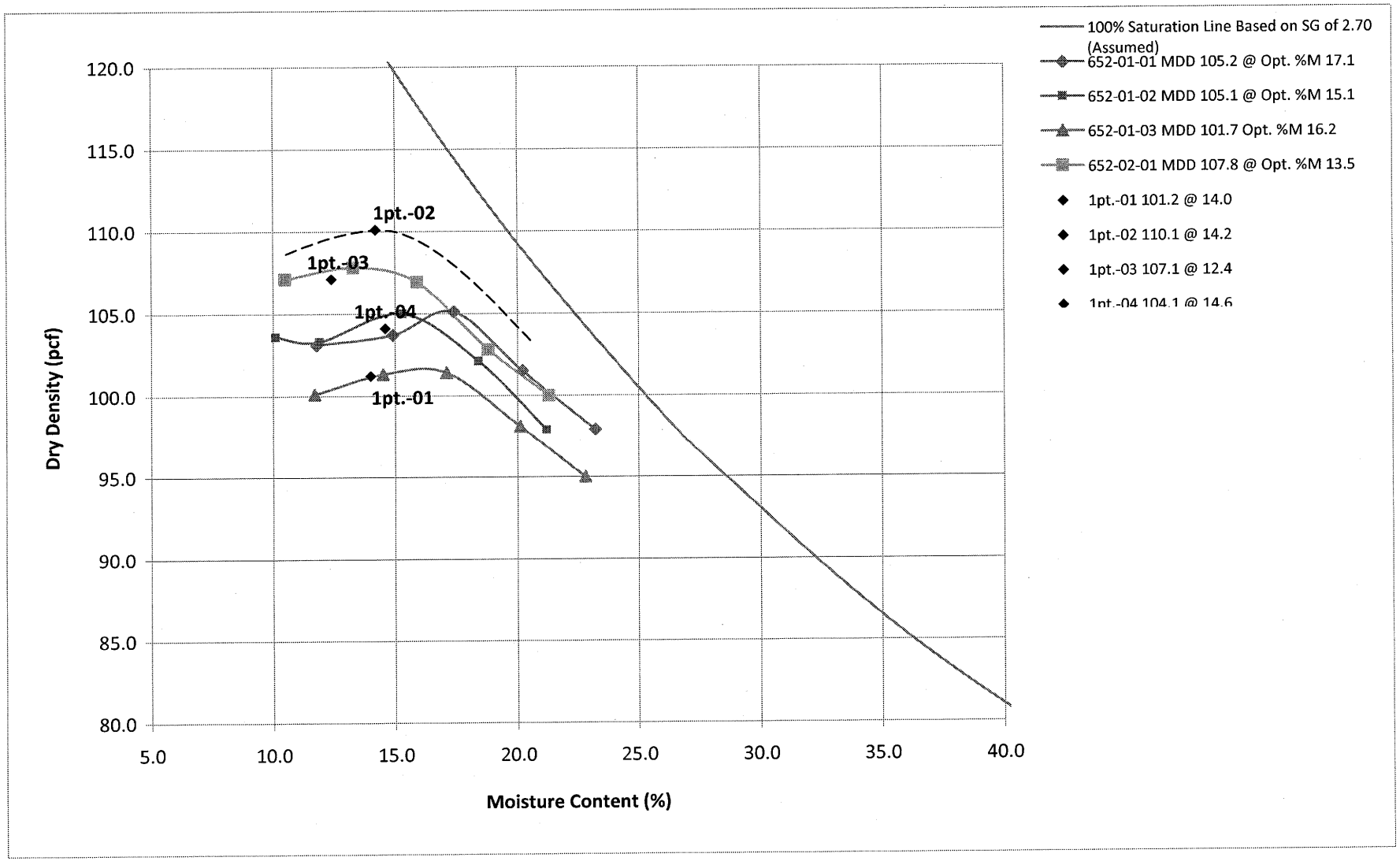
Onsite Stockpile Moisture / Density Relationships

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652



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Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

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INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-02**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 8
Date (s) : **4.19. - 4.23.10**	Reviewed By : MB	Date : 5-6-10

Contractor : Glover Construction	Borrow Source : On-Site Stockpile

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 49	ACRE 10	Bridge Lift	8"	652-02-02	107.8	13.5	**120.9**	**16.1**	**104.1**	**96.6%**	**95.0%**	
ND - 50	ACRE 10	Bridge Lift	8"	652-02-02	107.8	13.5	**116.6**	**12.7**	**103.5**	**96.0%**	**95.0%**	
ND - 51	ACRE 10	Bridge Lift	8"	652-02-02	107.8	13.5	**119.7**	**12.6**	**106.3**	**98.6%**	**95.0%**	
ND - 52	ACRE 10	Bridge Lift	8"	652-02-02	107.8	13.5	**116.8**	**12.7**	**103.6**	**96.1%**	**95.0%**	
ND - 53	ACRE 12	Bridge Lift	8"	652-02-02	107.8	13.5	**115.6**	**9.6**	**105.5**	**97.8%**	**95.0%**	
ND - 54	ACRE 12	Bridge Lift	8"	652-02-02	107.8	13.5	**123.5**	**15.2**	**107.2**	**99.4%**	**95.0%**	
ND - 55	ACRE 12	Bridge Lift	8"	1pt.-02	110.1	14.2	**121.8**	**10.8**	**109.9**	**99.8%**	**95.0%**	
ND - 56	ACRE 12	Bridge Lift	8"	1pt.-02	110.1	14.2	**124.1**	**13.5**	**109.3**	**99.3%**	**95.0%**	
ND - 57	ACRE 9	Bridge Lift	8"	1pt.-02	110.1	14.2	**126.7**	**13.1**	**112.0**	**101.7%**	**95.0%**	
ND - 58	ACRE 9	Bridge Lift	8"	1pt.-02	110.1	14.2	**122.7**	**8.4**	**113.2**	**102.8%**	**95.0%**	
ND - 59	ACRE 9	Bridge Lift	8"	652-02-02	107.8	13.5	**113.8**	**7.3**	**106.1**	**98.4%**	**95.0%**	
ND - 60	ACRE 9	Bridge Lift	8"	652-02-02	107.8	13.5	**111.8**	**9.0**	**102.6**	**95.1%**	**95.0%**	
ND - 61	ACRE 11	Bridge Lift	8"	652-02-02	107.8	13.5	**115.6**	**12.3**	**102.9**	**95.5%**	**95.0%**	
ND - 62	ACRE 11	Bridge Lift	8"	652-02-02	107.8	13.5	**116.3**	**10.2**	**105.5**	**97.9%**	**95.0%**	
ND - 63	ACRE 11	Bridge Lift	8"	652-02-02	107.8	13.5	**121.1**	**12.7**	**107.5**	**99.7%**	**95.0%**	
ND - 64	ACRE 11	Bridge Lift	8"	652-02-02	107.8	13.5	**119.4**	**13.7**	**105.0**	**97.4%**	**95.0%**	
ND - 65	ACRE 13	Bridge Lift	8"	652-02-02	107.8	13.5	**118.6**	**9.4**	**108.4**	**100.6%**	**95.0%**	
ND - 66	ACRE 13	Bridge Lift	8"	652-02-02	107.8	13.5	**119.1**	**12.4**	**106.0**	**98.3%**	**95.0%**	
ND - 67	ACRE 13	Bridge Lift	8"	652-02-02	107.8	13.5	**121.0**	**12.1**	**107.9**	**100.1%**	**95.0%**	
ND - 68	ACRE 13	Bridge Lift	8"	652-02-02	107.8	13.5	**121.3**	**11.2**	**109.1**	**101.2%**	**95.0%**	
ND - 69	ACRE 14	Bridge Lift	8"	652-02-02	107.8	13.5	**118.3**	**11.0**	**106.6**	**98.9%**	**95.0%**	
ND - 70	ACRE 14	Bridge Lift	8"	652-02-02	107.8	13.5	**118.3**	**11.9**	**105.7**	**98.1%**	**95.0%**	
ND - 71	ACRE 14	Bridge Lift	8"	652-02-02	107.8	13.5	**120.3**	**12.7**	**106.7**	**99.0%**	**95.0%**	
ND - 72	ACRE 14	Bridge Lift	8"	652-02-02	107.8	13.5	**117.6**	**13.2**	**103.9**	**96.4%**	**95.0%**	
ND - 73	ACRE 6	LIFT 1	6"	652-02-02	107.8	13.5	**115.1**	**10.7**	**104.0**	**96.5%**	**95.0%**	
ND - 74	ACRE 6	LIFT 1	6"	652-02-02	107.8	13.5	**120.1**	**15.1**	**104.3**	**96.8%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

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Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

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INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-02**	Geotechnics Representative : Jacob R. Buda	Page : 2 of 8
Date (s) : **4.19. - 4.23.10**	Reviewed By :	Date : 5-6-10

Contractor : Glover Construction	Borrow Source : On-Site Stockpile

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 75	ACRE 8	LIFT 1	6"	652-02-02	107.8	13.5	**122.7**	**17.0**	**104.9**	**97.3%**	**95.0%**	
ND - 76	ACRE 8	LIFT 1	6"	652-01-03	101.7	16.2	**116.4**	**14.9**	**101.3**	**99.6%**	**95.0%**	
ND - 77	ACRE 10	LIFT 1	6"	652-02-02	107.8	13.5	**120.3**	**14.4**	**105.2**	**97.5%**	**95.0%**	
ND - 78	ACRE 10	LIFT 1	6"	652-01-03	101.7	16.2	**111.8**	**12.7**	**99.2**	**97.5%**	**95.0%**	
ND - 79	ACRE 10	LIFT 1	6"	652-01-03	101.7	16.2	**120.6**	**17.7**	**102.5**	**100.8%**	**95.0%**	
ND - 80	ACRE 10	LIFT 1	6"	652-01-03	101.7	16.2	**118.9**	**17.0**	**101.6**	**99.9%**	**95.0%**	
ND - 81	ACRE 8	LIFT 1	6"	652-02-02	107.8	13.5	**122.2**	**13.7**	**107.5**	**99.7%**	**95.0%**	
ND - 82	ACRE 8	LIFT 1	6"	652-02-02	107.8	13.5	**120.4**	**11.7**	**107.8**	**100.0%**	**95.0%**	
ND - 83	ACRE 6	LIFT 1	6"	652-02-02	107.8	13.5	**122.5**	**17.1**	**104.6**	**97.0%**	**95.0%**	
ND - 84	ACRE 6	LIFT 1	6"	652-02-02	107.8	13.5	**123.0**	**14.9**	**107.0**	**99.3%**	**95.0%**	
ND - 85	ACRE 5	LIFT 1	6"	652-02-02	107.8	13.5	**118.5**	**14.5**	**103.5**	**96.0%**	**95.0%**	
ND - 86	ACRE 5	LIFT 1	6"	652-02-02	107.8	13.5	**116.4**	**10.7**	**105.1**	**97.5%**	**95.0%**	
ND - 87	ACRE 7	LIFT 1	6"	652-02-02	107.8	13.5	**118.8**	**12.6**	**105.5**	**97.9%**	**95.0%**	
ND - 88	ACRE 7	LIFT 1	6"	652-02-02	107.8	13.5	**117.2**	**12.5**	**104.2**	**96.6%**	**95.0%**	
ND - 89	ACRE 9	LIFT 1	6"	652-02-02	107.8	13.5	**115.6**	**11.8**	**103.4**	**95.9%**	**95.0%**	
ND - 90	ACRE 9	LIFT 1	6"	652-02-02	107.8	13.5	**118.5**	**9.9**	**107.8**	**100.0%**	**95.0%**	
ND - 91	ACRE 9	LIFT 1	6"	652-02-02	107.8	13.5	**122.3**	**14.6**	**106.7**	**99.0%**	**95.0%**	
ND - 92	ACRE 9	LIFT 1	6"	652-02-02	107.8	13.5	**120.3**	**11.7**	**107.7**	**99.9%**	**95.0%**	
ND - 93	ACRE 7	LIFT 1	6"	652-02-02	107.8	13.5	**121.2**	**15.7**	**104.8**	**97.2%**	**95.0%**	
ND - 94	ACRE 7	LIFT 1	6"	652-02-02	107.8	13.5	**117.0**	**9.5**	**106.8**	**99.1%**	**95.0%**	
ND - 95	ACRE 5	LIFT 1	6"	1pt.-02	110.1	14.2	**120.9**	**9.8**	**110.1**	**100.0%**	**95.0%**	
ND - 96	ACRE 5	LIFT 1	6"	652-02-02	107.8	13.5	**121.3**	**13.7**	**106.7**	**99.0%**	**95.0%**	
ND - 97	ACRE 11	LIFT 1	6"	652-02-02	107.8	13.5	**119.9**	**14.8**	**104.4**	**96.9%**	**95.0%**	
ND - 98	ACRE 11	LIFT 1	6"	652-02-02	107.8	13.5	**119.9**	**15.1**	**104.2**	**96.6%**	**95.0%**	
ND - 99	ACRE 13	LIFT 1	6"	652-02-02	107.8	13.5	**117.7**	**13.2**	**104.0**	**96.5%**	**95.0%**	
ND - 100	ACRE 13	LIFT 1	6"	652-02-02	107.8	13.5	**118.8**	**11.9**	**106.2**	**98.5%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

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INTEGRITY IN TESTING

Field Density Report

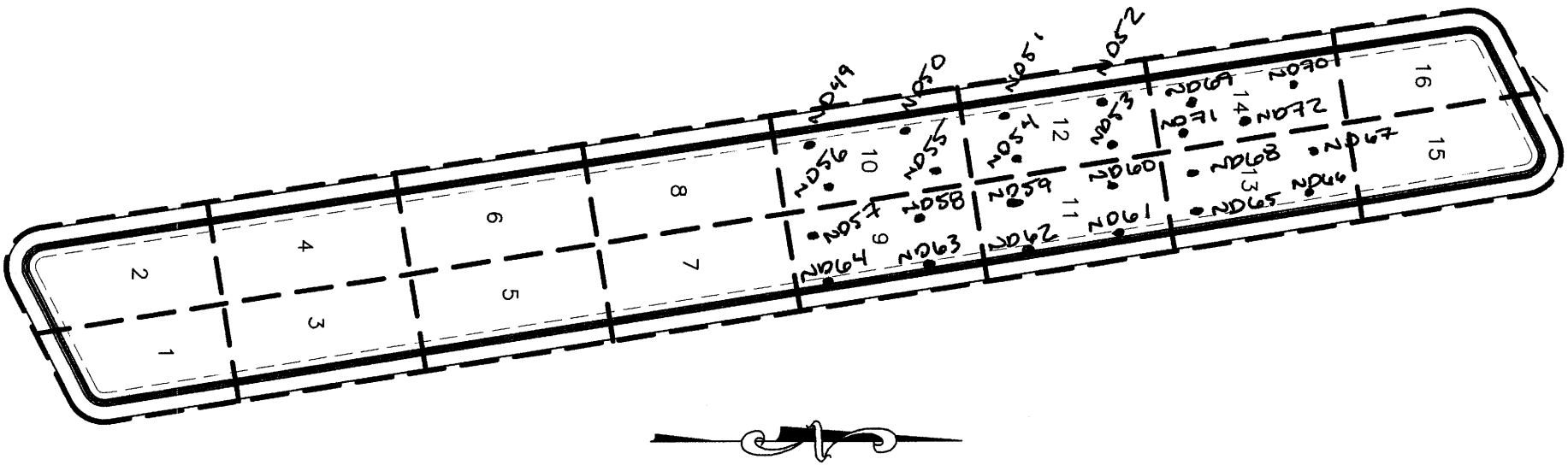
Report Number : **CFFDR-02**	Geotechnics Representative : Jacob R. Buda	Page : 3 of 8
Date (s) : **4.19. - 4.23.10**	Reviewed By : MMS	Date : 5-6-10

Contractor : Glover Construction	Borrow Source : On-Site Stockpile

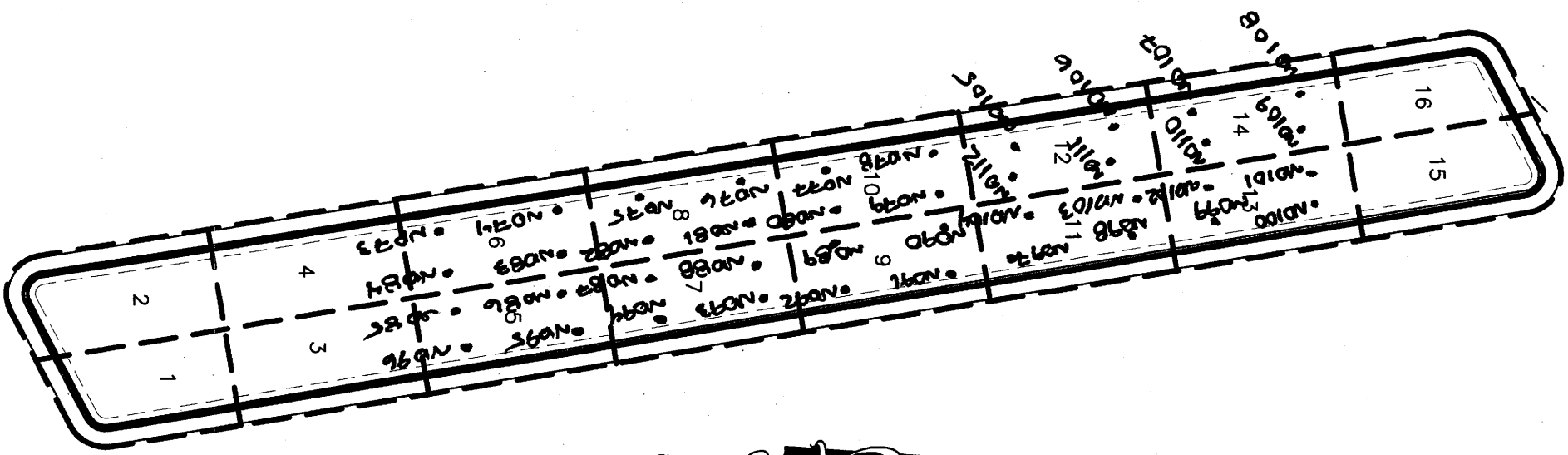
Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 101	ACRE 13	LIFT 1	6"	652-02-02	107.8	13.5	**120.2**	**13.7**	**105.7**	**98.1%**	**95.0%**	
ND - 102	ACRE 13	LIFT 1	6"	652-02-02	107.8	13.5	**117.3**	**10.4**	**106.3**	**98.6%**	**95.0%**	
ND - 103	ACRE 11	LIFT 1	6"	652-02-02	107.8	13.5	**118.0**	**12.9**	**104.5**	**97.0%**	**95.0%**	
ND - 104	ACRE 11	LIFT 1	6"	652-02-02	107.8	13.5	**120.5**	**14.5**	**105.2**	**97.6%**	**95.0%**	
ND - 105	ACRE 12	LIFT 1	6"	652-02-02	107.8	13.5	**118.8**	**13.2**	**104.9**	**97.4%**	**95.0%**	
ND - 106	ACRE 12	LIFT 1	6"	652-02-02	107.8	13.5	**121.3**	**16.0**	**104.6**	**97.0%**	**95.0%**	
ND - 107	ACRE 14	LIFT 1	6"	652-02-02	107.8	13.5	**118.1**	**11.9**	**105.5**	**97.9%**	**95.0%**	
ND - 108	ACRE 14	LIFT 1	6"	652-02-02	107.8	13.5	**122.6**	**14.5**	**107.1**	**99.3%**	**95.0%**	
ND - 109	ACRE 14	LIFT 1	6"	652-02-02	107.8	13.5	**120.5**	**16.0**	**103.9**	**96.4%**	**95.0%**	
ND - 110	ACRE 14	LIFT 1	6"	652-02-02	107.8	13.5	**118.2**	**10.8**	**106.7**	**99.0%**	**95.0%**	
ND - 111	ACRE 12	LIFT 1	6"	652-02-02	107.8	13.5	**121.2**	**16.7**	**103.9**	**96.3%**	**95.0%**	
ND - 112	ACRE 12	LIFT 1	6"	652-02-02	107.8	13.5	**122.3**	**17.8**	**103.8**	**96.3%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440



CFFDL-02 APPROX. DENSITY TEST LOCATIONS



CFFDR-02 APPROX. DENSITY TEST LOCATIONS

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase No. 4
Project Number : 2010-652

Report Number : **CFFDR-02**
Date (s) : 4.16. - 4.23.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Light Grey Sandy Silt

Test Information

Test Number :	1pt.-05
Location:	ACRE 1
Depth (ft):	LIFT 1
Date :	4.20.10

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.37
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	4.05
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	297.90
Wt. of Tare & DS (gm)	274.50
Wt. of Tare (gm)	86.50
Wt. of Water (gm)	23.40
Wt. of DS (gm)	188.00
Wet Density (pcf)	122.7
Moisture Content %	**12.4**
Dry Density (pcf)	**109.1**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-02**
Date (s) :	4.16. - 4.23.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Brown / Grey Sandy Silt

Test Information

Test Number :	1pt.-06
Location:	ACRE 10
Depth (ft):	LIFT 1
Date :	4.20.10

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.12
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	3.8
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-01
Wt. of Tare & WS (gm)	314.90
Wt. of Tare & DS (gm)	288.70
Wt. of Tare (gm)	87.10
Wt. of Water (gm)	26.20
Wt. of DS (gm)	201.60
Wet Density (pcf)	115.2
Moisture Content %	**13.0**
Dry Density (pcf)	**101.9**

Geotechnics Represenative : Jacob R. Buda

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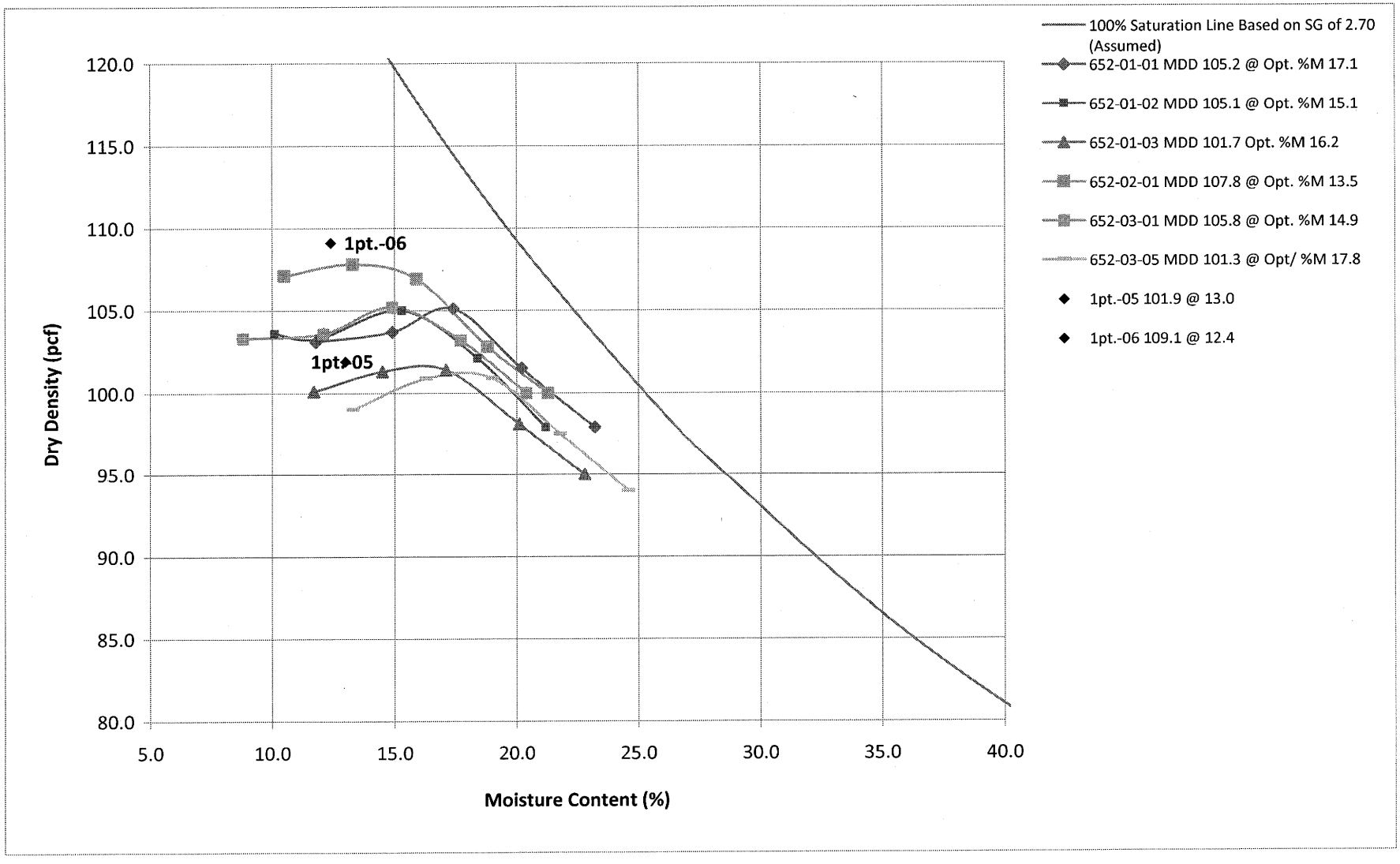
INTEGRITY IN TESTING

Onsite Common Fill Moisture / Density Relationships

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652



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Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-03**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 7
Date (s) : **4.26. - 4.30.10**	Reviewed By : [illegible]	Date : 5-14-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 113	ACRE 1	LIFT 2	6"	652-02-02	107.8	13.5	**121.0**	**10.4**	**109.6**	**101.7%**	**95.0%**	
ND - 114	ACRE 1	LIFT 2	6"	652-02-02	107.8	13.5	**116.5**	**11.9**	**104.1**	**96.6%**	**95.0%**	
ND - 115	ACRE 3	LIFT 2	6"	652-02-02	107.8	13.5	**112.9**	**6.9**	**105.6**	**98.0%**	**95.0%**	
ND - 116	ACRE 3	LIFT 2	6"	652-02-02	107.8	13.5	**118.1**	**8.7**	**108.6**	**100.8%**	**95.0%**	
ND - 117	ACRE 5	LIFT 2	6"	652-02-02	107.8	13.5	**117.9**	**14.1**	**103.3**	**95.9%**	**95.0%**	
ND - 118	ACRE 5	LIFT 2	6"	652-02-02	107.8	13.5	**119.5**	**13.1**	**105.7**	**98.0%**	**95.0%**	
ND - 119	ACRE 5	LIFT 2	6"	652-02-02	107.8	13.5	**121.8**	**16.9**	**104.2**	**96.7%**	**95.0%**	
ND - 120	ACRE 5	LIFT 2	6"	652-02-02	107.8	13.5	**112.7**	**10.1**	**102.4**	**95.0%**	**95.0%**	
ND - 121	ACRE 3	LIFT 2	6"	652-02-02	107.8	13.5	**117.2**	**9.9**	**106.6**	**98.9%**	**95.0%**	
ND - 122	ACRE 3	LIFT 2	6"	652-02-02	107.8	13.5	**117.9**	**10.3**	**106.9**	**99.2%**	**95.0%**	
ND - 123	ACRE 1	LIFT 2	6"	652-02-02	107.8	13.5	**121.0**	**10.4**	**109.6**	**101.7%**	**95.0%**	
ND - 124	ACRE 1	LIFT 2	6"	652-02-02	107.8	13.5	**122.7**	**9.3**	**112.3**	**104.1%**	**95.0%**	
ND - 125	ACRE 2	LIFT 2	6"	652-02-02	107.8	13.5	**118.4**	**10.7**	**107.0**	**99.2%**	**95.0%**	
ND - 126	ACRE 2	LIFT 2	6"	652-02-02	107.8	13.5	**117.6**	**11.2**	**105.8**	**98.1%**	**95.0%**	
ND - 127	ACRE 4	LIFT 2	6"	652-02-02	107.8	13.5	**115.8**	**9.9**	**105.4**	**97.7%**	**95.0%**	
ND - 128	ACRE 4	LIFT 2	6"	652-02-02	107.8	13.5	**120.6**	**12.8**	**106.9**	**99.2%**	**95.0%**	
ND - 129	ACRE 6	LIFT 2	6"	652-02-02	107.8	13.5	**122.5**	**17.1**	**104.6**	**97.0%**	**95.0%**	
ND - 130	ACRE 6	LIFT 2	6"	652-02-02	107.8	13.5	**122.9**	**18.0**	**104.2**	**96.6%**	**95.0%**	
ND - 131	ACRE 6	LIFT 2	6"	652-02-02	107.8	13.5	**118.1**	**8.1**	**109.3**	**101.3%**	**95.0%**	
ND - 132	ACRE 6	LIFT 2	6"	652-02-02	107.8	13.5	**121.6**	**15.2**	**105.6**	**97.9%**	**95.0%**	
ND - 133	ACRE 4	LIFT 2	6"	652-02-02	107.8	13.5	**121.6**	**12.3**	**108.3**	**100.4%**	**95.0%**	
ND - 134	ACRE 4	LIFT 2	6"	652-02-02	107.8	13.5	**119.1**	**15.9**	**102.8**	**95.3%**	**95.0%**	
ND - 135	ACRE 2	LIFT 2	6"	652-02-02	107.8	13.5	**116.2**	**10.2**	**105.4**	**97.8%**	**95.0%**	
ND - 136	ACRE 2	LIFT 2	6"	652-02-02	107.8	13.5	**117.8**	**12.4**	**104.8**	**97.2%**	**95.0%**	
ND - 137	ACRE 8	LIFT 2	6"	652-02-02	107.8	13.5	**115.6**	**9.5**	**105.6**	**97.9%**	**95.0%**	
ND - 138	ACRE 8	LIFT 2	6"	652-02-02	107.8	13.5	**116.7**	**11.4**	**104.8**	**97.2%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

Geotechnics
INTEGRITY IN TESTING

Field Density Report

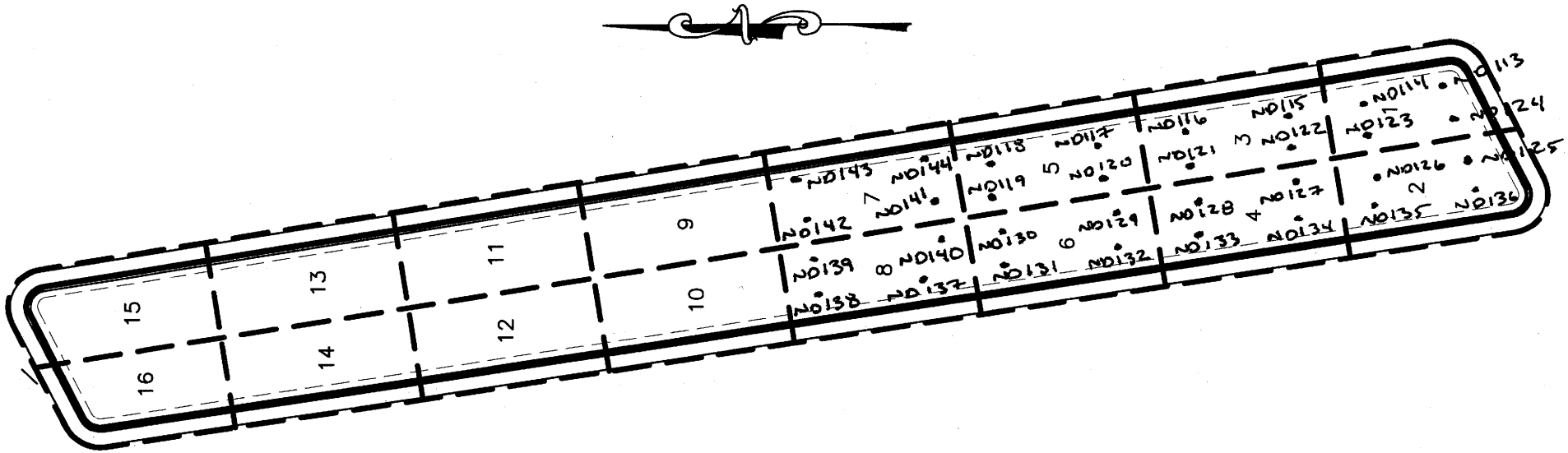
Report Number : **CFFDR-03**	Geotechnics Representative : Jacob R. Buda	Page : 2 of 7
Date (s) : **4.26. - 4.30.10**	Reviewed By : MMS	Date : 5-14-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

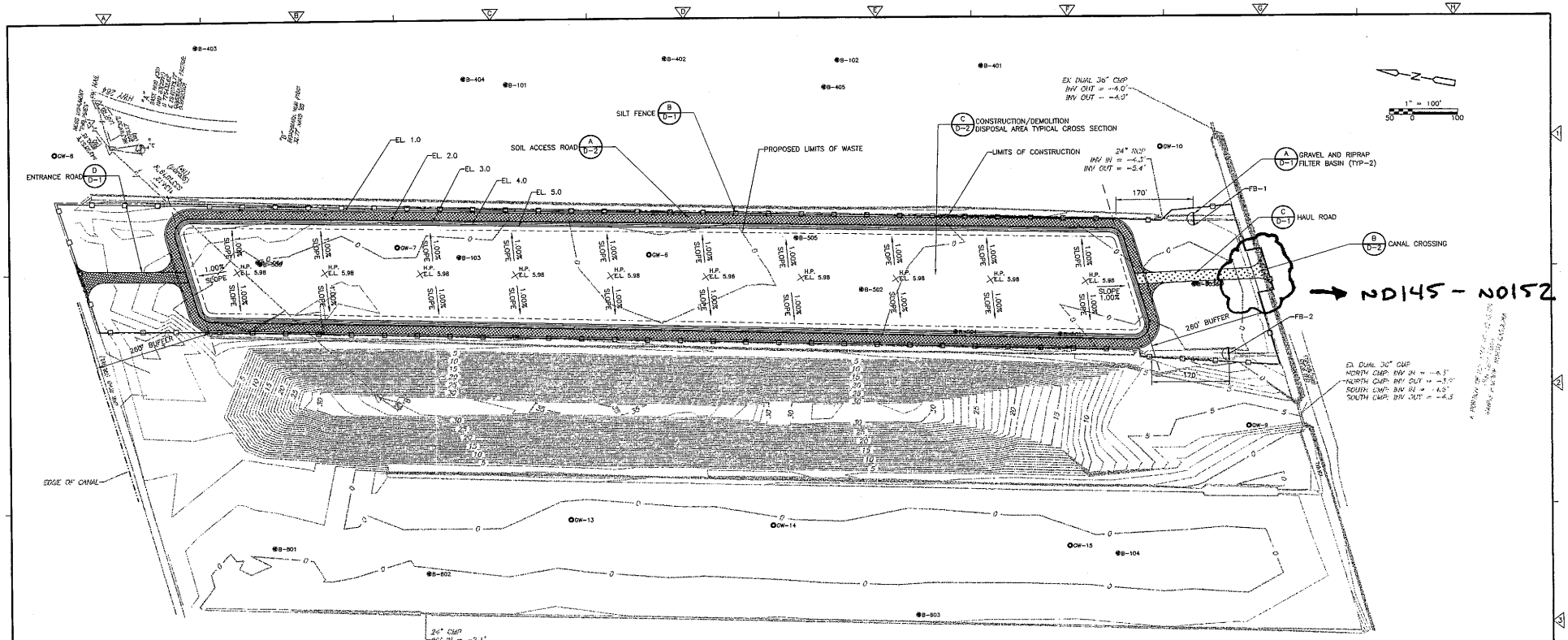
Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 139	ACRE 8	LIFT 2	6"	652-02-02	107.8	13.5	**117.4**	**12.4**	**104.4**	**96.9%**	**95.0%**	
ND - 140	ACRE 8	LIFT 2	6"	652-02-02	107.8	13.5	**116.9**	**13.2**	**103.3**	**95.8%**	**95.0%**	
ND - 141	ACRE 7	LIFT 2	6"	652-02-02	107.8	13.5	**118.4**	**12.4**	**105.3**	**97.7%**	**95.0%**	
ND - 142	ACRE 7	LIFT 2	6"	652-02-02	107.8	13.5	**117.2**	**14.1**	**102.7**	**95.3%**	**95.0%**	
ND - 143	ACRE 7	LIFT 2	6"	652-02-02	107.8	13.5	**116.9**	**13.7**	**102.8**	**95.4%**	**95.0%**	
ND - 144	ACRE 7	LIFT 2	6"	652-02-02	107.8	13.5	**117.4**	**11.9**	**104.9**	**97.3%**	**95.0%**	
ND - 145	Canal Crossing	LIFT 1	6"	652-04-02	101.1	16.4	**116.1**	**18.1**	**98.3**	**97.2%**	**95.0%**	
ND - 146	Canal Crossing	LIFT 2	6"	652-04-02	101.1	16.4	**117.5**	**20.8**	**97.3**	**96.2%**	**95.0%**	
ND - 147	Canal Crossing	LIFT 3	6"	652-04-02	101.1	16.4	**116.4**	**20.5**	**96.6**	**95.5%**	**95.0%**	
ND - 148	Canal Crossing	LIFT 4	6"	652-04-02	101.1	16.4	**114.1**	**17.9**	**96.8**	**95.7%**	**95.0%**	
ND - 149	Canal Crossing	LIFT 5	6"	652-04-02	101.1	16.4	**116.6**	**14.0**	**102.3**	**101.2%**	**95.0%**	
ND - 150	Canal Crossing	LIFT 6	6"	652-04-02	101.1	16.4	**111.4**	**13.2**	**98.4**	**97.3%**	**95.0%**	
ND - 151	Canal Crossing	LIFT 7	6"	652-04-02	101.1	16.4	**110.9**	**11.8**	**99.2**	**98.1%**	**95.0%**	
ND - 152	Canal Crossing	LIFT 8	6"	652-04-02	101.1	16.4	**113.6**	**15.9**	**98.0**	**96.9%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440



CFFDR-03 APPROX. CQC DENSITY TEST LOCATIONS



LEGEND

- EXISTING MONITORING WELL
- EXISTING PIEZOMETER
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- HIGH POINT
- FILTER BASIN
- SILT FENCE
- HAUL ROAD
- PROPOSED SOIL ACCESS ROAD
- ENTRANCE ROAD
- LIMITS OF CONSTRUCTION

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL LOCATE AND/OR RELOCATE ALL EXISTING UTILITIES, DRAINAGE STRUCTURES, MONITORING WELLS, ETC. IN COORDINATION WITH THE APPROPRIATE UTILITIES, AGENCY, OR COMPANY WITHIN 72 HOURS PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING, MAINTAINING, AND RESTORING ALL SITE UTILITIES AND BUILDING SERVICES.
2. NO HAUL ROUTE SHALL BE USED FOR MATERIAL TRANSPORT UNTIL NO THE ROUTE HAS BEEN COORDINATED WITH THE OWNER.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT NO ADDITIONAL COST TO THE OWNER, ANY EXISTING MONITORING WELLS, DRAINAGE STRUCTURES, ETC. DAMAGED DURING CONSTRUCTION.
4. CONTRACTOR'S TRAILER SHALL BE LOCATED WITHIN STAGING AREAS AS DESIGNATED BY THE OWNER ON THIS SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY UTILITY CONNECTIONS, A POTABLE WATER SUPPLY, AND TEMPORARY SANITARY SERVICE FOR TRAILER.
5. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, OR PRESERVATION AREAS AND OTHER FEATURES AFFECTING HIS WORK.
6. THE CONTRACTOR SHALL REPLACE ALL PAVING (ASPHALT, STONE, OR CONCRETE), STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, MAILBOXES, DRAINAGE CULVERTS, FENCES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION.
7. STORM DRAINAGE PIPE LENGTHS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS REQUIRED IN THE FIELD, UPON APPROVAL BY ENGINEER.
8. EXISTING DRAINAGE DITCHES SHALL HAVE SEDIMENT AND DEBRIS REMOVED AND SHALL BE REPAIRED AND ALL NEW EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO ANY CLEARING AND GRUBBING. THEY SHALL BE INSTALLED TO THE LIMITS OF CONSTRUCTION SHOWN ON THE DRAWINGS, REQUIRED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
9. THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS SHALL BE STRICTLY OBSERVED BY THE CONTRACTOR. ALL INGRESS AND EGRESS AND TRAFFIC PATTERNS ON THE SITE SHALL BE WITHIN THE LIMITS OF DISTURBANCE.
10. CONTRACTOR SHALL VERIFY THE EXISTANCE AND ACCURACY OF BENCHMARK AND CONTROL DATA PRIOR TO INITIATING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCES ARE FOUND.
11. CONTRACTOR SHALL STAKE OUT LIMITS OF WORK (INCLUDING CUT/FILL SLOPES) PRIOR TO INITIATING EXCAVATION AND BACKFILL ACTIVITIES. SURVEY DATA SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS PER SPECIFICATIONS EXCEPT FOR ROAD SURFACES AND AREA WITHIN PROPOSED EDGE OF WASTE.
12. CONTROL POINTS PROVIDED ARE BASED ON A LOCAL COORDINATE SYSTEM. COORDINATE WITH QUIBLE & ASSOC., PC (PHONE NO. 252-261-3300) PRIOR TO LAYING OUT WORK.

SURVEY NOTES:

1. TOPOGRAPHIC SURVEY DATE 04/12-05/11-09 BY MCKIM AND CREED, PA.
2. REFERENCE DB 530, PG 733 & PL C, SL 32B.
3. DRAWING VERTICAL DATUM BASED ON GPS RAPID STATIC SESSIONS, OPUS REPORT NUMBERS 000023442, 000023441, 000023439 & 000031628 DATUM NAVD '88, FEET.
4. HORIZONTAL DATUM NAD 83(2007) AND VERTICAL DATUM VERIFICATION BASED UPON RAPID STATIC GPS SESSIONS 000381637, 000381747, 000180456, 000177169, 000147860, 000242228 AND 000237065.
5. CONDITIONS WITHIN SURVEY AREA MAY HAVE CHANGE SINCE DATE OF SURVEY.

NORTH CAROLINA PROFESSIONAL SEAL 028426 12/14/09 W. MICHAEL BRINCHEK, P.E.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. STOUT
DRAWN BY: P. STOUT
SHEET CHK'D BY: K. YANG
CROSS CHK'D BY: M. BRINCHEK
APPROVED BY: [illegible]
DATE: DECEMBER 2009

CDM
Camp Dresser & McKee
5400 Glenwood Avenue, Suite 300
Raleigh, NC 27612
Tel: (919) 787-5620 Fax: (919) 781-6730
North Carolina Firm Licensure: F-0412
consulting • engineering • construction • operations

DARE COUNTY
NORTH CAROLINA
CONSTRUCTION & DEMOLITION DEBRIS LANDFILL
PHASE IV CONSTRUCTION DRAWINGS

GRADING PLAN

PROJECT NO. 17952 56960
FILE NAME: C003LFPL.DWG
SHEET NO.
C-3

BID SET

12/03/09 11:15:17 PM L:\17952-56960\CONSTRUCTION_DRAWINGS\1CDR\C003LFPL.DWG

Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-02**
Date (s) :	4.16. - 4.23.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Grey Clayey Sand

Test Information

Test Number :	1pt.-07
Location:	ACRE 2
Depth (ft):	LIFT 2
Date :	4.27.10

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.25
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	3.93
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	288.30
Wt. of Tare & DS (gm)	268.50
Wt. of Tare (gm)	86.50
Wt. of Water (gm)	19.80
Wt. of DS (gm)	182.00
Wet Density (pcf)	119.1
Moisture Content %	**10.9**
Dry Density (pcf)	**107.4**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Report Number :	**CFFDR-02**
Date (s) :	4.16. - 4.23.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Light Grey Sandy Silt

Test Information

Test Number :	1pt.-08
Location:	Canal Crossing
Depth (ft):	LIFT 1
Date :	4.28.10

Mold

Weight of Mold (lbs.)	9.32
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.19
Weight of Mold (lbs)	9.32
Weight of WS (lbs)	3.87
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	260.10
Wt. of Tare & DS (gm)	236.20
Wt. of Tare (gm)	86.50
Wt. of Water (gm)	23.90
Wt. of DS (gm)	149.70
Wet Density (pcf)	117.3
Moisture Content %	**16.0**
Dry Density (pcf)	**101.1**

Geotechnics Represenative : Jacob R. Buda

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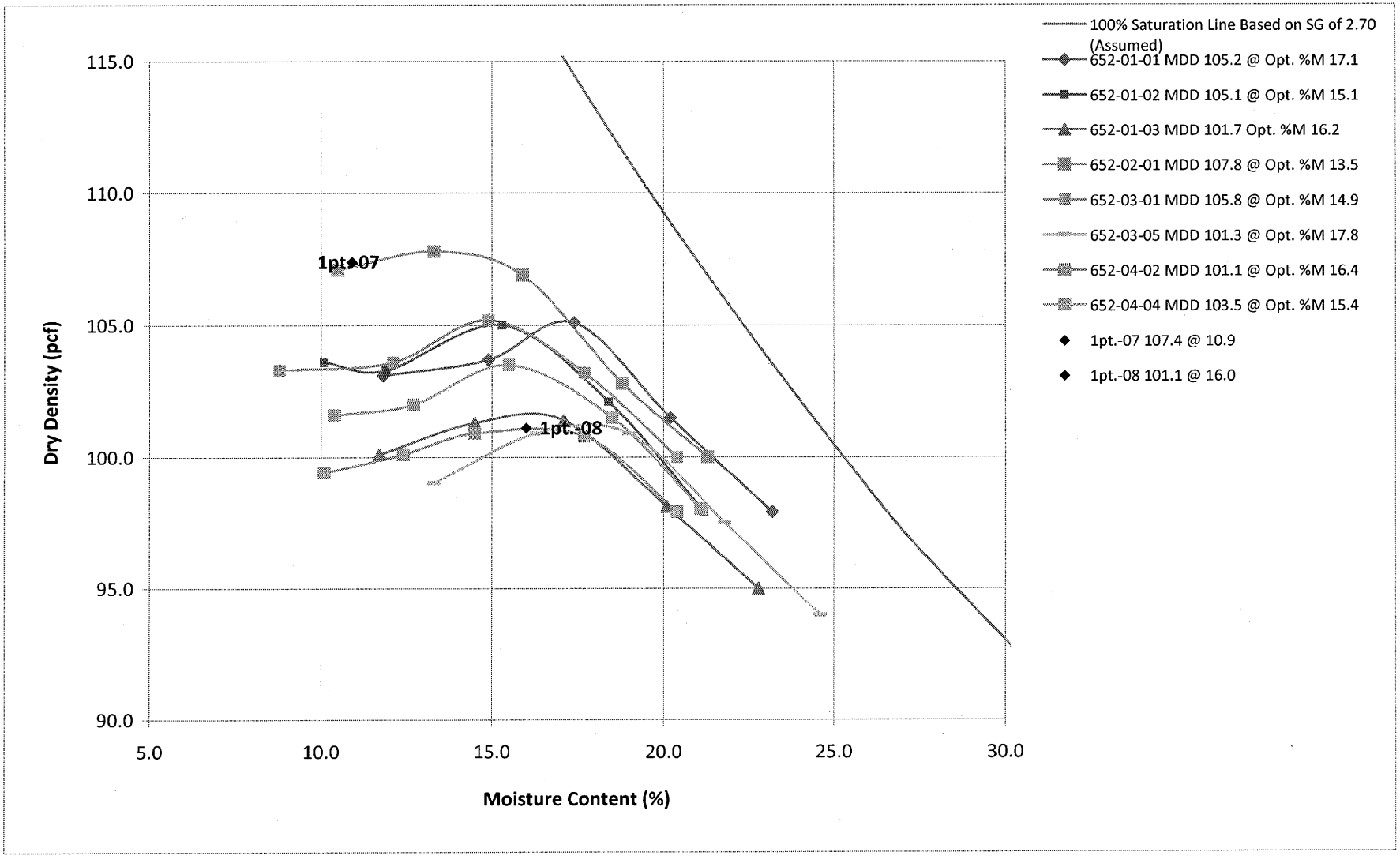
geotechnics
INTEGRITY IN TESTING

Onsite Common Fill Moisture / Density Relationships

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652



2200 Westinghouse Blvd. - Suite 103 - Raleigh, NC 27604 - Phone (919) 876-0405 - Fax (919) 876-0460 MPS

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

Geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-04**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 15
Date (s) : **5.19. - 5.22.10**	Reviewed By : MDS	Date : 6-7-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 153	ACRE 9	LIFT 2	6"	652-04-02	103.5	15.4	**116.2**	**16.0**	**100.2**	**96.8%**	**95.0%**	
ND - 154	ACRE 9	LIFT 2	6"	652-04-02	103.5	15.4	**115.7**	**14.2**	**101.3**	**97.9%**	**95.0%**	
ND - 155	ACRE 11	LIFT 2	6"	652-04-02	103.5	15.4	**117.4**	**15.7**	**101.5**	**98.0%**	**95.0%**	
ND - 156	ACRE 11	LIFT 2	6"	652-04-02	103.5	15.4	**114.7**	**13.7**	**100.9**	**97.5%**	**95.0%**	
ND - 157	ACRE 13	LIFT 2	6"	652-04-02	103.5	15.4	**115.2**	**14.3**	**100.8**	**97.4%**	**95.0%**	
ND - 158	ACRE 13	LIFT 2	6"	652-04-02	103.5	15.4	**116.9**	**12.7**	**103.7**	**100.2%**	**95.0%**	
ND - 159	ACRE 13	LIFT 2	6"	652-04-02	103.5	15.4	**112.7**	**14.1**	**98.8**	**95.4%**	**95.0%**	
ND - 160	ACRE 13	LIFT 2	6"	652-04-02	103.5	15.4	**114.8**	**16.3**	**98.7**	**95.4%**	**95.0%**	
ND - 161	ACRE 11	LIFT 2	6"	652-04-02	103.5	15.4	**118.0**	**17.4**	**100.5**	**97.1%**	**95.0%**	
ND - 162	ACRE 11	LIFT 2	6"	652-04-02	103.5	15.4	**117.0**	**16.2**	**100.7**	**97.3%**	**95.0%**	
ND - 163	ACRE 9	LIFT 2	6"	652-04-02	103.5	15.4	**116.8**	**13.0**	**103.4**	**99.9%**	**95.0%**	
ND - 164	ACRE 9	LIFT 2	6"	652-04-02	103.5	15.4	**116.2**	**13.7**	**102.2**	**98.7%**	**95.0%**	
ND - 165	ACRE 14	LIFT 2	6"	652-04-02	103.5	15.4	**114.2**	**14.1**	**100.1**	**96.7%**	**95.0%**	
ND - 166	ACRE 14	LIFT 2	6"	652-04-02	103.5	15.4	**116.9**	**15.9**	**100.9**	**97.5%**	**95.0%**	
ND - 167	ACRE 12	LIFT 2	6"	652-04-02	103.5	15.4	**119.3**	**18.6**	**100.6**	**97.2%**	**95.0%**	
ND - 168	ACRE 12	LIFT 2	6"	652-04-02	103.5	15.4	**117.4**	**18.7**	**98.9**	**95.6%**	**95.0%**	
ND - 169	ACRE 10	LIFT 2	6"	652-04-02	103.5	15.4	**109.9**	**11.7**	**98.4**	**95.1%**	**95.0%**	
ND - 170	ACRE 10	LIFT 2	6"	652-04-02	103.5	15.4	**117.9**	**13.6**	**103.8**	**100.3%**	**95.0%**	
ND - 171	ACRE 10	LIFT 2	6"	652-04-02	103.5	15.4	**112.7**	**12.2**	**100.4**	**97.0%**	**95.0%**	
ND - 172	ACRE 10	LIFT 2	6"	652-04-02	103.5	15.4	**116.4**	**14.9**	**101.3**	**97.9%**	**95.0%**	
ND - 173	ACRE 12	LIFT 2	6"	652-04-02	103.5	15.4	**115.9**	**15.9**	**100.0**	**96.6%**	**95.0%**	
ND - 174	ACRE 12	LIFT 2	6"	652-04-02	103.5	15.4	**115.0**	**16.4**	**98.8**	**95.5%**	**95.0%**	
ND - 175	ACRE 14	LIFT 2	6"	652-04-02	103.5	15.4	**116.3**	**14.3**	**101.7**	**98.3%**	**95.0%**	
ND - 176	ACRE 14	LIFT 2	6"	652-04-02	103.5	15.4	**117.4**	**16.2**	**101.0**	**97.6%**	**95.0%**	
ND - 177	S. Access Rd.	~ Grade	6"	652-03-05	101.3	17.8	**108.4**	**8.0**	**100.4**	**99.1%**	**95.0%**	
ND - 178	S. Access Rd.	~ Grade	6"	652-03-05	101.3	17.8	**107.2**	**5.9**	**101.2**	**99.9%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

Geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-04**	Geotechnics Representative : Jacob R. Buda	Page : 2 of 15
Date (s) : **5.19. - 5.22.10**	Reviewed By : [illegible]	Date : 6-7-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 179	S. Access Rd.	~ Grade	6"	652-03-05	101.3	17.8	**109.6**	**5.6**	**103.8**	**102.5%**	**95.0%**	
ND - 180	S. Access Rd.	~ Grade	6"	652-03-05	101.3	17.8	**104.9**	**5.3**	**99.6**	**98.3%**	**95.0%**	
ND - 181	ACRE 2	LIFT 3	6"	652-07-01	106.8	17.5	**120.2**	**12.5**	**106.8**	**100.0%**	**95.0%**	
ND - 182	ACRE 2	LIFT 3	6"	652-07-01	106.8	17.5	**120.2**	**17.5**	**102.3**	**95.8%**	**95.0%**	
ND - 183	ACRE 4	LIFT 3	6"	652-07-01	106.8	17.5	**120.3**	**15.2**	**104.4**	**97.8%**	**95.0%**	
ND - 184	ACRE 4	LIFT 3	6"	652-07-01	106.8	17.5	**122.9**	**18.6**	**103.6**	**97.0%**	**95.0%**	
ND - 185	ACRE 6	LIFT 3	6"	652-07-01	106.8	17.5	**121.1**	**18.9**	**101.9**	**95.4%**	**95.0%**	
ND - 186	ACRE 6	LIFT 3	6"	652-07-01	106.8	17.5	**121.0**	**18.4**	**102.2**	**95.7%**	**95.0%**	
ND - 187	ACRE 6	LIFT 3	6"	652-07-01	106.8	17.5	**120.5**	**18.8**	**101.4**	**95.0%**	**95.0%**	
ND - 188	ACRE 6	LIFT 3	6"	652-07-01	106.8	17.5	**119.6**	**17.9**	**101.4**	**95.0%**	**95.0%**	
ND - 189	ACRE 4	LIFT 3	6"	652-07-01	106.8	17.5	**118.8**	**16.9**	**101.6**	**95.2%**	**95.0%**	
ND - 190	ACRE 4	LIFT 3	6"	652-07-01	106.8	17.5	**118.1**	**14.6**	**103.1**	**96.5%**	**95.0%**	
ND - 191	ACRE 2	LIFT 3	6"	652-07-01	106.8	17.5	**122.9**	**20.4**	**102.1**	**95.6%**	**95.0%**	
ND - 192	ACRE 2	LIFT 3	6"	652-07-01	106.8	17.5	**122.5**	**14.3**	**107.2**	**100.4%**	**95.0%**	
ND - 193	ACRE 8	LIFT 3	6"	652-07-02	104.8	17.7	**120.1**	**18.2**	**101.6**	**97.0%**	**95.0%**	
ND - 194	ACRE 8	LIFT 3	6"	652-07-02	104.8	17.7	**120.9**	**20.7**	**100.2**	**95.6%**	**95.0%**	
ND - 195	ACRE 10	LIFT 3	6"	652-07-02	104.8	17.7	**121.3**	**21.5**	**99.8**	**95.3%**	**95.0%**	
ND - 196	ACRE 10	LIFT 3	6"	652-07-02	104.8	17.7	**119.2**	**17.0**	**101.9**	**97.2%**	**95.0%**	
ND - 197	ACRE 12	LIFT 3	6"	652-07-02	104.8	17.7	**119.5**	**20.0**	**99.6**	**95.0%**	**95.0%**	
ND - 198	ACRE 12	LIFT 3	6"	652-07-02	104.8	17.7	**121.8**	**21.5**	**100.2**	**95.7%**	**95.0%**	
ND - 199	ACRE 14	LIFT 3	6"	652-07-02	104.8	17.7	**119.3**	**19.1**	**100.2**	**95.6%**	**95.0%**	
ND - 200	ACRE 14	LIFT 3	6"	652-07-02	104.8	17.7	**120.0**	**19.5**	**100.4**	**95.8%**	**95.0%**	
ND - 201	ACRE 14	LIFT 3	6"	652-07-02	104.8	17.7	**119.8**	**19.4**	**100.3**	**95.7%**	**95.0%**	
ND - 202	ACRE 14	LIFT 3	6"	652-07-02	104.8	17.7	**118.7**	**19.2**	**99.6**	**95.0%**	**95.0%**	
ND - 203	ACRE 12	LIFT 3	6"	652-07-02	104.8	17.7	**120.2**	**20.3**	**99.9**	**95.3%**	**95.0%**	
ND - 204	ACRE 12	LIFT 3	6"	652-07-02	104.8	17.7	**120.4**	**19.3**	**100.9**	**96.3%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

Geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-04**	Geotechnics Representative : Jacob R. Buda	Page : 3 of 15
Date (s) : **5.19. - 5.22.10**	Reviewed By : MMS	Date : 6-7-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 205	ACRE 10	LIFT 3	6"	652-07-02	104.8	17.7	**121.9**	**20.6**	**101.1**	**96.4%**	**95.0%**	
ND - 206	ACRE 10	LIFT 3	6"	652-07-02	104.8	17.7	**120.2**	**19.7**	**100.4**	**95.8%**	**95.0%**	
ND - 207	ACRE 8	LIFT 3	6"	652-07-02	104.8	17.7	**121.9**	**20.4**	**101.2**	**96.6%**	**95.0%**	
ND - 208	ACRE 8	LIFT 3	6"	652-07-02	104.8	17.7	**121.6**	**19.5**	**101.8**	**97.1%**	**95.0%**	
ND - 209	ACRE 13	LIFT 3	6"	1pt.-15	98.1	18.3	**119.4**	**20.7**	**98.9**	**100.8%**	**95.0%**	
ND - 210	ACRE 13	LIFT 3	6"	1pt.-15	98.1	18.3	**116.3**	**22.7**	**94.8**	**96.6%**	**95.0%**	
ND - 211	ACRE 11	LIFT 3	6"	1pt.-15	98.1	18.3	**119.0**	**20.8**	**98.5**	**100.4%**	**95.0%**	
ND - 212	ACRE 11	LIFT 3	6"	1pt.-15	98.1	18.3	**116.0**	**20.3**	**96.4**	**98.3%**	**95.0%**	
ND - 213	ACRE 9	LIFT 3	6"	1pt.-15	98.1	18.3	**117.6**	**19.2**	**98.7**	**100.6%**	**95.0%**	
ND - 214	ACRE 9	LIFT 3	6"	1pt.-15	98.1	18.3	**120.2**	**20.1**	**100.1**	**102.0%**	**95.0%**	
ND - 215	ACRE 9	LIFT 3	6"	1pt.-15	98.1	18.3	**121.7**	**21.2**	**100.4**	**102.4%**	**95.0%**	
ND - 216	ACRE 9	LIFT 3	6"	1pt.-15	98.1	18.3	**117.3**	**17.7**	**99.7**	**101.6%**	**95.0%**	
ND - 217	ACRE 11	LIFT 3	6"	1pt.-15	98.1	18.3	**113.1**	**19.4**	**94.7**	**96.6%**	**95.0%**	
ND - 218	ACRE 11	LIFT 3	6"	1pt.-15	98.1	18.3	**111.4**	**19.5**	**93.2**	**95.0%**	**95.0%**	
ND - 219	ACRE 13	LIFT 3	6"	1pt.-15	98.1	18.3	**117.2**	**21.7**	**96.3**	**98.2%**	**95.0%**	
ND - 220	ACRE 13	LIFT 3	6"	1pt.-15	98.1	18.3	**115.6**	**22.1**	**94.7**	**96.5%**	**95.0%**	
ND - 221	ACRE 7	LIFT 3	6"	1pt.-15	98.1	18.3	**118.9**	**18.6**	**100.3**	**102.2%**	**95.0%**	
ND - 222	ACRE 7	LIFT 3	6"	1pt.-15	98.1	18.3	**118.0**	**23.5**	**95.5**	**97.4%**	**95.0%**	
ND - 223	ACRE 5	LIFT 3	6"	1pt.-15	98.1	18.3	**117.0**	**24.6**	**93.9**	**95.7%**	**95.0%**	
ND - 224	ACRE 5	LIFT 3	6"	1pt.-15	98.1	18.3	**119.3**	**23.0**	**97.0**	**98.9%**	**95.0%**	
ND - 225	ACRE 3	LIFT 3	6"	1pt.-15	98.1	18.3	**117.7**	**24.9**	**94.2**	**96.1%**	**95.0%**	
ND - 226	ACRE 3	LIFT 3	6"	1pt.-15	98.1	18.3	**117.9**	**22.3**	**96.4**	**98.3%**	**95.0%**	
ND - 227	ACRE 3	LIFT 3	6"	1pt.-15	98.1	18.3	**115.5**	**23.3**	**93.7**	**95.5%**	**95.0%**	
ND - 228	ACRE 3	LIFT 3	6"	1pt.-15	98.1	18.3	**115.6**	**22.1**	**94.7**	**96.5%**	**95.0%**	
ND - 229	ACRE 5	LIFT 3	6"	1pt.-15	98.1	18.3	**115.6**	**21.7**	**95.0**	**96.8%**	**95.0%**	
ND - 230	ACRE 5	LIFT 3	6"	1pt.-15	98.1	18.3	**115.7**	**22.3**	**94.6**	**96.4%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-04**	Geotechnics Representative : Jacob R. Buda	Page : 4 of 15
Date (s) : **5.19. - 5.22.10**	Reviewed By : MAS	Date : 6-7-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 231	ACRE 7	LIFT 3	6"	1pt.-15	98.1	18.3	**116.7**	**23.9**	**94.2**	**96.0%**	**95.0%**	
ND - 232	ACRE 7	LIFT 3	6"	1pt.-15	98.1	18.3	**117.2**	**22.5**	**95.7**	**97.5%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

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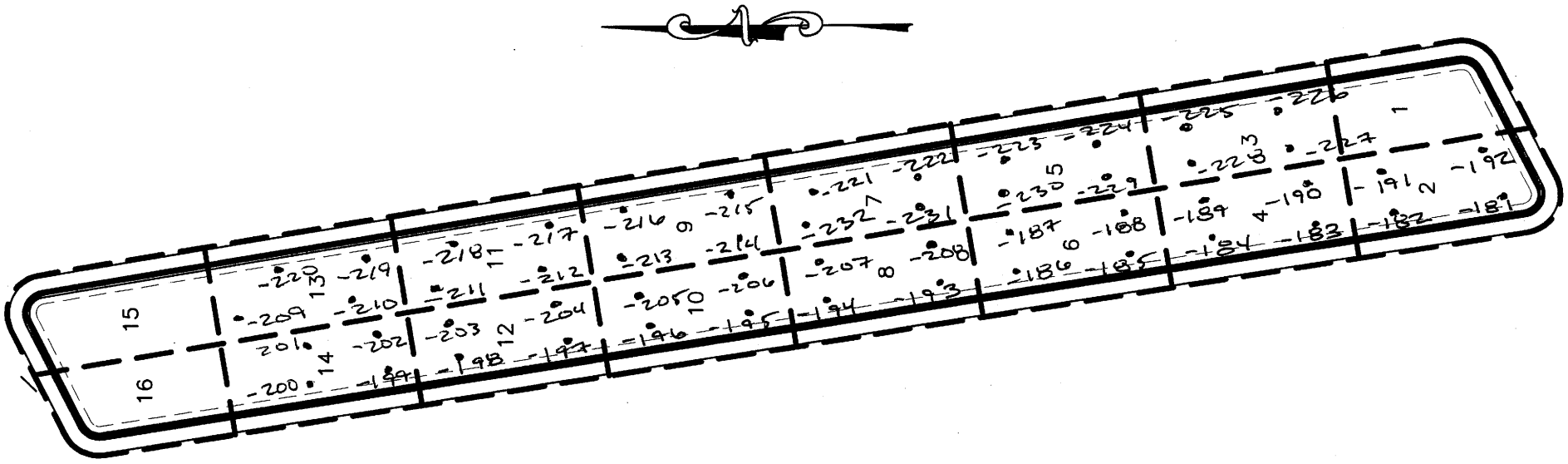
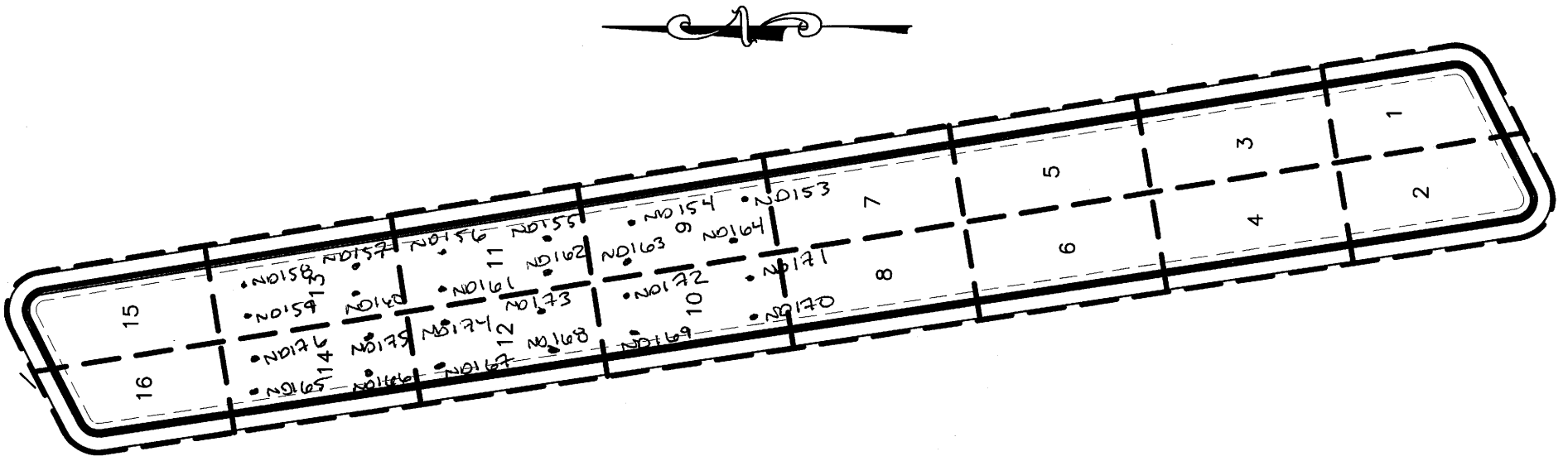


APPROX DENSITY TEST LOCATIONS

CFFDR-04



APPROX. DENSITY TEST LOCATION

CFFDR-04

Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Report Number :	**CFFDR-04**
Date (s) :	5.19. - 5.22.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Brown / Grey Silty Sand

Test Information

Test Number :	1pt.-09
Location:	South Access Rd.
Depth (ft):	~ Grade
Date :	5.19.10

Mold

Weight of Mold (lbs.)	9.5
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.17
Weight of Mold (lbs)	9.5
Weight of WS (lbs)	3.67
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	317
Wt. of Tare & WS (gm)	396.66
Wt. of Tare & DS (gm)	359.21
Wt. of Tare (gm)	84.19
Wt. of Water (gm)	37.45
Wt. of DS (gm)	275.02
Wet Density (pcf)	111.2
Moisture Content %	**13.6**
Dry Density (pcf)	**97.9**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-04**
Date (s) :	5.19. - 5.22.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Dark Gray Sandy Clay

Test Information

Test Number :	1pt.-10
Location:	Acre 2
Depth (ft):	Lift 3
Date :	5.21.10

Mold

Weight of Mold (lbs.)	9.31
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.41
Weight of Mold (lbs)	9.31
Weight of WS (lbs)	4.1
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-01
Wt. of Tare & WS (gm)	200.60
Wt. of Tare & DS (gm)	184.00
Wt. of Tare (gm)	87.10
Wt. of Water (gm)	16.60
Wt. of DS (gm)	96.90
Wet Density (pcf)	124.2
Moisture Content %	**17.1**
Dry Density (pcf)	**106.1**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-04**
Date (s) :	5.19. - 5.22.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Dark Gray Sandy Clay

Test Information

Test Number :	1pt.-11
Location:	Acre 8
Depth (ft):	Lift 3
Date :	5.21.10

Mold

Weight of Mold (lbs.)	9.31
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.4
Weight of Mold (lbs)	9.31
Weight of WS (lbs)	4.09
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	328.20
Wt. of Tare & DS (gm)	290.50
Wt. of Tare (gm)	86.50
Wt. of Water (gm)	37.70
Wt. of DS (gm)	204.00
Wet Density (pcf)	123.9
Moisture Content %	**18.5**
Dry Density (pcf)	**104.6**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-04**
Date (s) :	5.19. - 5.22.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Dark Gray Sandy Clay

Test Information

Test Number :	1pt.-12
Location:	Acre 2
Depth (ft):	Lift 3
Date :	5.21.10

Mold

Weight of Mold (lbs.)	9.31
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.41
Weight of Mold (lbs)	9.31
Weight of WS (lbs)	4.1
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	283.00
Wt. of Tare & DS (gm)	250.20
Wt. of Tare (gm)	86.40
Wt. of Water (gm)	32.80
Wt. of DS (gm)	163.80
Wet Density (pcf)	124.2
Moisture Content %	**20.0**
Dry Density (pcf)	**103.5**

Geotechnics Represenative : Jacob R. Buda

2200 Westinghouse Boulevard • Suite 103 • Raleigh, NC 27604 • Phone (919) 876-0405 • Fax (919) 876-0460

Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-04**
Date (s) :	5.19. - 5.22.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Dark Gray Sandy Clay

Test Information

Test Number :	1pt.-13
Location:	Acre 13
Depth (ft):	Lift 3
Date :	5.21.10

Mold

Weight of Mold (lbs.)	9.31
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.02
Weight of Mold (lbs)	9.31
Weight of WS (lbs)	3.71
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-04
Wt. of Tare & WS (gm)	291.60
Wt. of Tare & DS (gm)	255.10
Wt. of Tare (gm)	86.40
Wt. of Water (gm)	36.50
Wt. of DS (gm)	168.70
Wet Density (pcf)	112.4
Moisture Content %	**21.6**
Dry Density (pcf)	**92.4**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-04**
Date (s) :	5.19. - 5.22.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Dark Gray Sandy Clay

Test Information

Test Number :	1pt.-14
Location:	Acre 7
Depth (ft):	Lift 3
Date :	5.22.10

Mold

Weight of Mold (lbs.)	9.31
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.01
Weight of Mold (lbs)	9.31
Weight of WS (lbs)	3.7
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-01
Wt. of Tare & WS (gm)	291.90
Wt. of Tare & DS (gm)	262.90
Wt. of Tare (gm)	87.10
Wt. of Water (gm)	29.00
Wt. of DS (gm)	175.80
Wet Density (pcf)	112.1
Moisture Content %	**16.5**
Dry Density (pcf)	**96.2**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-04**
Date (s) :	5.19. - 5.22.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Dark Gray Sandy Clay

Test Information

Test Number :	1pt.-14
Location:	Acre 7
Depth (ft):	Lift 3
Date :	5.22.10

Mold

Weight of Mold (lbs.)	9.31
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.14
Weight of Mold (lbs)	9.31
Weight of WS (lbs)	3.83
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	JB-01
Wt. of Tare & WS (gm)	311.70
Wt. of Tare & DS (gm)	277.00
Wt. of Tare (gm)	87.10
Wt. of Water (gm)	34.70
Wt. of DS (gm)	189.90
Wet Density (pcf)	116.1
Moisture Content %	**18.3**
Dry Density (pcf)	**98.1**

Geotechnics Represenative : Jacob R. Buda

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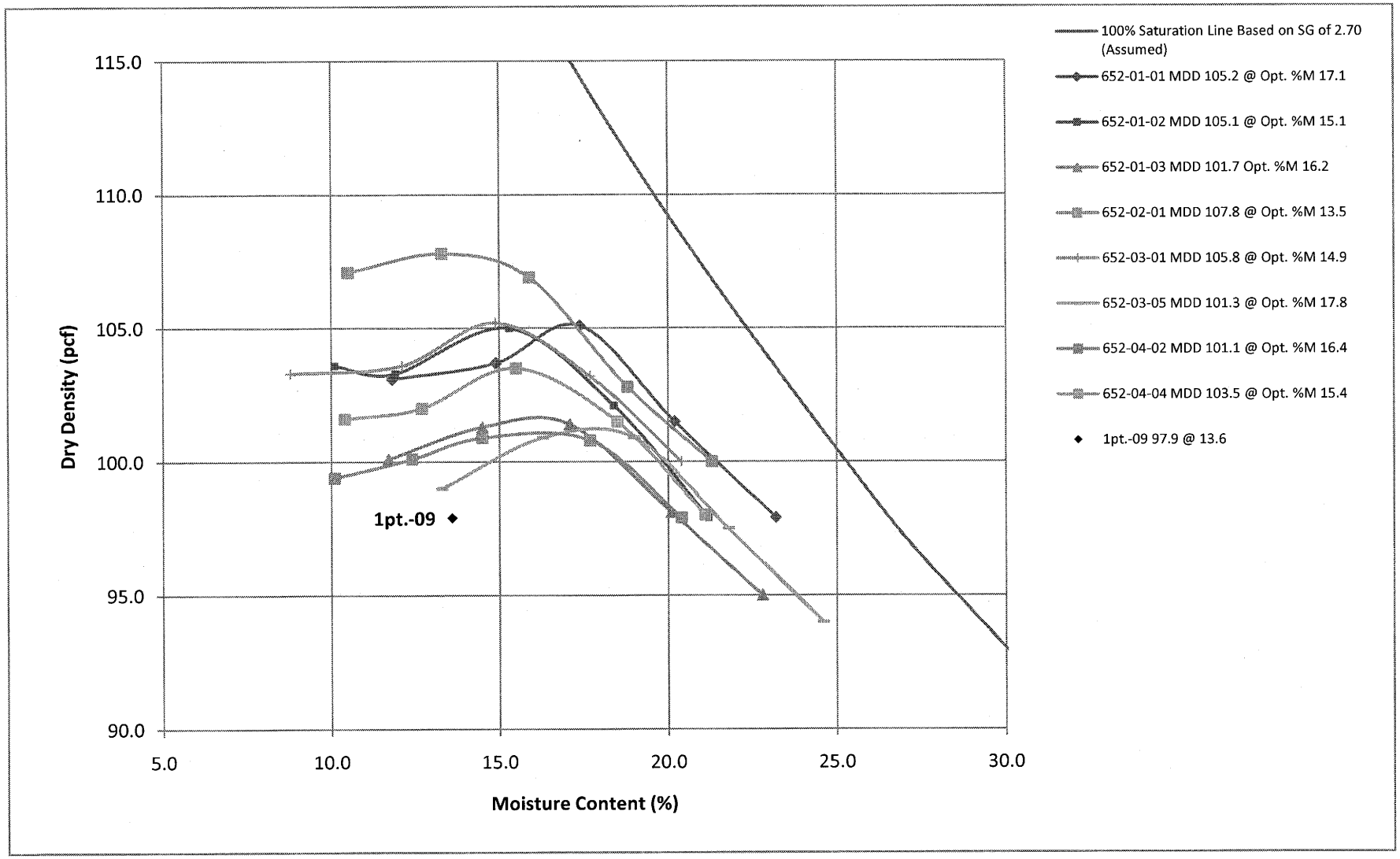
INTEGRITY IN TESTING

Onsite Common Fill Moisture / Density Relationships

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652



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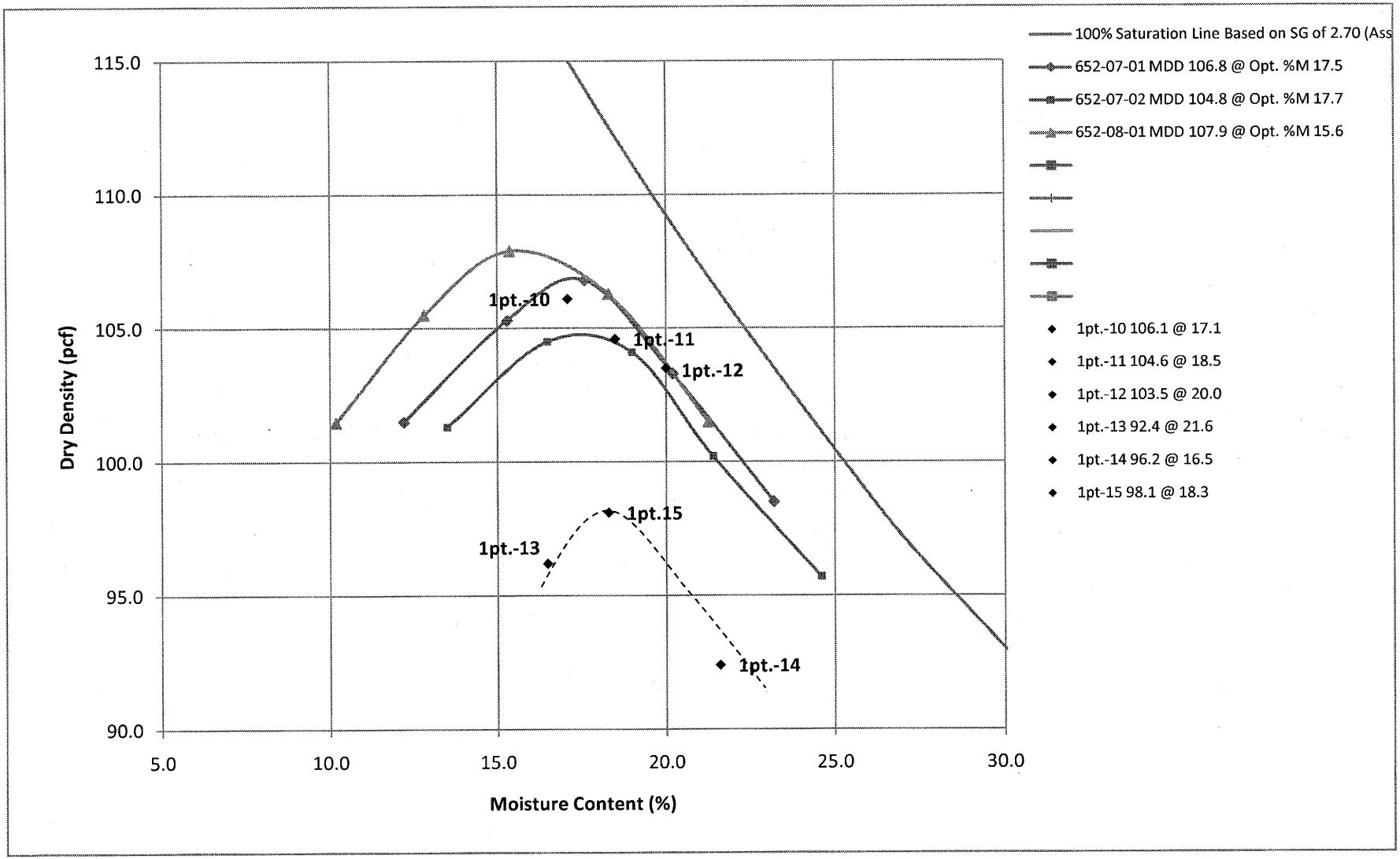
INTEGRITY IN TESTING

Onsite Upper Common Fill Moisture / Density Relationships

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652



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Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

Geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-05**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 8
Date (s) : **5.24. - 5.28.10**	Reviewed By : MPS	Date : 6-9-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 233	ACRE 1	LIFT 3	6"	1pt.-15	98.1	18.3	**117.4**	**20.9**	**97.1**	**99.0%**	**95.0%**	
ND - 234	ACRE 1	LIFT 3	6"	1pt.-15	98.1	18.3	**116.8**	**21.4**	**96.2**	**98.1%**	**95.0%**	
ND - 235	ACRE 1	LIFT 3	6"	1pt.-15	98.1	18.3	**115.2**	**19.6**	**96.3**	**98.2%**	**95.0%**	
ND - 236	ACRE 1	LIFT 3	6"	1pt.-15	98.1	18.3	**117.0**	**20.1**	**97.4**	**99.3%**	**95.0%**	
ND - 237	ACRE 2	LIFT 4	6"	652-07-02	104.8	17.7	**118.5**	**18.5**	**100.0**	**95.4%**	**95.0%**	
ND - 238	ACRE 2	LIFT 4	6"	652-07-02	104.8	17.7	**118.7**	**17.8**	**100.8**	**96.1%**	**95.0%**	
ND - 239	ACRE 4	LIFT 4	6"	652-07-02	104.8	17.7	**119.3**	**19.2**	**100.1**	**95.5%**	**95.0%**	
ND - 240	ACRE 4	LIFT 4	6"	652-07-02	104.8	17.7	**118.1**	**17.9**	**100.2**	**95.6%**	**95.0%**	
ND - 241	ACRE 6	LIFT 4	6"	652-07-02	104.8	17.7	**116.8**	**17.3**	**99.6**	**95.0%**	**95.0%**	
ND - 242	ACRE 6	LIFT 4	6"	652-07-02	104.8	17.7	**119.1**	**17.4**	**101.4**	**96.8%**	**95.0%**	
ND - 243	ACRE 8	LIFT 4	6"	652-07-02	104.8	17.7	**117.9**	**16.8**	**100.9**	**96.3%**	**95.0%**	
ND - 244	ACRE 8	LIFT 4	6"	652-07-02	104.8	17.7	**118.0**	**17.3**	**100.6**	**96.0%**	**95.0%**	
ND - 245	ACRE 8	LIFT 4	6"	652-07-02	104.8	17.7	**118.1**	**17.9**	**100.2**	**95.6%**	**95.0%**	
ND - 246	ACRE 8	LIFT 4	6"	652-07-02	104.8	17.7	**120.1**	**17.8**	**102.0**	**97.3%**	**95.0%**	
ND - 247	ACRE 6	LIFT 4	6"	652-07-02	104.8	17.7	**118.1**	**18.4**	**99.7**	**95.2%**	**95.0%**	
ND - 248	ACRE 6	LIFT 4	6"	652-07-02	104.8	17.7	**117.2**	**17.1**	**100.1**	**95.5%**	**95.0%**	
ND - 249	ACRE 4	LIFT 4	6"	652-07-02	104.8	17.7	**118.3**	**18.0**	**100.3**	**95.7%**	**95.0%**	
ND - 250	ACRE 4	LIFT 4	6"	652-07-02	104.8	17.7	**123.5**	**20.1**	**102.8**	**98.1%**	**95.0%**	
ND - 251	ACRE 2	LIFT 4	6"	652-07-02	104.8	17.7	**118.1**	**17.8**	**100.3**	**95.7%**	**95.0%**	
ND - 252	ACRE 2	LIFT 4	6"	652-07-02	104.8	17.7	**123.3**	**17.0**	**105.4**	**100.6%**	**95.0%**	
ND - 253	ACRE 10	LIFT 4	6"	652-07-02	104.8	17.7	**119.6**	**19.1**	**100.4**	**95.8%**	**95.0%**	
ND - 254	ACRE 10	LIFT 4	6"	652-07-02	104.8	17.7	**120.6**	**17.4**	**102.7**	**98.0%**	**95.0%**	
ND - 255	ACRE 12	LIFT 4	6"	652-07-02	104.8	17.7	**118.2**	**18.0**	**100.2**	**95.6%**	**95.0%**	
ND - 256	ACRE 12	LIFT 4	6"	652-07-02	104.8	17.7	**119.1**	**17.8**	**101.1**	**96.5%**	**95.0%**	
ND - 257	ACRE 14	LIFT 4	6"	652-07-02	104.8	17.7	**117.8**	**17.4**	**100.3**	**95.7%**	**95.0%**	
ND - 258	ACRE 14	LIFT 4	6"	652-07-02	104.8	17.7	**122.5**	**17.5**	**104.3**	**99.5%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-05**	Geotechnics Representative : Jacob R. Buda	Page : 2 of 8
Date (s) : **5.24. - 5.28.10**	Reviewed By : MMS	Date : 6-9-2010

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 259	ACRE 14	LIFT 4	6"	652-07-02	104.8	18.3	**117.8**	**18.2**	**99.7**	**95.1%**	**95.0%**	
ND - 260	ACRE 14	LIFT 4	6"	652-07-02	104.8	18.3	**117.7**	**16.9**	**100.7**	**96.1%**	**95.0%**	
ND - 261	ACRE 12	LIFT 4	6"	652-07-02	104.8	17.7	**117.8**	**17.9**	**99.9**	**95.3%**	**95.0%**	
ND - 262	ACRE 12	LIFT 4	6"	652-07-02	104.8	17.7	**122.6**	**20.3**	**101.9**	**97.2%**	**95.0%**	
ND - 263	ACRE 10	LIFT 4	6"	652-07-02	104.8	17.7	**117.2**	**17.5**	**99.7**	**95.2%**	**95.0%**	
ND - 264	ACRE 10	LIFT 4	6"	652-07-02	104.8	17.7	**119.6**	**18.3**	**101.1**	**96.5%**	**95.0%**	
ND - 265	ACRE 1	LIFT 4	6"	652-07-02	104.8	17.7	**122.5**	**17.2**	**104.5**	**99.7%**	**95.0%**	
ND - 266	ACRE 1	LIFT 4	6"	652-07-02	104.8	17.7	**123.1**	**17.7**	**104.6**	**99.8%**	**95.0%**	
ND - 267	ACRE 3	LIFT 4	6"	652-07-02	104.8	17.7	**120.1**	**15.7**	**103.8**	**99.0%**	**95.0%**	
ND - 268	ACRE 3	LIFT 4	6"	652-07-02	104.8	17.7	**118.9**	**17.7**	**101.0**	**96.4%**	**95.0%**	
ND - 269	ACRE 5	LIFT 4	6"	652-07-02	104.8	17.7	**120.1**	**16.1**	**103.4**	**98.7%**	**95.0%**	
ND - 270	ACRE 5	LIFT 4	6"	652-07-02	104.8	17.7	**121.7**	**18.4**	**102.8**	**98.1%**	**95.0%**	
ND - 271	ACRE 7	LIFT 4	6"	652-07-02	104.8	17.7	**119.0**	**17.7**	**101.1**	**96.5%**	**95.0%**	
ND - 272	ACRE 7	LIFT 4	6"	652-07-02	104.8	17.7	**118.2**	**16.5**	**101.5**	**96.8%**	**95.0%**	
ND - 273	ACRE 7	LIFT 4	6"	652-07-02	104.8	17.7	**117.6**	**16.4**	**101.0**	**96.4%**	**95.0%**	
ND - 274	ACRE 7	LIFT 4	6"	652-07-02	104.8	17.7	**121.3**	**16.9**	**103.8**	**99.0%**	**95.0%**	
ND - 275	ACRE 5	LIFT 4	6"	652-07-02	104.8	17.7	**119.3**	**15.6**	**103.2**	**98.5%**	**95.0%**	
ND - 276	ACRE 5	LIFT 4	6"	652-07-02	104.8	17.7	**120.0**	**16.9**	**102.7**	**98.0%**	**95.0%**	
ND - 277	ACRE 3	LIFT 4	6"	652-07-02	104.8	17.7	**117.1**	**16.5**	**100.5**	**95.9%**	**95.0%**	
ND - 278	ACRE 3	LIFT 4	6"	652-07-02	104.8	17.7	**120.4**	**19.2**	**101.0**	**96.4%**	**95.0%**	
ND - 279	ACRE 1	LIFT 4	6"	652-07-02	104.8	17.7	**124.0**	**16.6**	**106.3**	**101.5%**	**95.0%**	
ND - 280	ACRE 1	LIFT 4	6"	652-07-02	104.8	17.7	**122.6**	**20.0**	**102.2**	**97.5%**	**95.0%**	
ND - 281	ACRE 9	LIFT 4	6"	652-08-01	107.9	15.6	**122.7**	**16.2**	**105.6**	**97.9%**	**95.0%**	
ND - 282	ACRE 9	LIFT 4	6"	652-08-01	107.9	15.6	**123.5**	**16.0**	**106.5**	**98.7%**	**95.0%**	
ND - 283	ACRE 11	LIFT 4	6"	652-08-01	107.9	15.6	**121.0**	**17.1**	**103.3**	**95.8%**	**95.0%**	
ND - 284	ACRE 11	LIFT 4	6"	652-08-01	107.9	15.6	**124.7**	**16.6**	**106.9**	**99.1%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics
INTEGRITY IN TESTING

Field Density Report

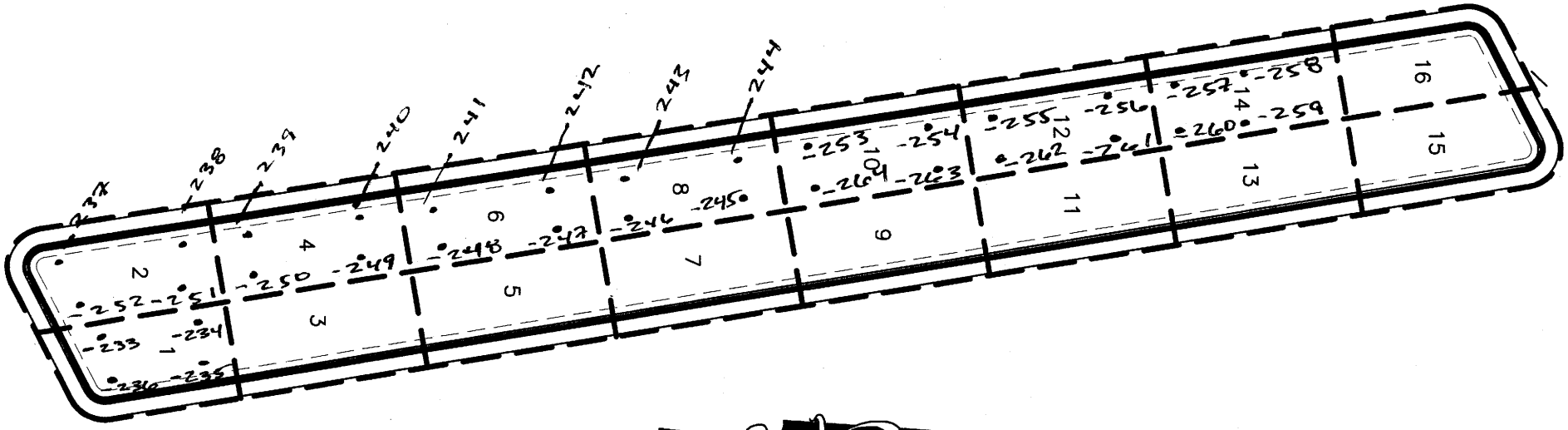
Report Number :	**CFFDR-05**	Geotechnics Representative :	Jacob R. Buda	Page :	3 of 8
Date (s) :	**5.24. - 5.28.10**	Reviewed By :	MPS	Date :	6-9-2010

Contractor :	Glover Construction	Borrow Source :	On-Site Borrow Source

Compaction Equipment :	New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 285	ACRE 13	LIFT 4	6"	652-08-01	107.9	15.6	**120.8**	**16.8**	**103.4**	**95.9%**	**95.0%**	
ND - 286	ACRE 13	LIFT 4	6"	652-08-01	107.9	15.6	**119.6**	**15.2**	**103.8**	**96.2%**	**95.0%**	
ND - 287	ACRE 11	LIFT 4	6"	652-08-01	107.9	15.6	**118.7**	**12.6**	**105.4**	**97.7%**	**95.0%**	
ND - 288	ACRE 11	LIFT 4	6"	652-08-01	107.9	15.6	**120.3**	**16.5**	**103.3**	**95.7%**	**95.0%**	
ND - 289	ACRE 9	LIFT 4	6"	652-08-01	107.9	15.6	**118.2**	**14.6**	**103.1**	**95.6%**	**95.0%**	
ND - 290	ACRE 9	LIFT 4	6"	652-08-01	107.9	15.6	**119.7**	**15.4**	**103.7**	**96.1%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-05**
Date (s) :	5.24. - 5.28.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Grey Sandy Clay

Test Information

Test Number :	1pt.-14
Location:	Acre 10
Depth (ft):	Lift 4
Date :	5.25.10

Mold

Weight of Mold (lbs.)	9.5
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.52
Weight of Mold (lbs)	9.5
Weight of WS (lbs)	4.02
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	304
Wt. of Tare & WS (gm)	327.98
Wt. of Tare & DS (gm)	295.11
Wt. of Tare (gm)	110.69
Wt. of Water (gm)	32.87
Wt. of DS (gm)	184.42
Wet Density (pcf)	121.8
Moisture Content %	**17.8**
Dry Density (pcf)	**103.4**

Geotechnics Represenative : Jacob R. Buda

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Client:	Glover Construction
Project Name :	Dare Co. C&D LF - Phase No. 4
Project Number :	2010-652

Geotechnics
INTEGRITY IN TESTING

Report Number :	**CFFDR-05**
Date (s) :	5.24. - 5.28.10

ONE POINT PROCTOR - Method for Soil Identification

Visual Descrpiton : Grey Sandy Clay

Test Information

Test Number :	1pt.-15
Location:	Acre 3
Depth (ft):	Lift 4
Date :	5.25.10

Mold

Weight of Mold (lbs.)	9.5
Volume OF Mold (ft^3)	0.033

Specimen

Weight of Mold & WS (lbs)	13.3
Weight of Mold (lbs)	9.5
Weight of WS (lbs)	3.8
Volume OF Mold (ft^3)	0.033

Moisture / Density

Tare Number	304
Wt. of Tare & WS (gm)	316.89
Wt. of Tare & DS (gm)	290.60
Wt. of Tare (gm)	110.56
Wt. of Water (gm)	26.29
Wt. of DS (gm)	180.04
Wet Density (pcf)	115.2
Moisture Content %	**14.6**
Dry Density (pcf)	**100.5**

Geotechnics Represenative : Jacob R. Buda

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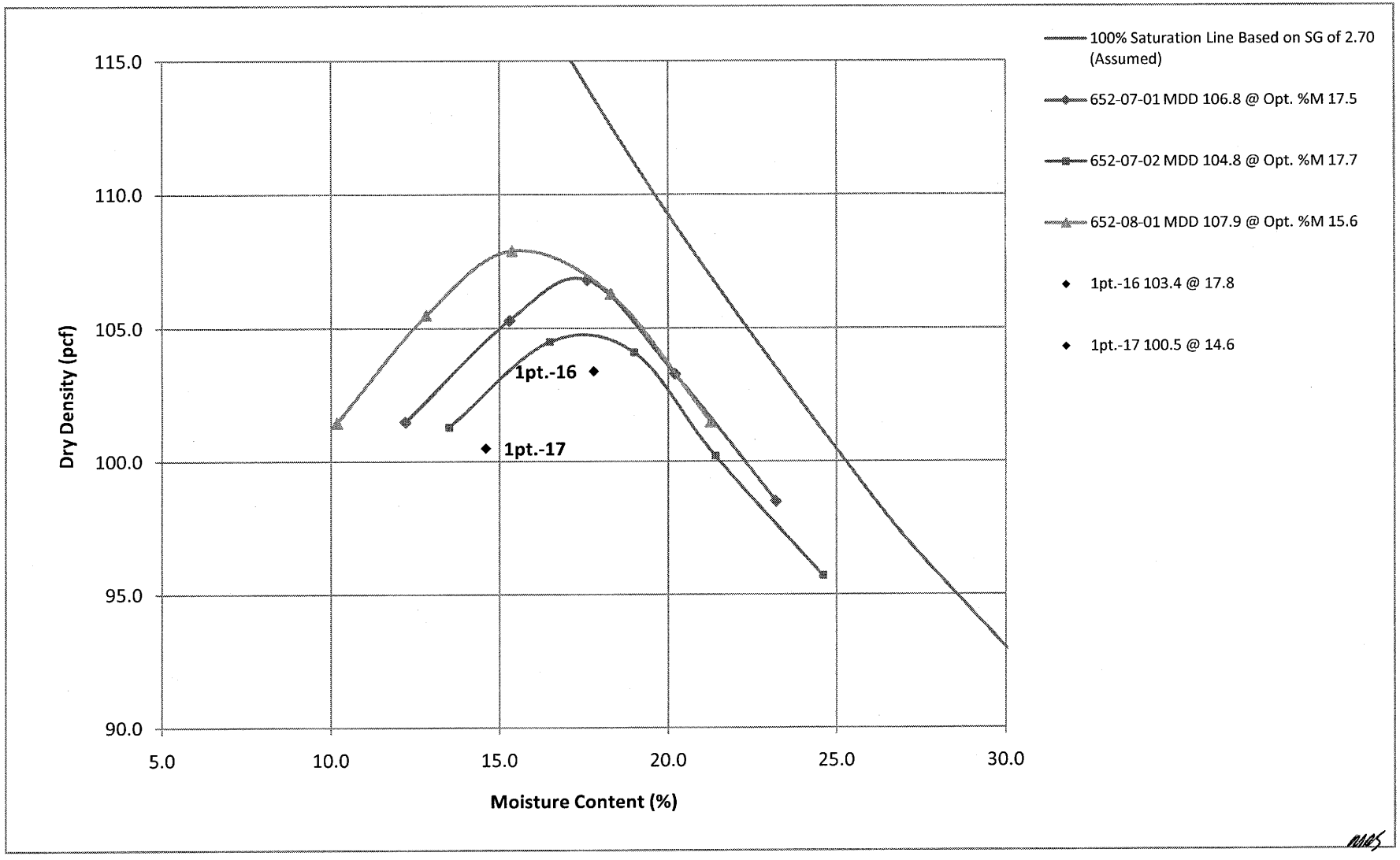
geotechnics
INTEGRITY IN TESTING

Onsite Upper Common Fill Moisture / Density Relationships

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652



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Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

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INTEGRITY IN TESTING

Field Density Report

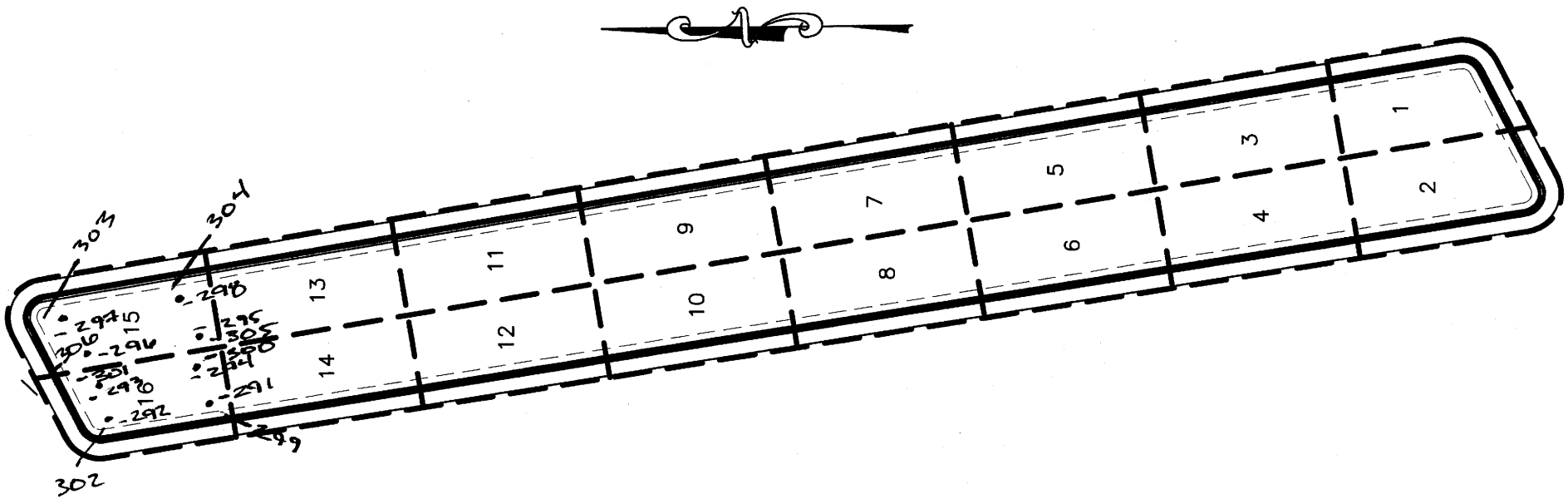
Report Number : **CFFDR-06**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 3
Date (s) : **6.1. - 6.5.10**	Reviewed By : [illegible]	Date : 6-29-10

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

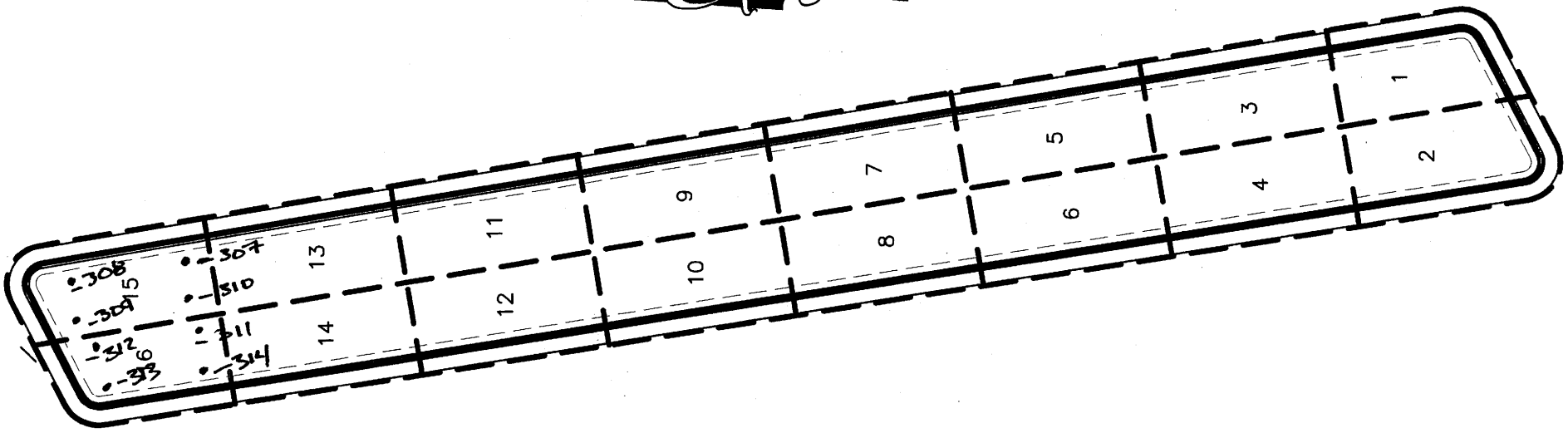
Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 291	ACRE 16	LIFT 1	6"	652-02-01	107.8	13.5	**120.9**	**13.7**	**106.3**	**98.6%**	**95.0%**	
ND - 292	ACRE 16	LIFT 1	6"	652-02-01	107.8	13.5	**119.8**	**15.6**	**103.6**	**96.1%**	**95.0%**	
ND - 293	ACRE 16	LIFT 1	6"	652-02-01	107.8	13.5	**118.8**	**11.3**	**106.7**	**99.0%**	**95.0%**	
ND - 294	ACRE 16	LIFT 1	6"	652-02-01	107.8	13.5	**116.1**	**6.7**	**108.8**	**100.9%**	**95.0%**	
ND - 295	ACRE 15	LIFT 1	6"	652-02-01	107.8	13.5	**118.0**	**8.3**	**109.0**	**101.1%**	**95.0%**	
ND - 296	ACRE 15	LIFT 1	6"	652-02-01	107.8	13.5	**119.9**	**9.7**	**109.3**	**101.4%**	**95.0%**	
ND - 297	ACRE 15	LIFT 1	6"	652-02-01	107.8	13.5	**116.8**	**10.3**	**105.9**	**98.2%**	**95.0%**	
ND - 298	ACRE 15	LIFT 1	6"	652-02-01	107.8	13.5	**114.7**	**9.6**	**104.7**	**97.1%**	**95.0%**	
ND - 299	ACRE 16	LIFT 2	6"	652-02-01	107.8	13.5	**119.7**	**10.0**	**108.8**	**100.9%**	**95.0%**	
ND - 300	ACRE 16	LIFT 2	6"	652-02-01	107.8	13.5	**117.4**	**12.4**	**104.4**	**96.9%**	**95.0%**	
ND - 301	ACRE 16	LIFT 2	6"	652-02-01	107.8	13.5	**115.0**	**10.2**	**104.4**	**96.8%**	**95.0%**	
ND - 302	ACRE 16	LIFT 2	6"	652-02-01	107.8	13.5	**112.6**	**7.5**	**104.7**	**97.2%**	**95.0%**	
ND - 303	ACRE 15	LIFT 2	6"	652-02-01	107.8	13.5	**113.8**	**7.8**	**105.6**	**97.9%**	**95.0%**	
ND - 304	ACRE 15	LIFT 2	6"	652-02-01	107.8	13.5	**113.0**	**10.3**	**102.4**	**95.0%**	**95.0%**	
ND - 305	ACRE 15	LIFT 2	6"	652-02-01	107.8	13.5	**116.6**	**11.4**	**104.7**	**97.1%**	**95.0%**	
ND - 306	ACRE 15	LIFT 2	6"	652-02-01	107.8	13.5	**114.7**	**9.8**	**104.5**	**96.9%**	**95.0%**	
ND - 307	ACRE 15	LIFT 3	6"	652-09-02	107.3	15.7	**122.8**	**15.9**	**106.0**	**98.7%**	**95.0%**	
ND - 308	ACRE 15	LIFT 3	6"	652-09-02	107.3	15.7	**121.3**	**17.5**	**103.2**	**96.2%**	**95.0%**	
ND - 309	ACRE 15	LIFT 3	6"	652-09-02	107.3	15.7	**122.2**	**17.8**	**103.7**	**96.7%**	**95.0%**	
ND - 310	ACRE 15	LIFT 3	6"	652-09-02	107.3	15.7	**120.5**	**16.6**	**103.3**	**96.3%**	**95.0%**	
ND - 311	ACRE 16	LIFT 3	6"	652-09-02	107.3	15.7	**122.1**	**17.4**	**104.0**	**96.9%**	**95.0%**	
ND - 312	ACRE 16	LIFT 3	6"	652-09-02	107.3	15.7	**121.8**	**17.6**	**103.6**	**96.5%**	**95.0%**	
ND - 313	ACRE 16	LIFT 3	6"	652-09-02	107.3	15.7	**120.3**	**17.4**	**102.5**	**95.5%**	**95.0%**	
ND - 314	ACRE 16	LIFT 3	6"	652-09-02	107.3	15.7	**119.7**	**16.7**	**102.6**	**95.6%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440



CEFDL-06 APPROX. DENSITY TEST LOC.



CFFDR-06 APPROX. DENSITY TEST LOC.

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-07**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 5
Date (s) : **6.7. - 6.12.10**	Reviewed By : MMS	Date : 6-29-10

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 315	ACRE 2	LIFT 5	6"	652-09-03	109.4	15.8	**120.7**	**11.7**	**108.1**	**98.8%**	**95.0%**	
ND - 316	ACRE 2	LIFT 5	6"	652-09-03	109.4	15.8	**121.4**	**11.8**	**108.6**	**99.3%**	**95.0%**	
ND - 317	ACRE 4	LIFT 5	6"	652-09-03	109.4	15.8	**125.8**	**14.9**	**109.5**	**100.1%**	**95.0%**	
ND - 318	ACRE 4	LIFT 5	6"	652-09-03	109.4	15.8	**124.3**	**13.7**	**109.3**	**99.9%**	**95.0%**	
ND - 319	ACRE 6	LIFT 5	6"	652-09-03	109.4	15.8	**122.9**	**14.1**	**107.7**	**98.5%**	**95.0%**	
ND - 320	ACRE 6	LIFT 5	6"	652-09-03	109.4	15.8	**120.3**	**13.5**	**106.0**	**96.9%**	**95.0%**	
ND - 321	ACRE 8	LIFT 5	6"	652-09-03	109.4	15.8	**116.2**	**10.2**	**105.4**	**96.4%**	**95.0%**	
ND - 322	ACRE 8	LIFT 5	6"	652-09-03	109.4	15.8	**121.0**	**12.0**	**108.0**	**98.8%**	**95.0%**	
ND - 323	ACRE 10	LIFT 5	6"	652-09-03	109.4	15.8	**121.9**	**12.1**	**108.7**	**99.4%**	**95.0%**	
ND - 324	ACRE 10	LIFT 5	6"	652-09-03	109.4	15.8	**122.8**	**14.7**	**107.1**	**97.9%**	**95.0%**	
ND - 325	ACRE 12	LIFT 5	6"	652-09-03	109.4	15.8	**121.8**	**14.8**	**106.1**	**97.0%**	**95.0%**	
ND - 326	ACRE 12	LIFT 5	6"	652-09-03	109.4	15.8	**121.4**	**13.0**	**107.4**	**98.2%**	**95.0%**	
ND - 327	ACRE 14	LIFT 5	6"	652-09-03	109.4	15.8	**118.3**	**11.8**	**105.8**	**96.7%**	**95.0%**	
ND - 328	ACRE 14	LIFT 5	6"	652-09-03	109.4	15.8	**122.9**	**16.0**	**105.9**	**96.8%**	**95.0%**	
ND - 329	ACRE 14	LIFT 5	6"	652-09-03	109.4	15.8	**123.4**	**12.6**	**109.6**	**100.2%**	**95.0%**	
ND - 330	ACRE 14	LIFT 5	6"	652-09-03	109.4	15.8	**121.0**	**15.2**	**105.0**	**96.0%**	**95.0%**	
ND - 331	ACRE 12	LIFT 5	6"	652-09-03	109.4	15.8	**119.6**	**14.5**	**104.5**	**95.5%**	**95.0%**	
ND - 332	ACRE 12	LIFT 5	6"	652-09-03	109.4	15.8	**123.1**	**13.5**	**108.5**	**99.1%**	**95.0%**	
ND - 333	ACRE 10	LIFT 5	6"	652-09-03	109.4	15.8	**123.9**	**14.7**	**108.0**	**98.7%**	**95.0%**	
ND - 334	ACRE 10	LIFT 5	6"	652-09-03	109.4	15.8	**124.6**	**17.5**	**106.0**	**96.9%**	**95.0%**	
ND - 335	ACRE 8	LIFT 5	6"	652-09-03	109.4	15.8	**120.7**	**14.4**	**105.5**	**96.4%**	**95.0%**	
ND - 336	ACRE 8	LIFT 5	6"	652-09-03	109.4	15.8	**123.7**	**14.7**	**107.8**	**98.6%**	**95.0%**	
ND - 337	ACRE 6	LIFT 5	6"	652-09-03	109.4	15.8	**122.3**	**12.2**	**109.0**	**99.6%**	**95.0%**	
ND - 338	ACRE 6	LIFT 5	6"	652-09-03	109.4	15.8	**117.1**	**11.1**	**105.4**	**96.3%**	**95.0%**	
ND - 339	ACRE 4	LIFT 5	6"	652-09-03	109.4	15.8	**121.6**	**12.6**	**108.0**	**98.7%**	**95.0%**	
ND - 340	ACRE 4	LIFT 5	6"	652-09-03	109.4	15.8	**118.8**	**11.8**	**106.3**	**97.1%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-07**	Geotechnics Representative : Jacob R. Buda	Page : 2 of 5
Date (s) : **6.7. - 6.12.10**	Reviewed By : MMS	Date : 6-29-10

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 341	ACRE 2	LIFT 5	6"	652-09-03	109.4	15.8	**117.1**	**11.0**	**105.5**	**96.4%**	**95.0%**	
ND - 342	ACRE 2	LIFT 5	6"	652-09-03	109.4	15.8	**115.1**	**9.8**	**104.8**	**95.8%**	**95.0%**	
ND - 343	ACRE 16	LIFT 4	6"	652-10-01	112.9	14.5	**130.3**	**14.9**	**113.4**	**100.4%**	**95.0%**	
ND - 344	ACRE 16	LIFT 4	6"	652-10-01	112.9	14.5	**124.4**	**15.5**	**107.7**	**95.4%**	**95.0%**	
ND - 345	ACRE 16	LIFT 4	6"	652-10-01	112.9	14.5	**124.4**	**15.4**	**107.8**	**95.5%**	**95.0%**	
ND - 346	ACRE 16	LIFT 4	6"	652-10-01	112.9	14.5	**127.9**	**15.1**	**111.1**	**98.4%**	**95.0%**	
ND - 347	ACRE 1	LIFT 5	6"	652-09-03	109.4	15.8	**120.1**	**15.3**	**104.2**	**95.2%**	**95.0%**	
ND - 348	ACRE 1	LIFT 5	6"	652-09-03	109.4	15.8	**121.3**	**14.5**	**105.9**	**96.8%**	**95.0%**	
ND - 349	ACRE 3	LIFT 5	6"	652-09-03	109.4	15.8	**122.0**	**15.9**	**105.3**	**96.2%**	**95.0%**	
ND - 350	ACRE 3	LIFT 5	6"	652-09-03	109.4	15.8	**117.6**	**12.2**	**104.8**	**95.8%**	**95.0%**	
ND - 351	ACRE 5	LIFT 5	6"	652-09-03	109.4	15.8	**122.1**	**14.7**	**106.5**	**97.3%**	**95.0%**	
ND - 352	ACRE 5	LIFT 5	6"	652-09-03	109.4	15.8	**121.3**	**15.5**	**105.0**	**96.0%**	**95.0%**	
ND - 353	ACRE 7	LIFT 5	6"	652-09-03	109.4	15.8	**121.3**	**15.4**	**105.1**	**96.1%**	**95.0%**	
ND - 354	ACRE 7	LIFT 5	6"	652-09-03	109.4	15.8	**121.7**	**15.4**	**105.5**	**96.4%**	**95.0%**	
ND - 355	ACRE 9	LIFT 5	6"	652-09-03	109.4	15.8	**120.4**	**14.4**	**105.2**	**96.2%**	**95.0%**	
ND - 356	ACRE 9	LIFT 5	6"	652-09-03	109.4	15.8	**120.3**	**14.8**	**104.8**	**95.8%**	**95.0%**	
ND - 357	ACRE 11	LIFT 5	6"	652-09-03	109.4	15.8	**121.1**	**12.9**	**107.3**	**98.0%**	**95.0%**	
ND - 358	ACRE 11	LIFT 5	6"	652-09-03	109.4	15.8	**119.1**	**14.0**	**104.5**	**95.5%**	**95.0%**	
ND - 359	ACRE 13	LIFT 5	6"	652-09-03	109.4	15.8	**119.8**	**14.4**	**104.7**	**95.7%**	**95.0%**	
ND - 360	ACRE 13	LIFT 5	6"	652-09-03	109.4	15.8	**123.7**	**14.8**	**107.8**	**98.5%**	**95.0%**	
ND - 361	ACRE 11	LIFT 5	6"	652-09-03	109.4	15.8	**119.3**	**13.1**	**105.5**	**96.4%**	**95.0%**	
ND - 362	ACRE 11	LIFT 5	6"	652-09-03	109.4	15.8	**122.9**	**17.2**	**104.9**	**95.9%**	**95.0%**	
ND - 363	ACRE 9	LIFT 5	6"	652-09-03	109.4	15.8	**120.7**	**15.7**	**104.3**	**95.4%**	**95.0%**	
ND - 364	ACRE 9	LIFT 5	6"	652-09-03	109.4	15.8	**120.7**	**15.9**	**104.1**	**95.2%**	**95.0%**	
ND - 365	ACRE 7	LIFT 5	6"	652-09-03	109.4	15.8	**120.6**	**15.3**	**104.6**	**95.6%**	**95.0%**	
ND - 366	ACRE 7	LIFT 5	6"	652-09-03	109.4	15.8	**122.2**	**15.8**	**105.5**	**96.5%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics INTEGRITY IN TESTING

Field Density Report

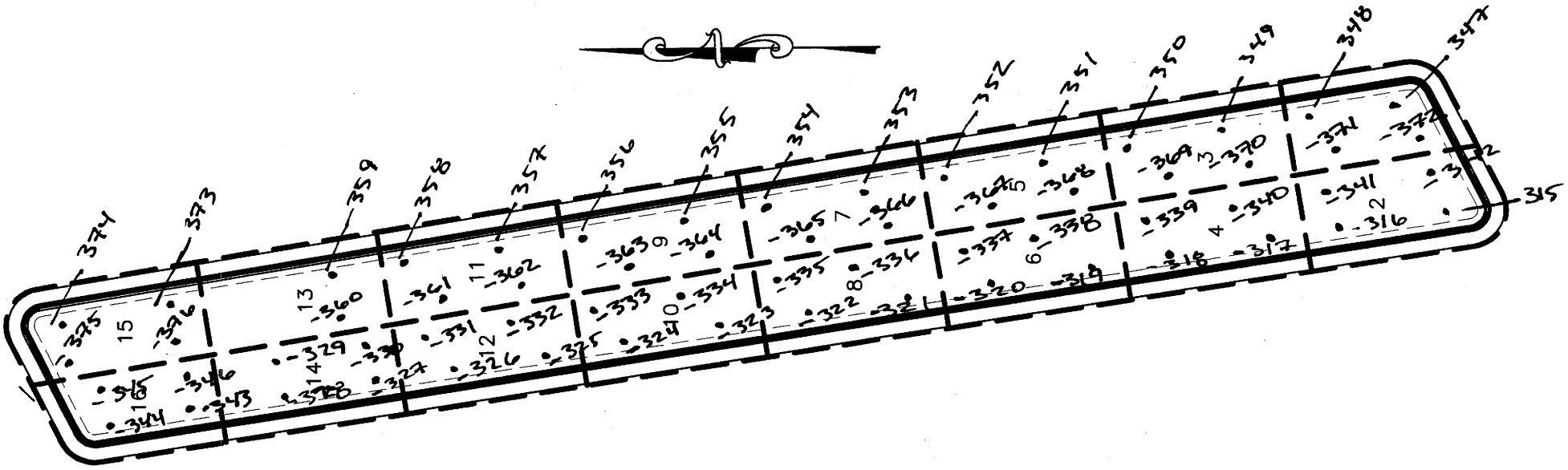
Report Number : **CFFDR-07**	Geotechnics Representative : Jacob R. Buda	Page : 3 of 5
Date (s) : **6.7. - 6.12.10**	Reviewed By : MRS	Date : 6-24-10

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

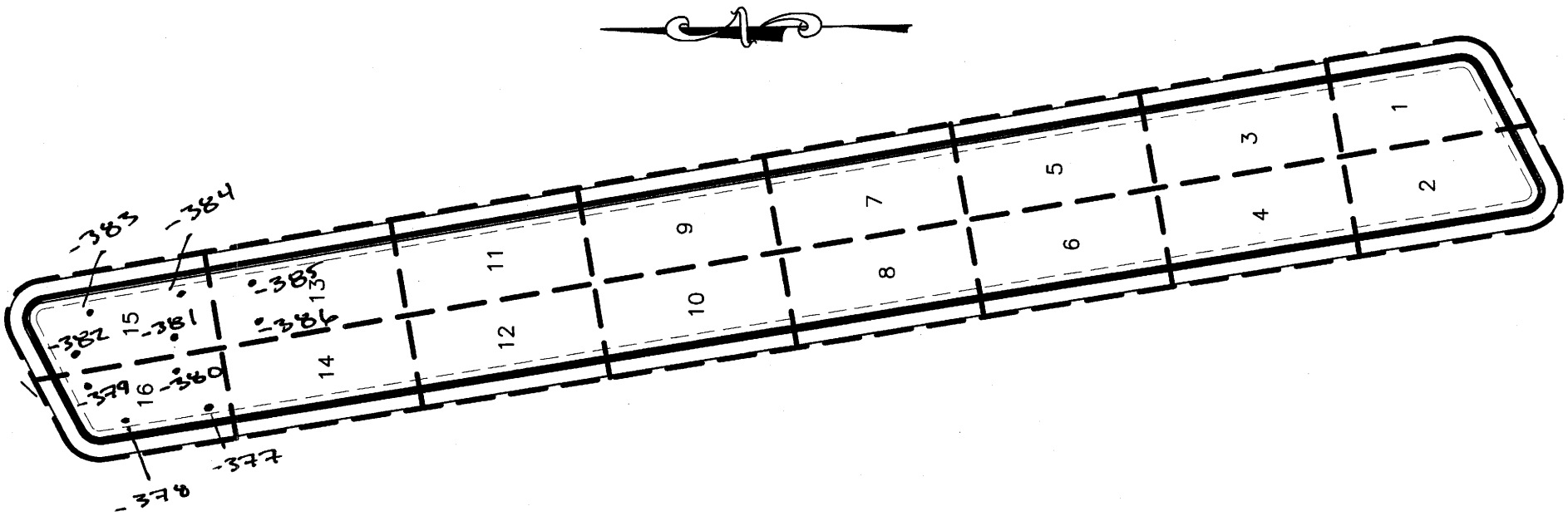
Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 367	ACRE 5	LIFT 5	6"	652-09-03	109.4	15.8	**121.2**	**16.5**	**104.0**	**95.1%**	**95.0%**	
ND - 368	ACRE 5	LIFT 5	6"	652-09-03	109.4	15.8	**120.9**	**14.4**	**105.7**	**96.6%**	**95.0%**	
ND - 369	ACRE 3	LIFT 5	6"	652-09-03	109.4	15.8	**119.5**	**14.8**	**104.1**	**95.1%**	**95.0%**	
ND - 370	ACRE 3	LIFT 5	6"	652-09-03	109.4	15.8	**120.4**	**15.0**	**104.7**	**95.7%**	**95.0%**	
ND - 371	ACRE 1	LIFT 5	6"	652-09-03	109.4	15.8	**121.0**	**14.7**	**105.5**	**96.4%**	**95.0%**	
ND - 372	ACRE 1	LIFT 5	6"	652-09-03	109.4	15.8	**121.9**	**16.8**	**104.4**	**95.4%**	**95.0%**	
ND - 373	ACRE 15	LIFT 4	6"	652-09-03	109.4	15.8	**122.7**	**13.8**	**107.8**	**98.6%**	**95.0%**	
ND - 374	ACRE 15	LIFT 4	6"	652-09-03	109.4	15.8	**120.9**	**16.1**	**104.1**	**95.2%**	**95.0%**	
ND - 375	ACRE 15	LIFT 4	6"	652-09-03	109.4	15.8	**119.7**	**14.2**	**104.8**	**95.8%**	**95.0%**	
ND - 376	ACRE 15	LIFT 4	6"	652-09-03	109.4	15.8	**121.6**	**15.8**	**105.0**	**96.0%**	**95.0%**	
ND - 377	ACRE 16	LIFT 5	6"	652-10-03	104.8	18.5	**119.1**	**19.1**	**100.0**	**95.4%**	**95.0%**	
ND - 378	ACRE 16	LIFT 5	6"	652-10-03	104.8	18.5	**117.3**	**17.6**	**99.7**	**95.2%**	**95.0%**	
ND - 379	ACRE 16	LIFT 5	6"	652-10-03	104.8	18.5	**119.9**	**18.6**	**101.1**	**96.5%**	**95.0%**	
ND - 380	ACRE 16	LIFT 5	6"	652-10-03	104.8	18.5	**117.0**	**17.4**	**99.7**	**95.1%**	**95.0%**	
ND - 381	ACRE 15	LIFT 5	6"	652-10-03	104.8	18.5	**119.5**	**19.9**	**99.7**	**95.1%**	**95.0%**	
ND - 382	ACRE 15	LIFT 5	6"	652-10-03	104.8	18.5	**120.2**	**19.9**	**100.3**	**95.7%**	**95.0%**	
ND - 383	ACRE 15	LIFT 5	6"	652-10-03	104.8	18.5	**119.4**	**18.9**	**100.4**	**95.8%**	**95.0%**	
ND - 384	ACRE 15	LIFT 5	6"	652-10-03	104.8	18.5	**118.8**	**18.9**	**99.9**	**95.3%**	**95.0%**	
ND - 385	ACRE 13	LIFT 5	6"	652-10-03	104.8	18.5	**121.2**	**18.7**	**102.1**	**97.4%**	**95.0%**	
ND - 386	ACRE 13	LIFT 5	6"	652-10-03	104.8	18.5	**118.8**	**18.9**	**99.9**	**95.3%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440



CFFDR-07 APPROX. DENSITY TEST LOCATIONS



CFFDR-07 APPROX. DENSITY TEST LOCATIONS

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number : **CFFDR-08**	Geotechnics Representative : Jacob R. Buda	Page : 1 of 5
Date (s) : **6.14. - 6.15.10**	Reviewed By : MAS	Date : 6-29-10

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 387	ACRE 2	LIFT 6	6"	652-09-03	112.9	14.5	**125.8**	**14.6**	**109.8**	**97.2%**	**95.0%**	
ND - 388	ACRE 2	LIFT 6	6"	652-09-03	109.4	15.8	**116.2**	**9.3**	**106.3**	**97.2%**	**95.0%**	
ND - 389	ACRE 4	LIFT 6	6"	652-09-03	109.4	15.8	**115.7**	**9.5**	**105.7**	**96.6%**	**95.0%**	
ND - 390	ACRE 4	LIFT 6	6"	652-09-03	109.4	15.8	**119.0**	**12.1**	**106.2**	**97.0%**	**95.0%**	
ND - 391	ACRE 6	LIFT 6	6"	652-09-03	109.4	15.8	**118.8**	**11.0**	**107.0**	**97.8%**	**95.0%**	
ND - 392	ACRE 6	LIFT 6	6"	652-09-03	109.4	15.8	**123.4**	**12.3**	**109.9**	**100.4%**	**95.0%**	
ND - 393	ACRE 6	LIFT 6	6"	652-09-03	109.4	15.8	**120.7**	**11.9**	**107.9**	**98.6%**	**95.0%**	
ND - 394	ACRE 6	LIFT 6	6"	652-09-03	109.4	15.8	**116.1**	**10.6**	**105.0**	**96.0%**	**95.0%**	
ND - 395	ACRE 4	LIFT 6	6"	652-09-03	109.4	15.8	**122.7**	**16.1**	**105.7**	**96.6%**	**95.0%**	
ND - 396	ACRE 4	LIFT 6	6"	652-09-03	109.4	15.8	**125.1**	**16.1**	**107.8**	**98.5%**	**95.0%**	
ND - 397	ACRE 2	LIFT 6	6"	652-09-03	109.4	15.8	**124.0**	**17.8**	**105.3**	**96.2%**	**95.0%**	
ND - 398	ACRE 2	LIFT 6	6"	652-09-03	109.4	15.8	**123.7**	**14.7**	**107.8**	**98.6%**	**95.0%**	
ND - 399	ACRE 1	LIFT 6	6"	652-11-02	104.3	19.0	**124.6**	**19.7**	**104.1**	**99.8%**	**95.0%**	
ND - 400	ACRE 1	LIFT 6	6"	652-11-02	104.3	19.0	**119.6**	**15.6**	**103.5**	**99.2%**	**95.0%**	
ND - 401	ACRE 3	LIFT 6	6"	652-11-02	104.3	19.0	**125.6**	**18.1**	**106.4**	**102.0%**	**95.0%**	
ND - 402	ACRE 3	LIFT 6	6"	652-11-02	104.3	19.0	**119.1**	**16.8**	**102.0**	**97.8%**	**95.0%**	
ND - 403	ACRE 5	LIFT 6	6"	652-11-02	104.3	19.0	**121.5**	**17.3**	**103.6**	**99.3%**	**95.0%**	
ND - 404	ACRE 5	LIFT 6	6"	652-11-02	104.3	19.0	**119.6**	**13.8**	**105.1**	**100.8%**	**95.0%**	
ND - 405	ACRE 5	LIFT 6	6"	652-11-02	104.3	19.0	**119.2**	**18.5**	**100.6**	**96.4%**	**95.0%**	
ND - 406	ACRE 5	LIFT 6	6"	652-11-02	104.3	19.0	**118.5**	**14.3**	**103.7**	**99.4%**	**95.0%**	
ND - 407	ACRE 3	LIFT 6	6"	652-11-02	104.3	19.0	**117.9**	**18.3**	**99.7**	**95.6%**	**95.0%**	
ND - 408	ACRE 3	LIFT 6	6"	652-11-02	104.3	19.0	**121.3**	**19.2**	**101.8**	**97.6%**	**95.0%**	
ND - 409	ACRE 1	LIFT 6	6"	652-11-02	104.3	19.0	**122.1**	**17.3**	**104.1**	**99.8%**	**95.0%**	
ND - 410	ACRE 1	LIFT 6	6"	652-11-02	104.3	19.0	**122.2**	**17.6**	**103.9**	**99.6%**	**95.0%**	
ND - 411	ACRE 7	LIFT 6	6"	652-11-02	104.3	19.0	**122.9**	**18.3**	**103.9**	**99.6%**	**95.0%**	
ND - 412	ACRE 7	LIFT 6	6"	652-11-02	104.3	19.0	**120.7**	**18.8**	**101.6**	**97.4%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

Geotechnics
INTEGRITY IN TESTING

Field Density Report

Report Number :	**CFFDR-08**	Geotechnics Representative :	Jacob R. Buda	Page :	2 of 5
Date (s) :	**6.14. - 6.15.10**	Reviewed By :	MMS	Date :	6-29-10

Contractor :	Glover Construction	Borrow Source :	On-Site Borrow Source

Compaction Equipment :	New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 413	ACRE 9	LIFT 6	6"	652-11-02	104.3	19.0	**122.5**	**18.7**	**103.2**	**98.9%**	**95.0%**	
ND - 414	ACRE 9	LIFT 6	6"	652-11-02	104.3	19.0	**121.6**	**18.7**	**102.4**	**98.2%**	**95.0%**	
ND - 415	ACRE 9	LIFT 6	6"	652-11-02	104.3	19.0	**119.0**	**13.8**	**104.6**	**100.3%**	**95.0%**	
ND - 416	ACRE 9	LIFT 6	6"	652-11-02	104.3	19.0	**121.8**	**19.5**	**101.9**	**97.7%**	**95.0%**	
ND - 417	ACRE 7	LIFT 6	6"	652-11-02	104.3	19.0	**121.6**	**15.4**	**105.4**	**101.0%**	**95.0%**	
ND - 418	ACRE 7	LIFT 6	6"	652-11-02	104.3	19.0	**124.3**	**19.7**	**103.8**	**99.6%**	**95.0%**	
ND - 419	ACRE 8	LIFT 6	6"	652-11-02	104.3	19.0	**118.4**	**17.9**	**100.4**	**96.3%**	**95.0%**	
ND - 420	ACRE 8	LIFT 6	6"	652-11-02	104.3	19.0	**119.6**	**19.3**	**100.3**	**96.1%**	**95.0%**	
ND - 421	ACRE 10	LIFT 6	6"	652-11-02	104.3	19.0	**122.4**	**18.3**	**103.5**	**99.2%**	**95.0%**	
ND - 422	ACRE 10	LIFT 6	6"	652-11-02	104.3	19.0	**119.4**	**18.2**	**101.0**	**96.9%**	**95.0%**	
ND - 423	ACRE 10	LIFT 6	6"	652-11-02	104.3	19.0	**120.3**	**17.1**	**102.7**	**98.5%**	**95.0%**	
ND - 424	ACRE 10	LIFT 6	6"	652-10-01	112.9	14.5	**125.7**	**13.2**	**111.0**	**98.4%**	**95.0%**	
ND - 425	ACRE 8	LIFT 6	6"	652-10-01	112.9	14.5	**126.3**	**14.2**	**110.6**	**98.0%**	**95.0%**	
ND - 426	ACRE 8	LIFT 6	6"	652-10-01	112.9	14.5	**127.2**	**14.6**	**111.0**	**98.3%**	**95.0%**	
ND - 427	ACRE 11	LIFT 6	6"	652-11-02	104.3	19.0	**124.1**	**16.3**	**106.7**	**102.3%**	**95.0%**	
ND - 428	ACRE 11	LIFT 6	6"	652-11-02	104.3	19.0	**123.5**	**20.0**	**102.9**	**98.7%**	**95.0%**	
ND - 429	ACRE 13	LIFT 6	6"	652-11-02	104.3	19.0	**117.1**	**17.0**	**100.1**	**96.0%**	**95.0%**	
ND - 430	ACRE 13	LIFT 6	6"	652-11-02	104.3	19.0	**121.5**	**17.6**	**103.3**	**99.1%**	**95.0%**	
ND - 431	ACRE 15	LIFT 6	6"	652-11-02	104.3	19.0	**120.2**	**17.7**	**102.1**	**97.9%**	**95.0%**	
ND - 432	ACRE 15	LIFT 6	6"	652-11-02	104.3	19.0	**120.6**	**19.6**	**100.8**	**96.7%**	**95.0%**	
ND - 433	ACRE 15	LIFT 6	6"	652-11-02	104.3	19.0	**121.7**	**20.4**	**101.1**	**96.9%**	**95.0%**	
ND - 434	ACRE 15	LIFT 6	6"	652-11-02	104.3	19.0	**121.5**	**20.2**	**101.1**	**96.9%**	**95.0%**	
ND - 435	ACRE 13	LIFT 6	6"	652-11-02	104.3	19.0	**122.5**	**18.7**	**103.2**	**98.9%**	**95.0%**	
ND - 436	ACRE 13	LIFT 6	6"	652-11-02	104.3	19.0	**118.9**	**15.8**	**102.7**	**98.4%**	**95.0%**	
ND - 437	ACRE 11	LIFT 6	6"	652-11-02	104.3	19.0	**121.3**	**18.0**	**102.8**	**98.6%**	**95.0%**	
ND - 438	ACRE 11	LIFT 6	6"	652-11-02	104.3	19.0	**123.6**	**15.9**	**106.6**	**102.2%**	**95.0%**	

Gauge Number	Gauge Model
33577	3440

Client: Glover Construction
Project Name : Dare Co. C&D LF - Phase 4
Project Number : 2010-652

geotechnics
INTEGRITY IN TESTING

Field Density Report

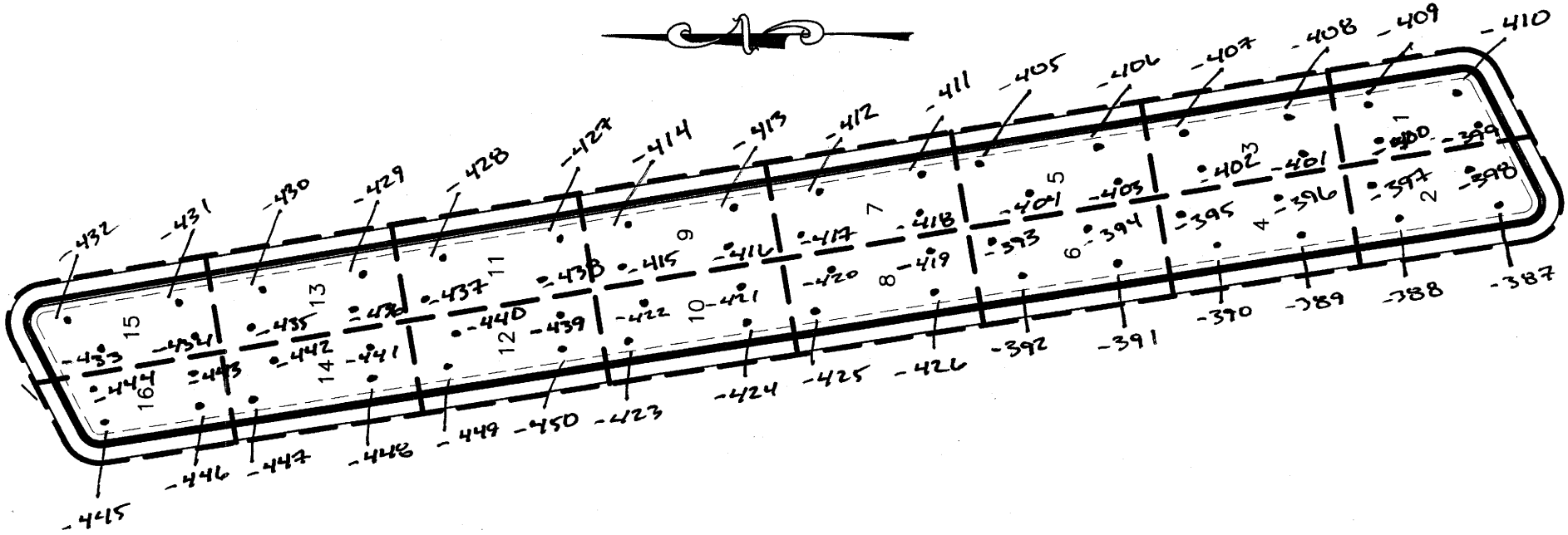
Report Number : **CFFDR-08**	Geotechnics Representative : Jacob R. Buda	Page : 3 of 5
Date (s) : **6.14. - 6.15.10**	Reviewed By : MAPS	Date : 6-29-10

Contractor : Glover Construction	Borrow Source : On-Site Borrow Source

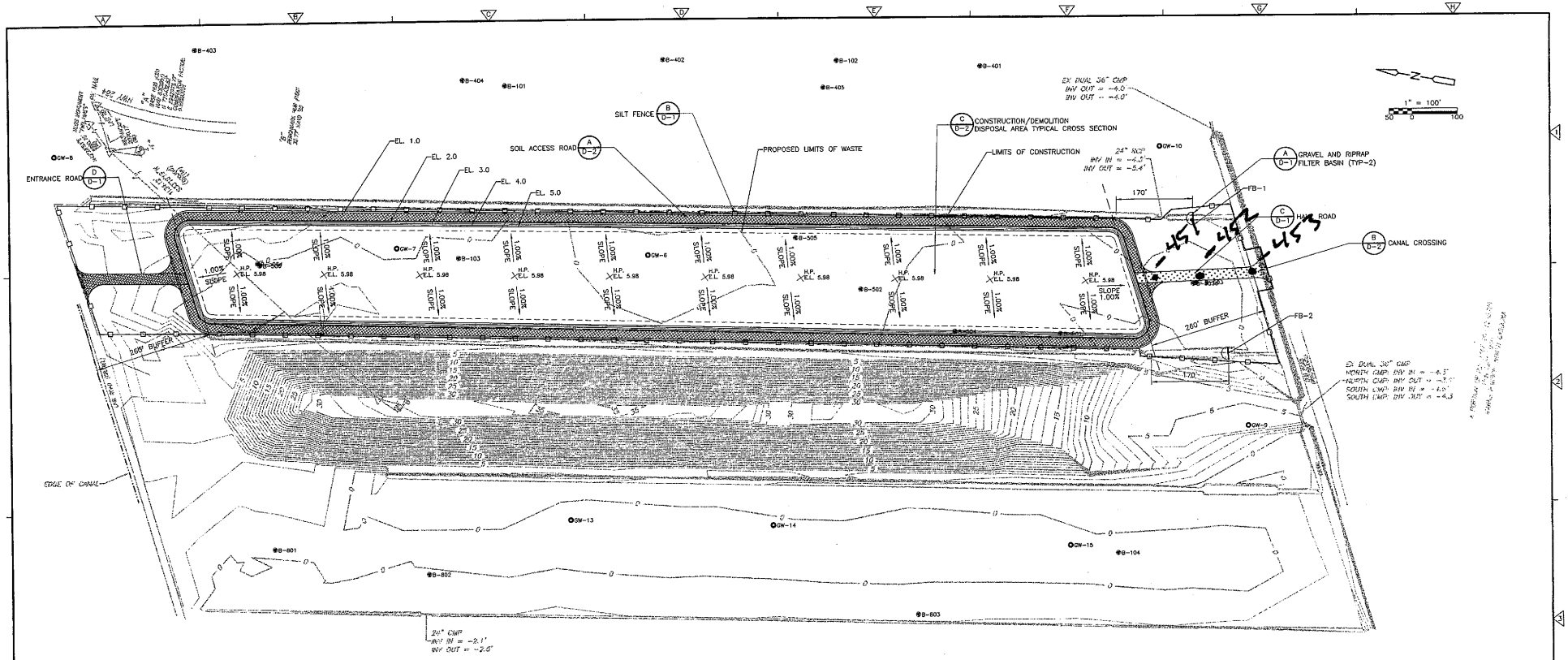
Compaction Equipment : New Holland TJ450 Farm Tractor w/ Smoothdrum Roller and CAT 683E Vibratory Smoothdrum Roller

Test Number	Test Location	Elevation/ Lift	Rod Depth	Proctor I.D. No.	Proctor Data		Measured In Place			Compaction		Comments
					MDD pcf	Opt. %M	WD (pcf)	% M	DD (pcf)	% C	% Req.	
ND - 439	ACRE 12	LIFT 6	6"	652-11-02	104.3	19.0	**118.6**	**17.1**	**101.3**	**97.1%**	**95.0%**	
ND - 440	ACRE 12	LIFT 6	6"	652-11-02	104.3	19.0	**116.6**	**10.4**	**105.6**	**101.3%**	**95.0%**	
ND - 441	ACRE 14	LIFT 6	6"	652-11-02	104.3	19.0	**119.4**	**13.6**	**105.1**	**100.8%**	**95.0%**	
ND - 442	ACRE 14	LIFT 6	6"	652-11-02	104.3	19.0	**112.3**	**12.0**	**100.3**	**96.1%**	**95.0%**	
ND - 443	ACRE 16	LIFT 6	6"	652-11-02	104.3	19.0	**118.5**	**15.8**	**102.3**	**98.1%**	**95.0%**	
ND - 444	ACRE 16	LIFT 6	6"	652-11-02	104.3	19.0	**112.1**	**11.7**	**100.4**	**96.2%**	**95.0%**	
ND - 445	ACRE 16	LIFT 6	6"	652-11-02	104.3	19.0	**120.4**	**16.4**	**103.4**	**99.2%**	**95.0%**	
ND - 446	ACRE 16	LIFT 6	6"	652-11-02	104.3	19.0	**118.1**	**17.3**	**100.7**	**96.5%**	**95.0%**	
ND - 447	ACRE 14	LIFT 6	6"	652-11-02	104.3	19.0	**122.8**	**18.6**	**103.5**	**99.3%**	**95.0%**	
ND - 448	ACRE 14	LIFT 6	6"	652-11-02	104.3	19.0	**117.1**	**15.0**	**101.8**	**97.6%**	**95.0%**	
ND - 449	ACRE 12	LIFT 6	6"	652-11-02	104.3	19.0	**118.3**	**13.1**	**104.6**	**100.3%**	**95.0%**	
ND - 450	ACRE 12	LIFT 6	6"	652-11-02	104.3	19.0	**121.9**	**14.5**	**106.5**	**102.1%**	**95.0%**	
ND - 451	S. ACCESS RD.	~ GRADE	6"	652-08-04	138.3	6.9	**139.1**	**3.3**	**134.7**	**97.4%**	**95.0%**	ABC BASE COURSE
ND - 452	S. ACCESS RD.	~ GRADE	6"	652-08-04	138.3	6.9	**137.2**	**1.2**	**135.6**	**98.0%**	**95.0%**	ABC BASE COURSE
ND - 453	S. ACCESS RD.	~ GRADE	6"	652-08-04	138.3	6.9	**136.8**	**1.5**	**134.8**	**97.5%**	**95.0%**	ABC BASE COURSE

Gauge Number	Gauge Model
33577	3440



CFFDR-08 APPROX. DENSITY TEST LOCATIONS



LEGEND

- EXISTING MONITORING WELL
- EXISTING PIEZOMETER
- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- HIGH POINT
- FILTER BASIN
- SILT FENCE
- HAUL ROAD
- PROPOSED SOIL ACCESS ROAD
- ENTRANCE ROAD
- LIMITS OF CONSTRUCTION

GENERAL CONSTRUCTION NOTES:

1. CONTRACTOR SHALL LOCATE AND/OR RELOCATE ALL EXISTING UTILITIES, DRAINAGE STRUCTURES, MONITORING WELLS, ETC. IN COORDINATION WITH THE APPROPRIATE UTILITIES, AGENCY, OR COMPANY WITHIN 72 HOURS PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING, PROTECTING, MAINTAINING, AND RESTORING ALL SITE UTILITIES AND BUILDING SERVICES.
2. NO HAUL ROUTE SHALL BE USED FOR MATERIAL TRANSPORT UNTIL NO THE ROUTE HAS BEEN COORDINATED WITH THE OWNER.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT NO ADDITIONAL COST TO THE OWNER, ANY EXISTING MONITORING WELLS, DRAINAGE STRUCTURES, ETC. DAMAGED DURING CONSTRUCTION.
4. CONTRACTOR'S TRAILER SHALL BE LOCATED WITHIN STAGING AREAS AS DESIGNATED BY THE OWNER ON THIS SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY UTILITY CONNECTIONS, A POTABLE WATER SUPPLY, AND TEMPORARY SANITARY SERVICE FOR TRAILER.
5. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, OR PRESERVATION AREAS AND OTHER FEATURES AFFECTING HIS WORK.
6. THE CONTRACTOR SHALL REPLACE ALL PAVING (ASPHALT, STONE, OR CONCRETE), STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, MAILBOXES, DRAINAGE CULVERTS, FENCES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED OR DAMAGED DURING CONSTRUCTION.
7. STORM DRAINAGE PIPE LENGTHS SHOWN ARE APPROXIMATE AND MAY BE ADJUSTED AS REQUIRED IN THE FIELD, UPON APPROVAL BY ENGINEER.
8. EXISTING DRAINAGE DITCHES SHALL HAVE SEDIMENT AND DEBRIS REMOVED AND SHALL BE REPAIRED AND ALL NEW EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO ANY CLEARING AND GRUBBING. THEY SHALL BE INSTALLED TO THE LIMITS OF CONSTRUCTION SHOWN ON THE DRAWINGS, REQUIRED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
9. THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS SHALL BE STRICTLY OBSERVED BY THE CONTRACTOR. ALL INGRESS AND EGRESS AND TRAFFIC PATTERNS ON THE SITE SHALL BE WITHIN THE LIMITS OF DISTURBANCE.
10. CONTRACTOR SHALL VERIFY THE EXISTANCE AND ACCURACY OF BENCHMARK AND CONTROL DATA PRIOR TO INITIATING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCES ARE FOUND.
11. CONTRACTOR SHALL STAKE OUT LIMITS OF WORK (INCLUDING CUT/FILL SLOPES) PRIOR TO INITIATING EXCAVATION AND BACKFILL ACTIVITIES. SURVEY DATA SHALL BE SUBMITTED TO ENGINEER FOR REVIEW. CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS PER SPECIFICATIONS EXCEPT FOR ROAD SURFACES AND AREA WITHIN PROPOSED EDGE OF WASTE.
12. CONTROL POINTS PROVIDED ARE BASED ON A LOCAL COORDINATE SYSTEM. COORDINATE WITH QUIBLE & ASSOC., PC (PHONE NO. 252-261-3300) PRIOR TO LAYING OUT WORK.

SURVEY NOTES:

1. TOPOGRAPHIC SURVEY DATE 04/12-05/11-09 BY MCKIM AND CREED, PA.
2. REFERENCE DB 530, PG 733 & PL C, SL 328.
3. DRAWING VERTICAL DATUM BASED ON GPS RAPID STATIC SESSIONS, OPUS REPORT NUMBERS 000023442, 000023441, 000023439 & 000031628 DATUM NAVD '88, FEET.
4. HORIZONTAL DATUM NAD 83(2007) AND VERTICAL DATUM VERIFICATION BASED UPON RAPID STATIC GPS SESSIONS 000381637, 000381747, 000180456, 000177169, 000147860, 000242228 AND 000237065.
5. CONDITIONS WITHIN SURVEY AREA MAY HAVE CHANGE SINCE DATE OF SURVEY.

NORTH CAROLINA PROFESSIONAL SEAL 028426 ENGINEER W. MICHAEL BRINCHEK

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: P. STOUT
DRAWN BY: P. STOUT
SHEET CHK'D BY: K. YANG
CROSS CHK'D BY: M. BRINCHEK
APPROVED BY: [illegible]
DATE: DECEMBER 2009

CDM
Camp Dresser & McKee
5400 Glenwood Avenue, Suite 300
Raleigh, NC 27612
Tel: (919) 787-3620 Fax: (919) 781-5730
North Carolina Firm Licensure: F-0412
consulting • engineering • construction • operations

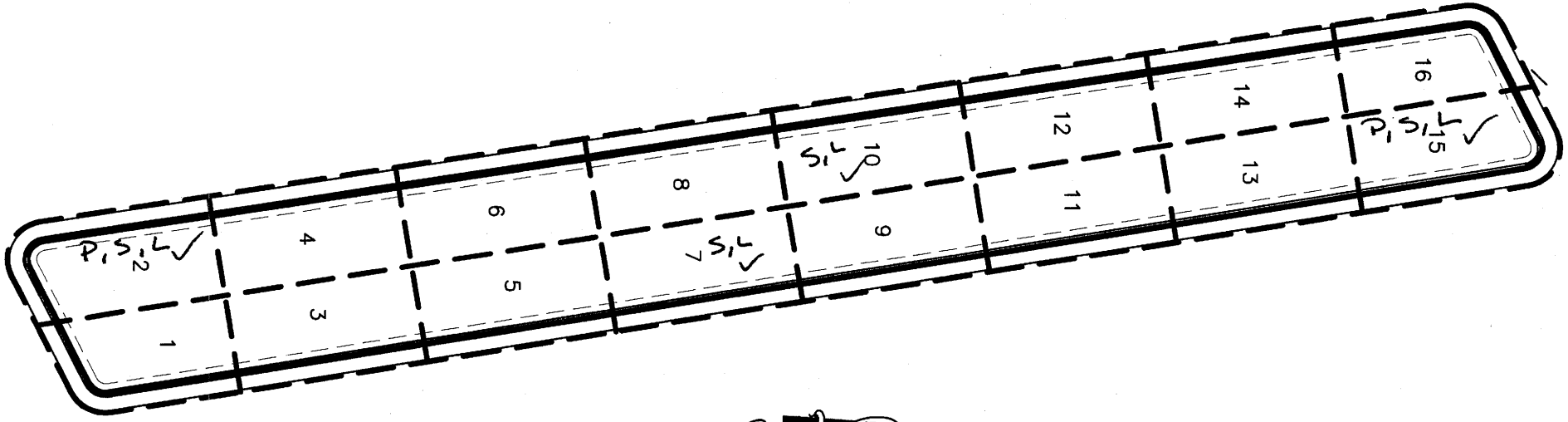
DARE COUNTY
NORTH CAROLINA
CONSTRUCTION & DEMOLITION DEBRIS LANDFILL
PHASE IV CONSTRUCTION DRAWINGS

GRADING PLAN

PROJECT NO. 17952 56960
FILE NAME: C003LFPL.DWG
SHEET NO.
C-3

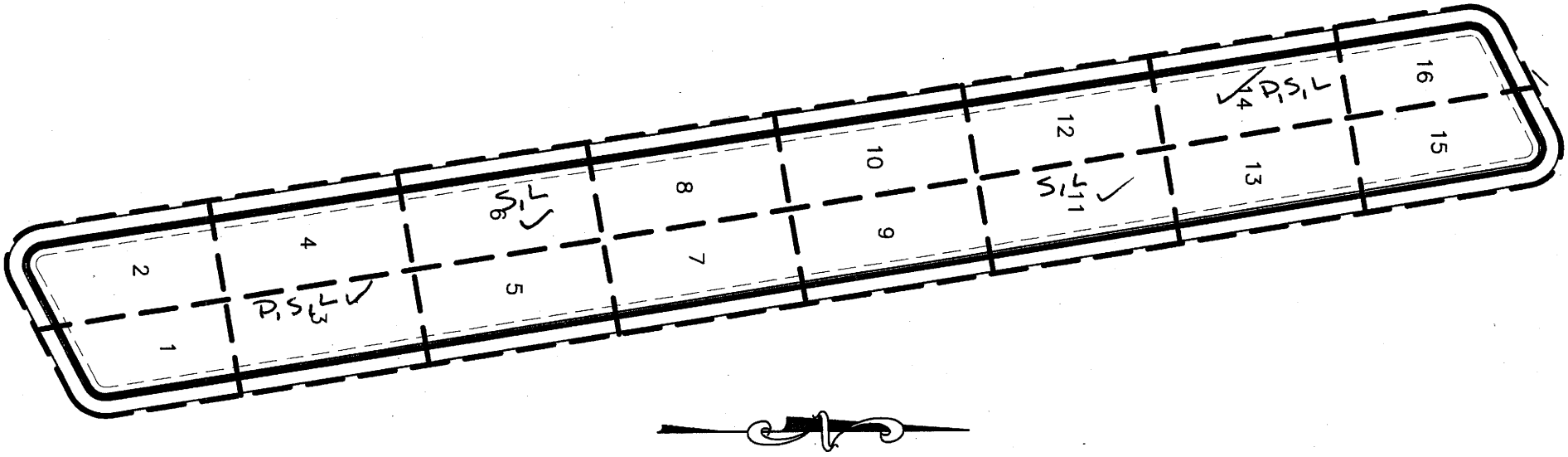
BID SET

12/03/09 1:15:17 PM L:\17952-56960\CONSTRUCTION_DRAWINGS\100%\C003LFPL.DWG



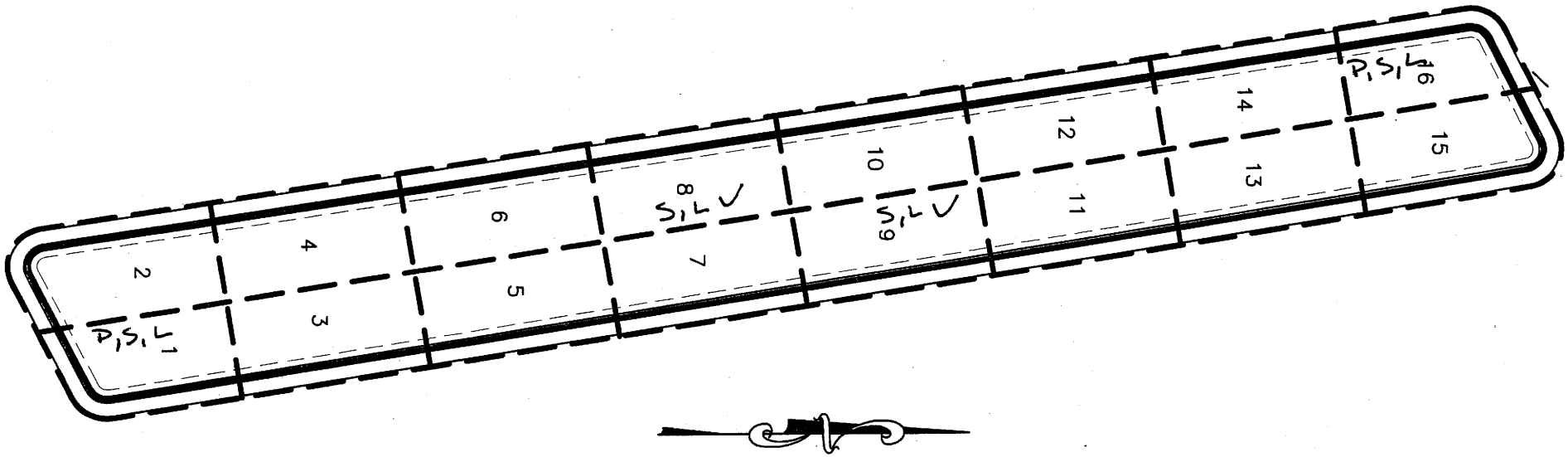
UPPER 2' COMMON FILL SAMPLING LOCATIONS

LIFT 3



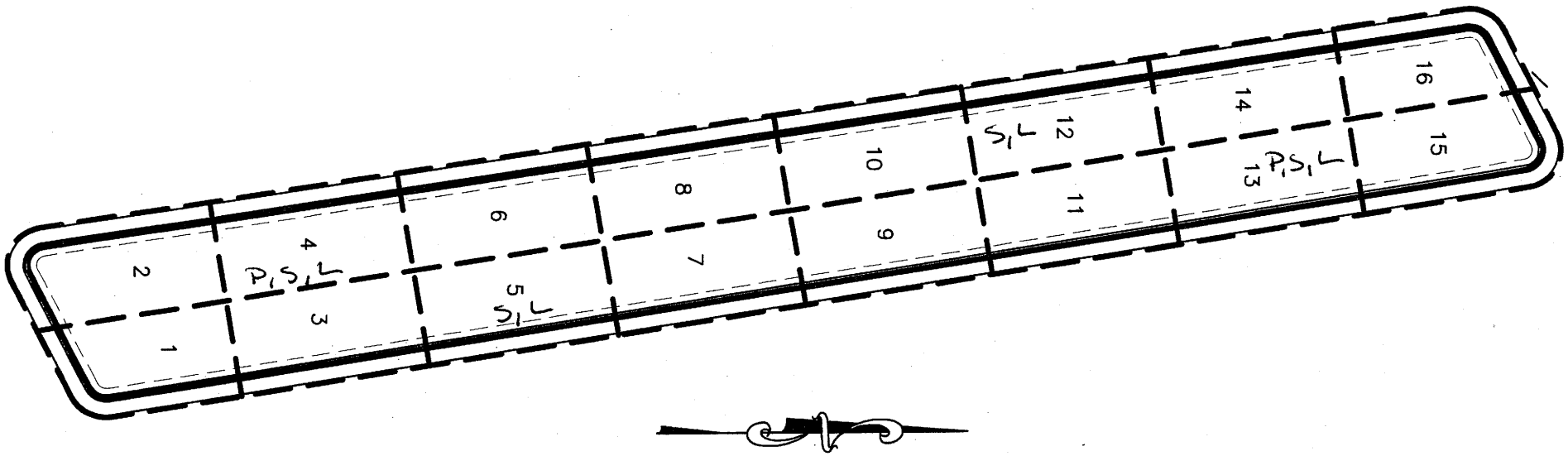
UPPER 2' COMMON FILL SAMPLING LOCATIONS

LIFT 4



UPPER 2' COMMON FILL SAMPLING LOCATIONS

LIFT 5



UPPER 2' COMMON FILL SAMPLING LOCATIONS

LIFT 6

Appendix A-8

COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
Northwest Quadrant	Bulk	Proctor No. 1	3' BFG	4/27/2010	SM	A-2-4(0)	12.2	NP/NL	16.0	103.4	16.6
Northeast Quadrant	Bulk	Proctor No. 2	3' BFG	4/27/2010	SP	A-3	11.8	NP/NL	3.5	98.7	17.8
Southeast Quadrant	Bulk	Proctor No. 3	3' BFG	4/27/2010	SM	A-2-4(0)	15.2	NP/NL	12.1	105.3	14.3
Southwest Quadrant	Bulk	Proctor No. 4	3' BFG	4/27/2010	SM	A-2-4(0)	12.2	NP/NL	12.5	103.7	13.2
35º 49.944' N / 75º 49.098' W	Hand Auger	D-1	3' BFG	4/30/2010	NT	NT	13.6	NT	NT	NT	NT
35º 49.944' N / 75º 49.098' W	Hand Auger	D-2	4' BFG	4/30/2010	NT	NT	12.7	NT	NT	NT	NT
35º 49.944' N / 75º 49.098' W	Hand Auger	D-3	5' BFG	4/30/2010	NT	NT	15.9	NT	NT	NT	NT
35º 50.001' N / 75º 49.107' W	Hand Auger	D-4	3' BFG	4/30/2010	NT	NT	9.8	NT	NT	NT	NT
35º 50.001' N / 75º 49.107' W	Hand Auger	D-5	4' BFG	4/30/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.042' N / 75º 49.113' W	Hand Auger	D-6	3' BFG	4/30/2010	NT	NT	13.0	NT	NT	NT	NT
35º 50.042' N / 75º 49.113' W	Hand Auger	D-7	4' BFG	4/30/2010	NT	NT	13.2	NT	NT	NT	NT
35º 50.100' N / 75º 49.122' W	Hand Auger	D-8	3' BFG	4/30/2010	NT	NT	15.1	NT	NT	NT	NT
35º 50.100' N / 75º 49.122' W	Hand Auger	D-9	4' BFG	4/30/2010	NT	NT	14.7	NT	NT	NT	NT
35º 50.100' N / 75º 49.122' W	Hand Auger	D-10	5' BFG	4/30/2010	NT	NT	14.5	NT	NT	NT	NT
35º 50.142' N / 75º 49.127' W	Hand Auger	D-11	3' BFG	4/30/2010	NT	NT	10.6	NT	NT	NT	NT
35º 50.142' N / 75º 49.127' W	Hand Auger	D-12	4' BFG	4/30/2010	NT	NT	13.2	NT	NT	NT	NT
35º 50.188' N / 75º 49.134' W	Hand Auger	D-13	3' BFG	4/30/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.188' N / 75º 49.134' W	Hand Auger	D-14	4' BFG	4/30/2010	NT	NT	11.3	NT	NT	NT	NT
35º 50.188' N / 75º 49.134' W	Hand Auger	D-15	5' BFG	4/30/2010	NT	NT	14.1	NT	NT	NT	NT
35º 50.177' N / 75º 49.162' W	Hand Auger	D-16	3' BFG	4/30/2010	NT	NT	15.6	NT	NT	NT	NT

NT = Not Tested

BFG = Below Finished Grade

NP/NL = Non Plastic/Non Liquid

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COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4 **Project Location:** Dare County, North Carolina

Client: CDM **GET Project Number:** EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.177' N / 75º 49.162' W	Hand Auger	D-17	4' BFG	4/30/2010	NT	NT	12.7	NT	NT	NT	NT
35º 50.131' N / 75º 49.157' W	Hand Auger	D-18	3' BFG	4/30/2010	NT	NT	13.1	NT	NT	NT	NT
35º 50.131' N / 75º 49.157' W	Hand Auger	D-19	4' BFG	4/30/2010	NT	NT	14.4	NT	NT	NT	NT
35º 50.131' N / 75º 49.157' W	Hand Auger	D-20	5' BFG	4/30/2010	NT	NT	11.3	NT	NT	NT	NT
35º 50.086' N / 75º 49.153' W	Hand Auger	D-21	3' BFG	4/30/2010	NT	NT	18.2	NT	NT	NT	NT
35º 50.086' N / 75º 49.153' W	Hand Auger	D-22	4' BFG	4/30/2010	NT	NT	14.3	NT	NT	NT	NT
35º 50.031' N / 75º 49.145' W	Hand Auger	D-23	3' BFG	4/30/2010	NT	NT	12.9	NT	NT	NT	NT
35º 50.031' N / 75º 49.145' W	Hand Auger	D-24	4' BFG	4/30/2010	NT	NT	12.9	NT	NT	NT	NT
35º 50.044' N / 75º 49.125' W	Hand Auger	D-25	3' BFG	4/30/2010	NT	NT	11.4	NT	NT	NT	NT
35º 50.044' N / 75º 49.125' W	Hand Auger	D-26	4' BFG	4/30/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.095' N / 75º 49.134' W	Hand Auger	D-27	3' BFG	4/30/2010	NT	NT	14.7	NT	NT	NT	NT
35º 50.095' N / 75º 49.134' W	Hand Auger	D-28	4' BFG	4/30/2010	NT	NT	15.6	NT	NT	NT	NT
35º 50.182' N / 75º 49.134' W	Hand Auger	D-29	2' BFG	4/29/2010	NT	NT	11.6	NT	NT	NT	NT
35º 50.182' N / 75º 49.149' W	Hand Auger	D-30	2' BFG	4/29/2010	NT	NT	6.9	NT	NT	NT	NT
35º 50.181' N / 75º 49.160' W	Hand Auger	D-31	2' BFG	4/29/2010	NT	NT	6.7	NT	NT	NT	NT
35º 50.148' N / 75º 49.129' W	Hand Auger	D-32	2' BFG	4/29/2010	NT	NT	11.9	NT	NT	NT	NT
35º 50.146' N / 75º 49.142' W	Hand Auger	D-33	2' BFG	4/29/2010	NT	NT	12.0	NT	NT	NT	NT
35º 50.146' N / 75º 49.155' W	Hand Auger	D-34	2' BFG	4/29/2010	NT	NT	11.7	NT	NT	NT	NT
35º 50.094' N / 75º 49.123' W	Hand Auger	D-35	2' BFG	4/29/2010	NT	NT	10.3	NT	NT	NT	NT
35º 50.094' N / 75º 49.137' W	Hand Auger	D-36	2' BFG	4/29/2010	NT	NT	12.2	NT	NT	NT	NT

NT = Not Tested

BFG = Below Finished Grade

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COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.094' N / 75º 49.137' W	Hand Auger	D-37	2' BFG	4/29/2010	NT	NT	11.0	NT	NT	NT	NT
35º 50.055' N / 75º 49.115' W	Hand Auger	D-38	2' BFG	4/29/2010	NT	NT	9.1	NT	NT	NT	NT
35º 50.052' N / 75º 49.127' W	Hand Auger	D-39	2' BFG	4/29/2010	NT	NT	7.2	NT	NT	NT	NT
35º 49.946' N / 75º 49.096' W	Hand Auger	D-40	2' BFG	4/29/2010	NT	NT	7.7	NT	NT	NT	NT
35º 50.022' N / 75º 49.141' W	Hand Auger	D-41	2' BFG	4/29/2010	NT	NT	11.4	NT	NT	NT	NT
35º 49.950' N / 75º 49.125' W	Hand Auger	D-42	1' BFG	5/25/2010	NT	NT	19.4	NT	33.9	NT	NT
35º 49.950' N / 75º 49.125' W	Hand Auger	D-43	2' BFG	5/25/2010	NT	NT	24.6	NT	32.0	NT	NT
35º 49.996' N / 75º 49.132' W	Hand Auger	D-44	1' BFG	5/25/2010	NT	NT	20.0	NT	30.4	NT	NT
35º 49.996' N / 75º 49.132' W	Hand Auger	D-45	2' BFG	5/25/2010	NT	NT	22.4	NT	45.9	NT	NT
35º 50.040' N / 75º 49.138' W	Hand Auger	D-46	1' BFG	5/25/2010	NT	NT	18.0	NT	36.2	NT	NT
35º 50.040' N / 75º 49.138' W	Hand Auger	D-47	2' BFG	5/25/2010	NT	NT	10.2	NT	14.3	NT	NT
35º 50.084' N / 75º 49.145' W	Hand Auger	D-48	1' BFG	5/25/2010	NT	NT	22.8	NT	32.9	NT	NT
35º 50.084' N / 75º 49.145' W	Hand Auger	D-49	2' BFG	5/25/2010	NT	NT	23.0	NT	15.6	NT	NT
35º 50.128' N / 75º 49.151' W	Hand Auger	D-50	1' BFG	5/25/2010	NT	NT	20.8	NT	25.5	NT	NT
35º 50.128' N / 75º 49.151' W	Hand Auger	D-51	2' BFG	5/25/2010	NT	NT	18.4	NT	28.6	NT	NT
35º 50.173' N / 75º 49.157' W	Hand Auger	D-52	1' BFG	5/25/2010	NT	NT	19.6	NT	19.0	NT	NT
35º 50.173' N / 75º 49.157' W	Hand Auger	D-53	2' BFG	5/25/2010	NT	NT	18.9	NT	28.0	NT	NT
35º 50.216' N / 75º 49.164' W	Hand Auger	D-54	1' BFG	5/25/2010	NT	NT	22.0	NT	28.3	NT	NT
35º 50.216' N / 75º 49.164' W	Hand Auger	D-55	2' BFG	5/25/2010	NT	NT	18.4	NT	27.2	NT	NT
35º 50.027' N / 75º 49.115' W	Hand Auger	D-56	FG	6/11/2010	NT	NT	16.6	NT	NT	NT	NT

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COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.027' N / 75º 49.137' W	Hand Auger	D-57	FG	6/11/2010	NT	NT	12.5	NT	NT	NT	NT
35º 50.070' N / 75º 49.117' W	Hand Auger	D-58	FG	6/11/2010	NT	NT	16.2	NT	NT	NT	NT
35º 50.068' N / 75º 49.140' W	Hand Auger	D-59	FG	6/11/2010	NT	NT	12.7	NT	NT	NT	NT
35º 50.121' N / 75º 49.122' W	Hand Auger	D-60	FG	6/11/2010	NT	NT	16.9	NT	NT	NT	NT
35º 50.119' N / 75º 49.147' W	Hand Auger	D-61	FG	6/11/2010	NT	NT	11.3	NT	NT	NT	NT
35º 49.969' N / 75º 49.101' W	Hand Auger	D-62	FG	6/14/2010	NT	NT	18.4	NT	NT	NT	NT
35º 49.969' N / 75º 49.101' W	Hand Auger	D-63	1' BFG	6/14/2010	NT	NT	18.8	NT	NT	NT	NT
35º 50.000' N / 75º 49.110' W	Hand Auger	D-64	FG	6/14/2010	NT	NT	14.5	NT	NT	NT	NT
35º 50.000' N / 75º 49.110' W	Hand Auger	D-65	1' BFG	6/14/2010	NT	NT	19.9	NT	NT	NT	NT
35º 50.053' N / 75º 49.115' W	Hand Auger	D-66	FG	6/14/2010	NT	NT	13.4	NT	NT	NT	NT
35º 50.053' N / 75º 49.115' W	Hand Auger	D-67	1' BFG	6/14/2010	NT	NT	16.8	NT	NT	NT	NT
35º 50.084' N / 75º 49.123' W	Hand Auger	D-68	FG	6/14/2010	NT	NT	14.3	NT	NT	NT	NT
35º 50.084' N / 75º 49.123' W	Hand Auger	D-69	1' BFG	6/14/2010	NT	NT	19.5	NT	NT	NT	NT
35º 50.137' N / 75º 49.127' W	Hand Auger	D-70	FG	6/14/2010	NT	NT	11.0	NT	NT	NT	NT
35º 50.137' N / 75º 49.127' W	Hand Auger	D-71	1' BFG	6/14/2010	NT	NT	15.2	NT	NT	NT	NT
35º 50.166' N / 75º 49.158' W	Hand Auger	D-72	FG	6/17/2010	NT	NT	14.2	NT	NT	NT	NT
35º 50.211' N / 75º 49.164' W	Hand Auger	D-73	FG	6/17/2010	NT	NT	14.8	NT	NT	NT	NT
35º 50.258' N / 75º 49.146' W	Hand Auger	D-74	FG	6/17/2010	NT	NT	12.5	NT	NT	NT	NT
35º 50.258' N / 75º 49.146' W	Hand Auger	D-75	1' BFG	6/17/2010	NT	NT	14.8	NT	NT	NT	NT
35º 50.258' N / 75º 49.146' W	Hand Auger	D-76	2' BFG	6/17/2010	NT	NT	14.6	NT	NT	NT	NT

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COMPREHENSIVE LABORATORY TEST RESULTS

Project: Dare County Landfill; Cell 4

Project Location: Dare County, North Carolina

Client: CDM

GET Project Number: EC10-166T

Sample Location	Sample Type	Sample Number	Sample Depth (ft)	Sample Date	USCS Classification	AASHTO Classification	Natural Moisture Content (%)	Atterberg Limits (LL/PL/PI)	Passing #200 Sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)
35º 50.258' N / 75º 49.146' W	Hand Auger	D-77	3' BFG	6/17/2010	NT	NT	14.9	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-78	FG	6/17/2010	NT	NT	11.9	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-79	1' BFG	6/17/2010	NT	NT	13.8	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-80	2' BFG	6/17/2010	NT	NT	14.8	NT	NT	NT	NT
35º 50.253' N / 75º 49.171' W	Hand Auger	D-81	3' BFG	6/17/2010	NT	NT	14.3	NT	NT	NT	NT
Lot 4	Bulk	Proctor #5	2' BFG	5/25/2010	SM	A-2-4	24.5	NP/NL	28.1	108.5	16.0
Lot 1	Bulk	Proctor #6	1' BFG	5/25/2010	SM	A-2-4	23.5	NP/NL	12.5	103.4	14.1

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FG = Finished Grade
NP/NL = Non Plastic/Non Liquid

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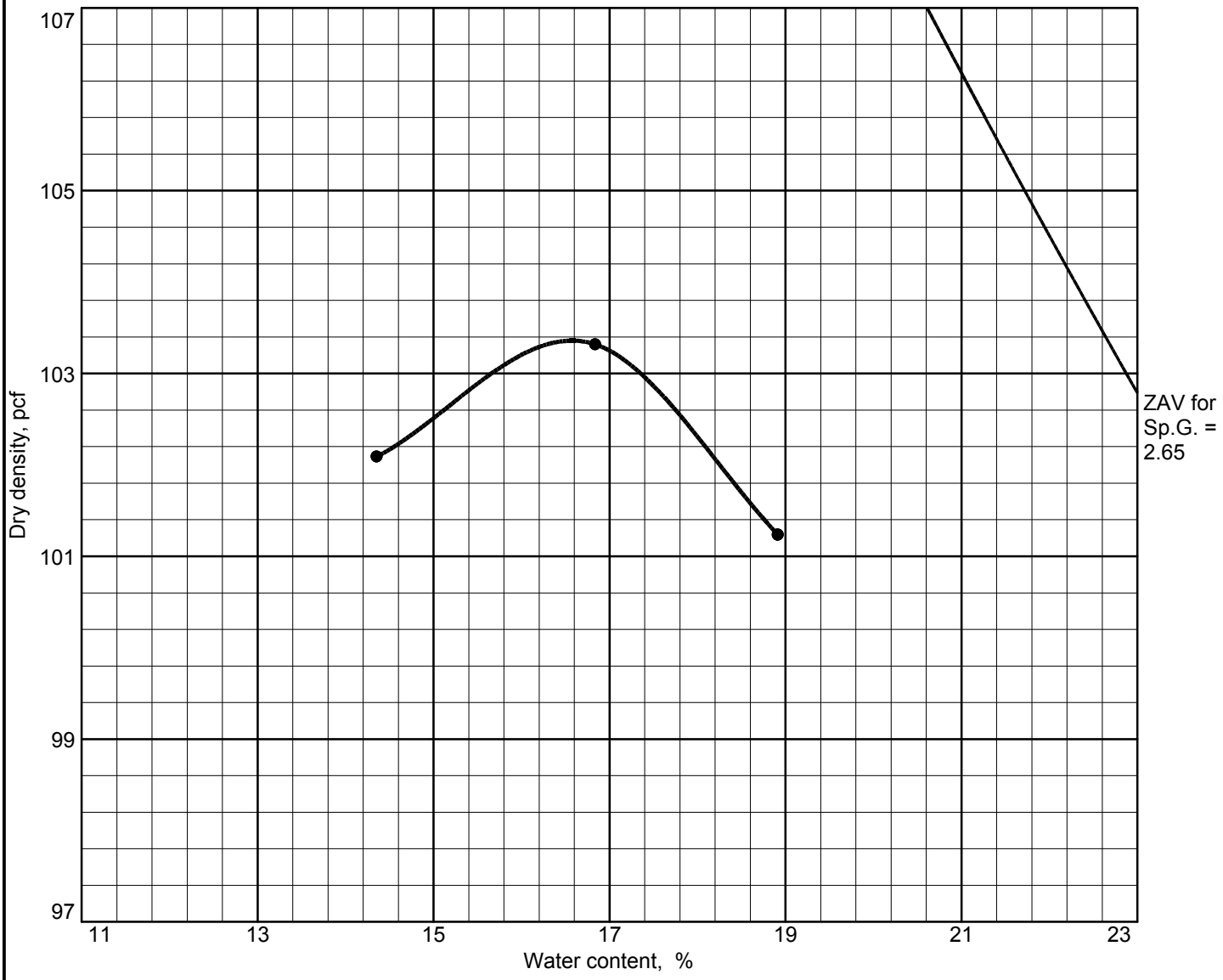
MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
	SM	A-2-4(0)	12.2		NP	NP	0.0	16.0

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 103.4 pcf Optimum moisture = 16.6 %	Tan Silty fine SAND (SM)

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App170'South from Northend and app 82'West from East edge

Remarks:

Proctor-#1

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

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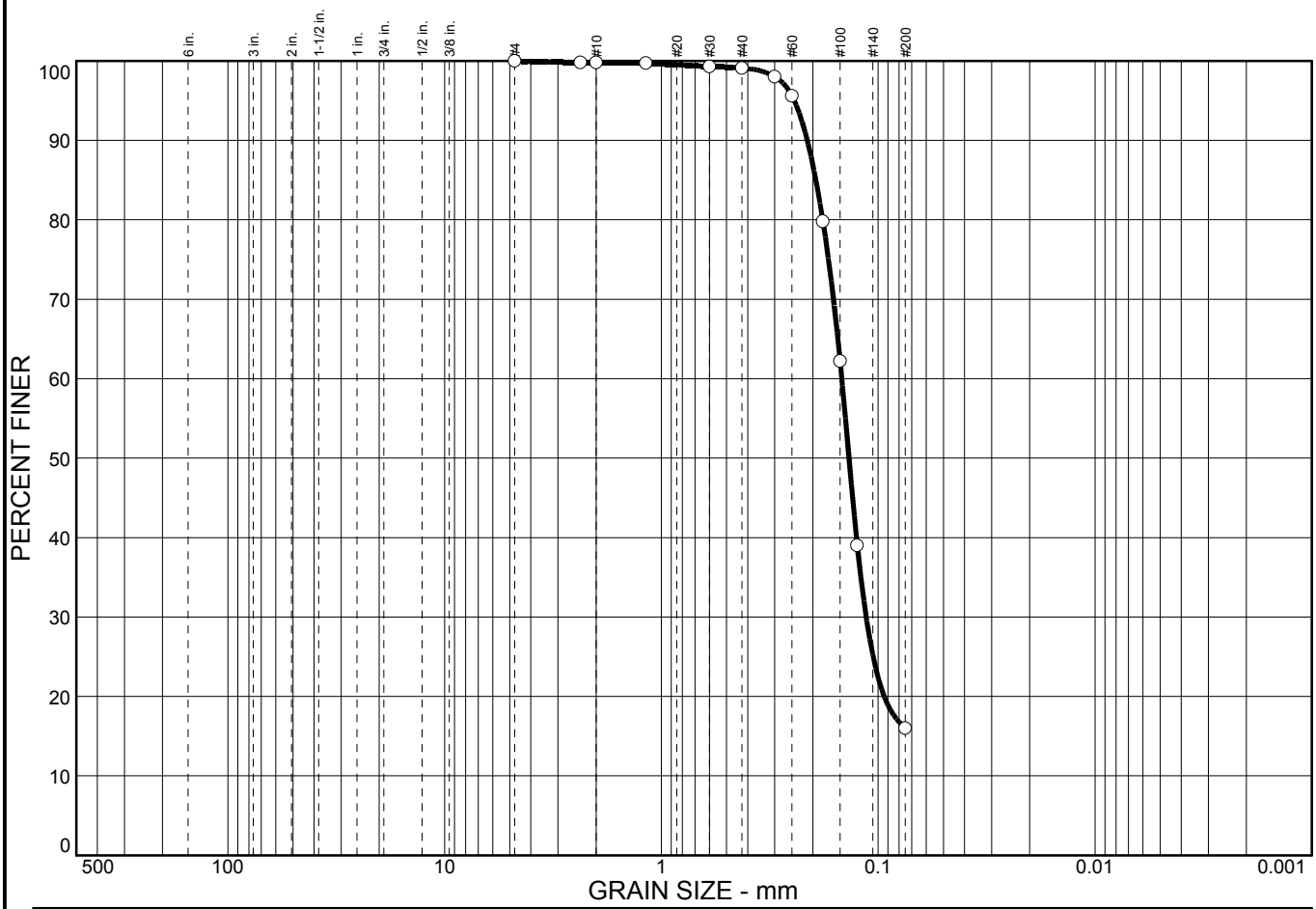
Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	84.0	16.0	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.8		
#10	99.8		
#16	99.7		
#30	99.3		
#40	99.1		
#50	98.0		
#60	95.6		
#80	79.8		
#100	62.2		
#120	39.0		
#200	16.0		

* (no specification provided)

Soil Description

Tan Silty fine SAND (SM)

Atterberg Limits

PL= LL= NP PI= NP

Coefficients

D_{85}= 0.194 D_{60}= 0.147 D_{50}= 0.137
D_{30}= 0.114 D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

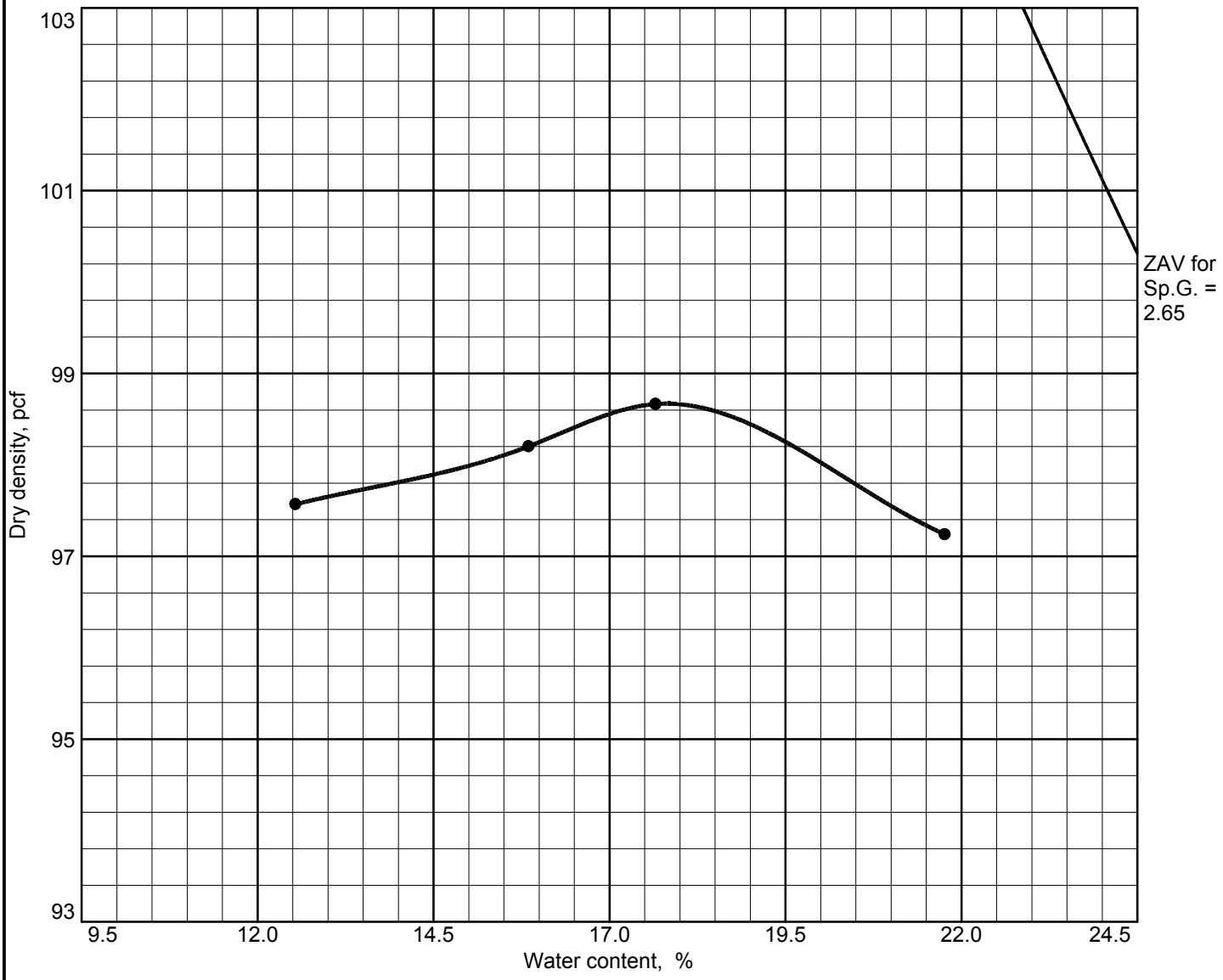
Proctor No. 1
F.M.=0.41

Sample No.: 1 **Source of Sample:** **Date:**
Location: App170'South from Northend and app 82'West from East edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
	SP	A-3	11.8		NP	NP	0.0	3.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 98.7 pcf Optimum moisture = 17.8 %	Gray poorly graded fine to medium SAND (SP)

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App 55' South from Northend and app 20'East from West edge

Remarks:

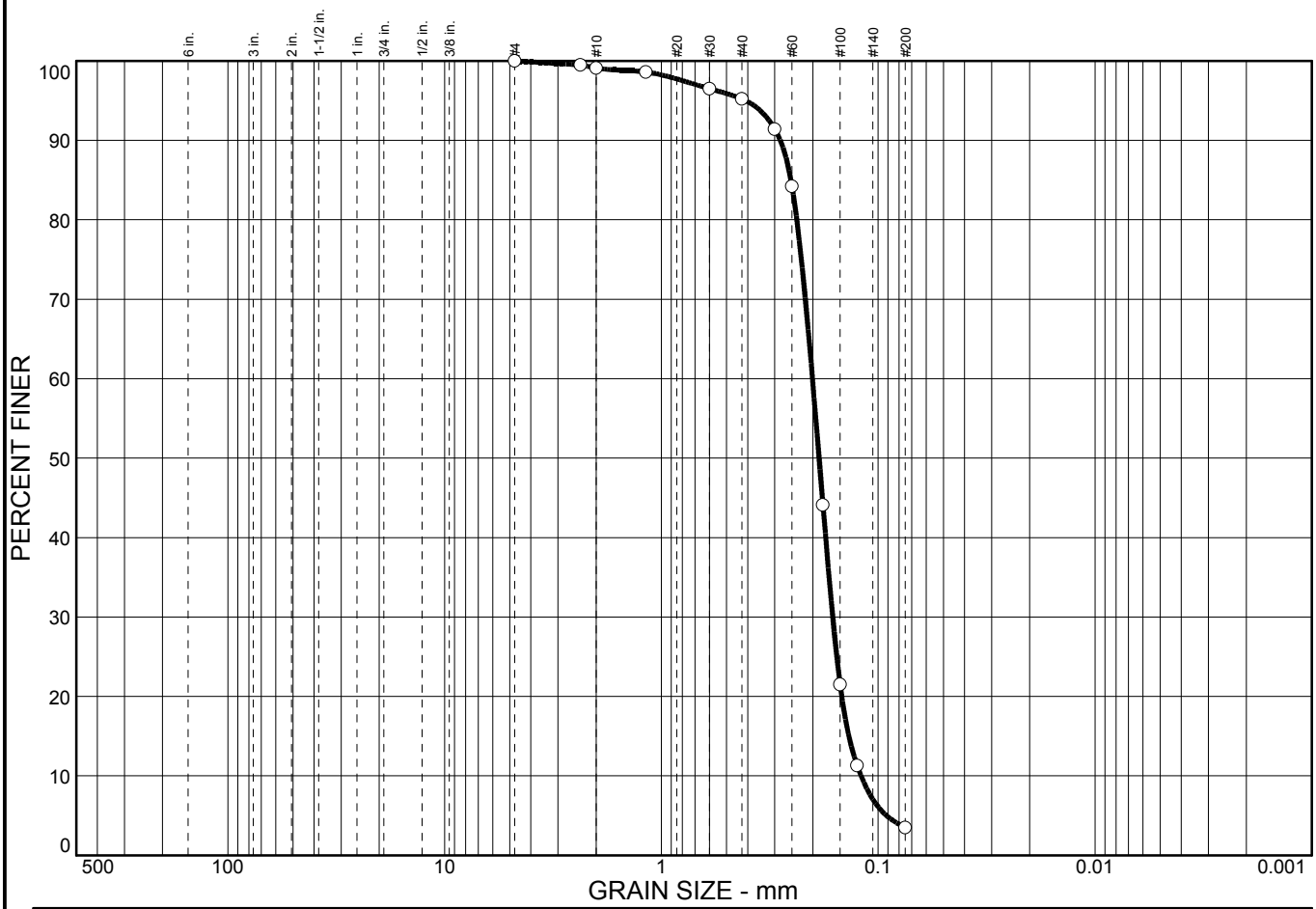
Proctor-#2

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	96.5	3.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.5		
#10	99.1		
#16	98.6		
#30	96.5		
#40	95.2		
#50	91.4		
#60	84.2		
#80	44.1		
#100	21.5		
#120	11.3		
#200	3.5		

* (no specification provided)

Soil Description

Gray poorly graded fine to medium SAND (SP)

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{85}= 0.253 D_{60}= 0.201 D_{50}= 0.188
D_{30}= 0.162 D_{15}= 0.137 D_{10}= 0.120
C_u= 1.68 C_c= 1.09

Classification

USCS= SP AASHTO= A-3

Remarks

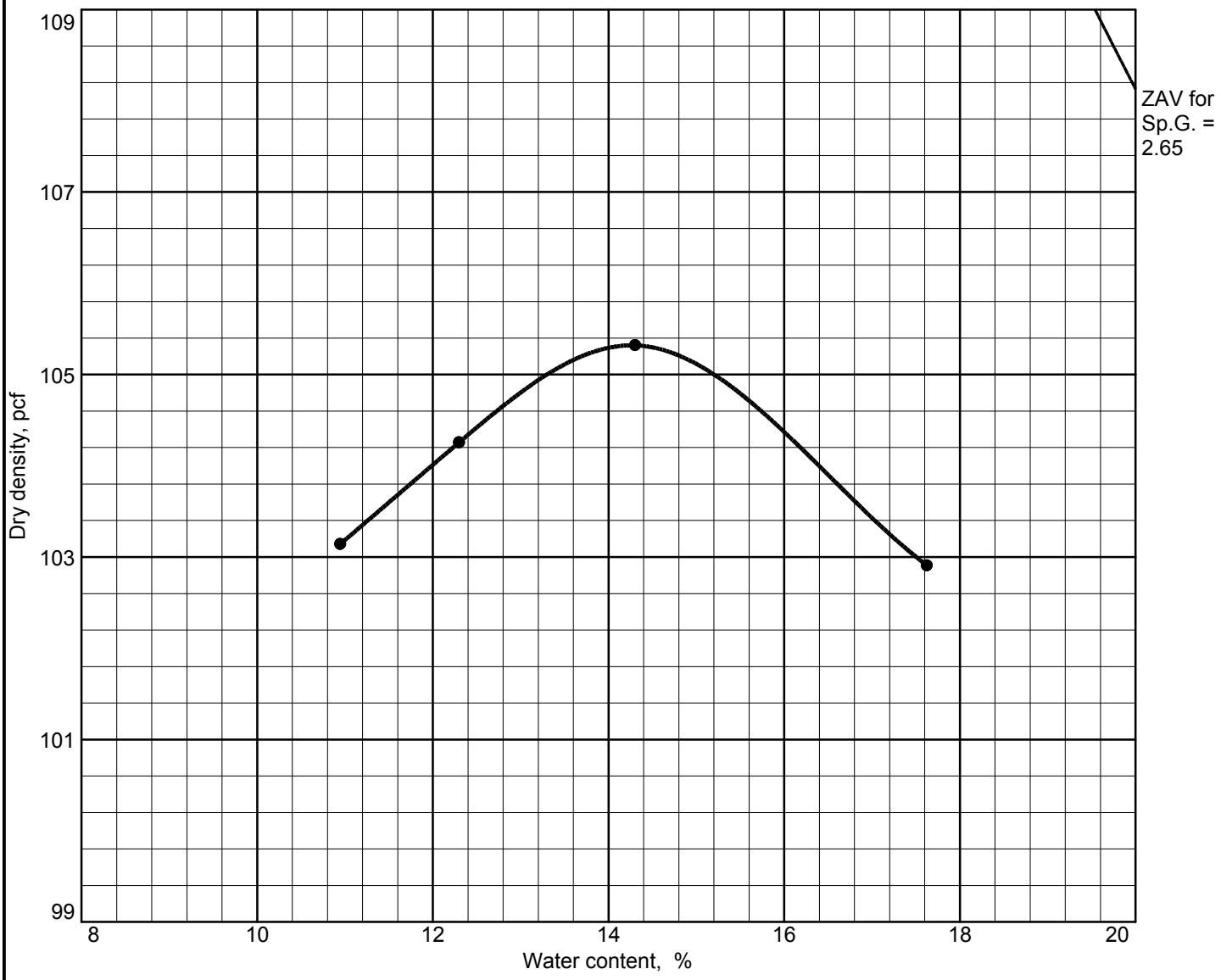
Proctor No. 2
F.M.=0.93

Sample No.: 2 **Source of Sample:** **Date:**
Location: App 55' South from Northend and app 20'East from West edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
	SM	A-2-4(0)	15.2		NP	NP	0.0	12.1

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 105.3 pcf Optimum moisture = 14.3 %	Gray Silty fine to medium SAND (SM) with marine shell fragments

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App 937'South from Northend and 95'West of East edge

Remarks:

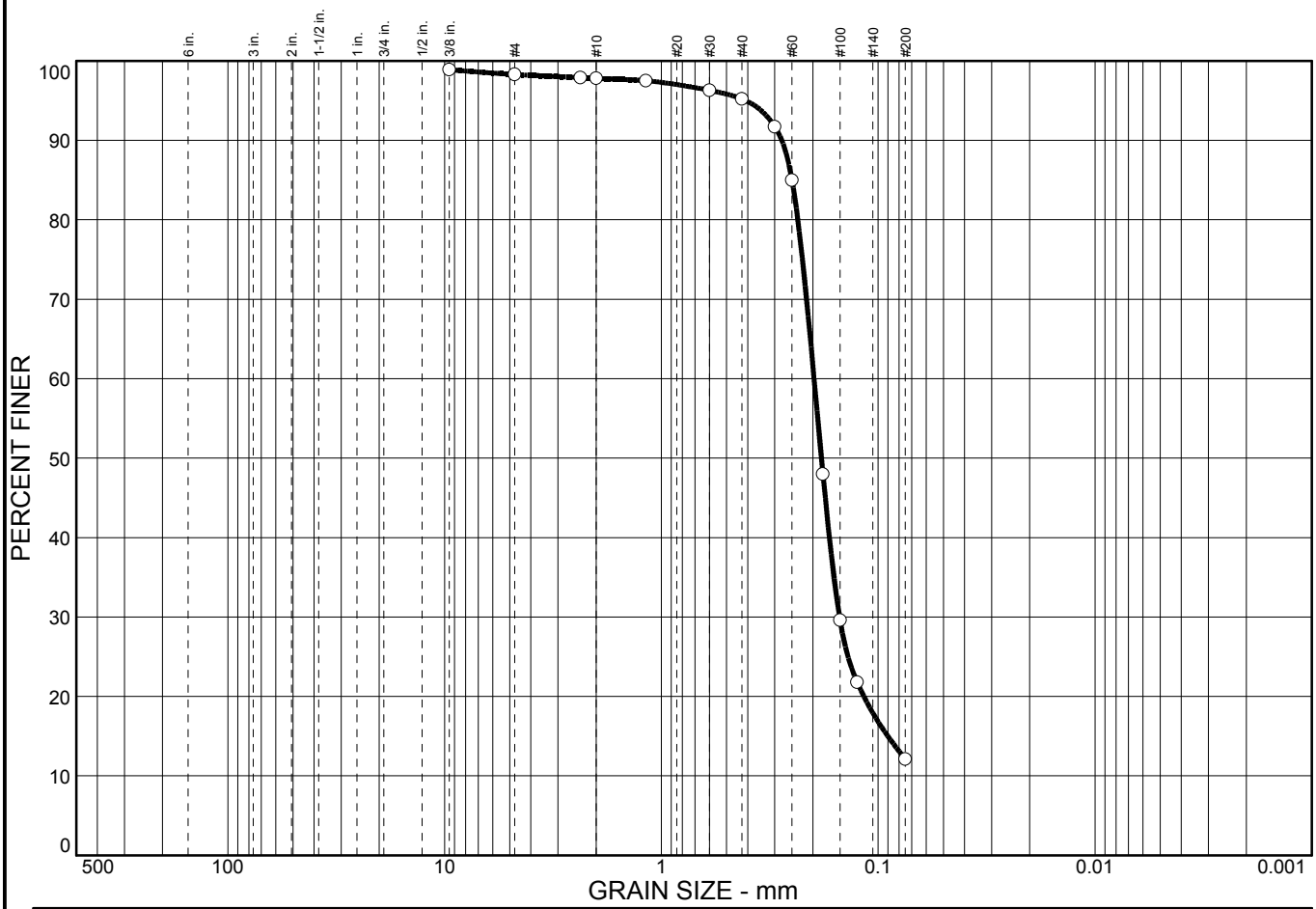
Proctor-#3

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
		86.2	12.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
.375 in.	98.9		
#4	98.3		
#8	97.9		
#10	97.8		
#16	97.5		
#30	96.3		
#40	95.2		
#50	91.7		
#60	85.0		
#80	48.0		
#100	29.6		
#120	21.8		
#200	12.1		

* (no specification provided)

Soil Description

Gray Silty fine to medium SAND (SM) with marine shell fragments

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{85}= 0.250 D_{60}= 0.198 D_{50}= 0.183
D_{30}= 0.151 D_{15}= 0.0904 D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Proctor No. 3
F.M.=0.90

Sample No.: 3 **Source of Sample:** **Date:**
Location: App 937'South from Northend and 95'West of East edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
		A-2-4(0)	12.2		NP	NP	0.0	12.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 103.7 pcf Optimum moisture = 13.2 %	Gray-Tan Silty fine SAND (SM) with Clay

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** App 156'North from Southend and app 51' East from West edge

Remarks:

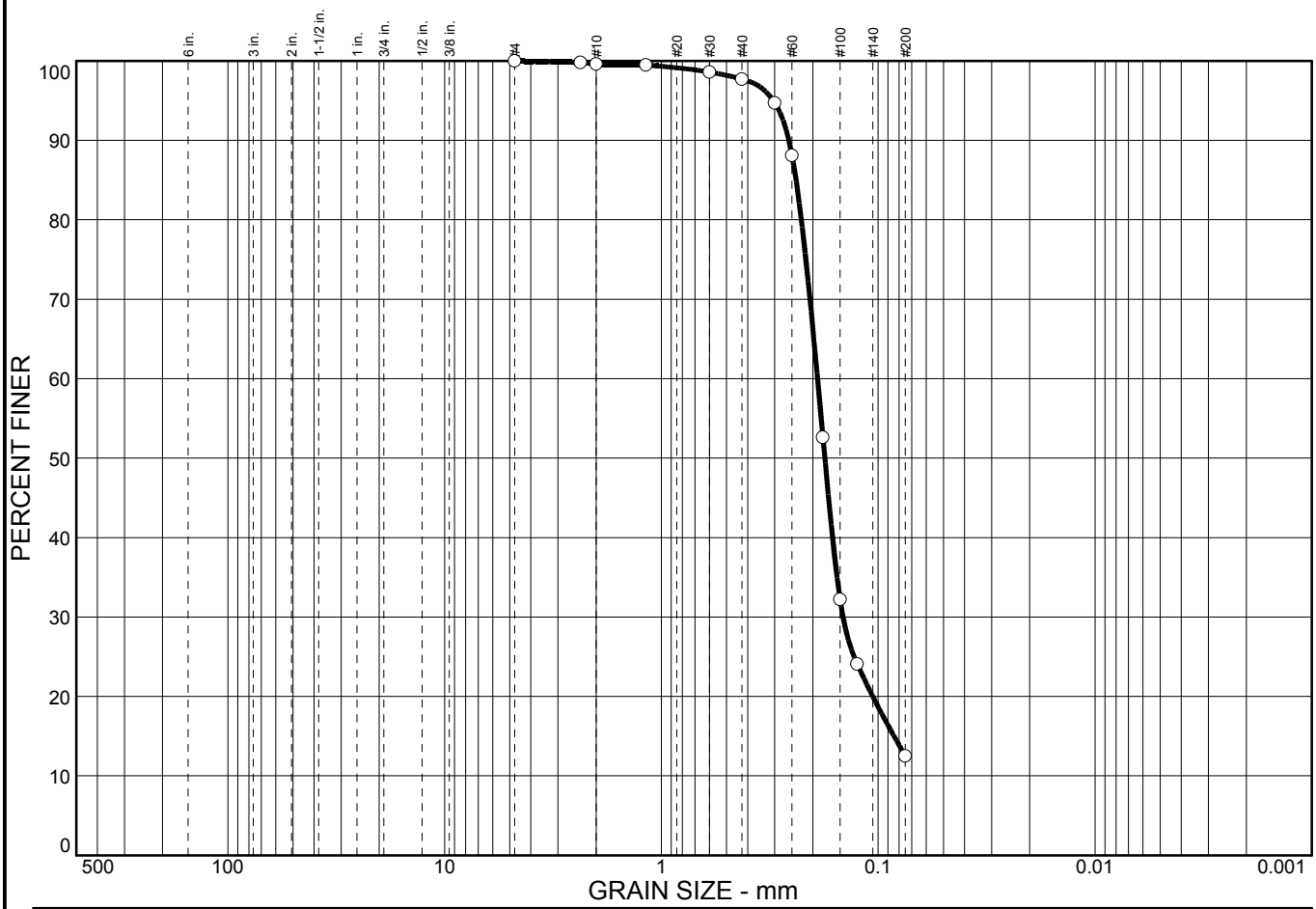
Proctor-#4

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	87.5	12.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#8	99.8		
#10	99.6		
#16	99.5		
#30	98.6		
#40	97.7		
#50	94.7		
#60	88.1		
#80	52.6		
#100	32.2		
#120	24.1		
#200	12.5		

* (no specification provided)

Soil Description

Gray-Tan Silty fine SAND (SM) with Clay

Atterberg Limits

PL= NP LL= NP PI= NP

Coefficients

D_{85}= 0.239 D_{60}= 0.191 D_{50}= 0.176
D_{30}= 0.145 D_{15}= 0.0845 D_{10}=
C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

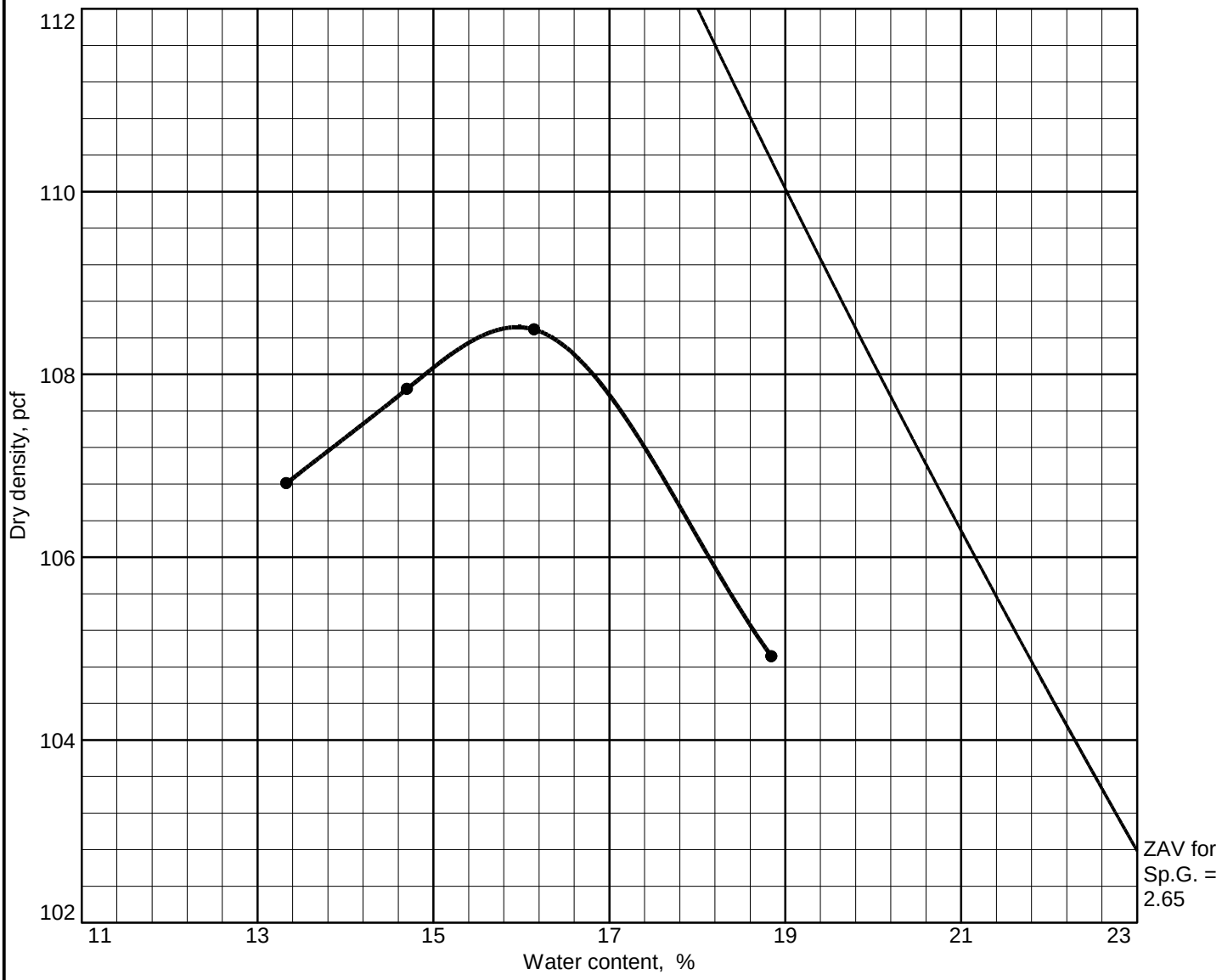
Proctor No. 4
F.M.=0.75

Sample No.: 4 **Source of Sample:** **Date:**
Location: App 156'North from Southend and app 51' East from West edge **Elev./Depth:**

GET SOLUTIONS, INC.

Client: CDM
Project: Dare County Landfill Phase {CELL} 4
Project No: EC10-166T **Figure**

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
2' BFG	SM		24.5		NP	NP	0.0	28.1

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 108.5 pcf Optimum moisture = 16.0 %	Dark Brown Silty fine SAND (SM) with Clay

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** Center of Lot#10

Remarks:

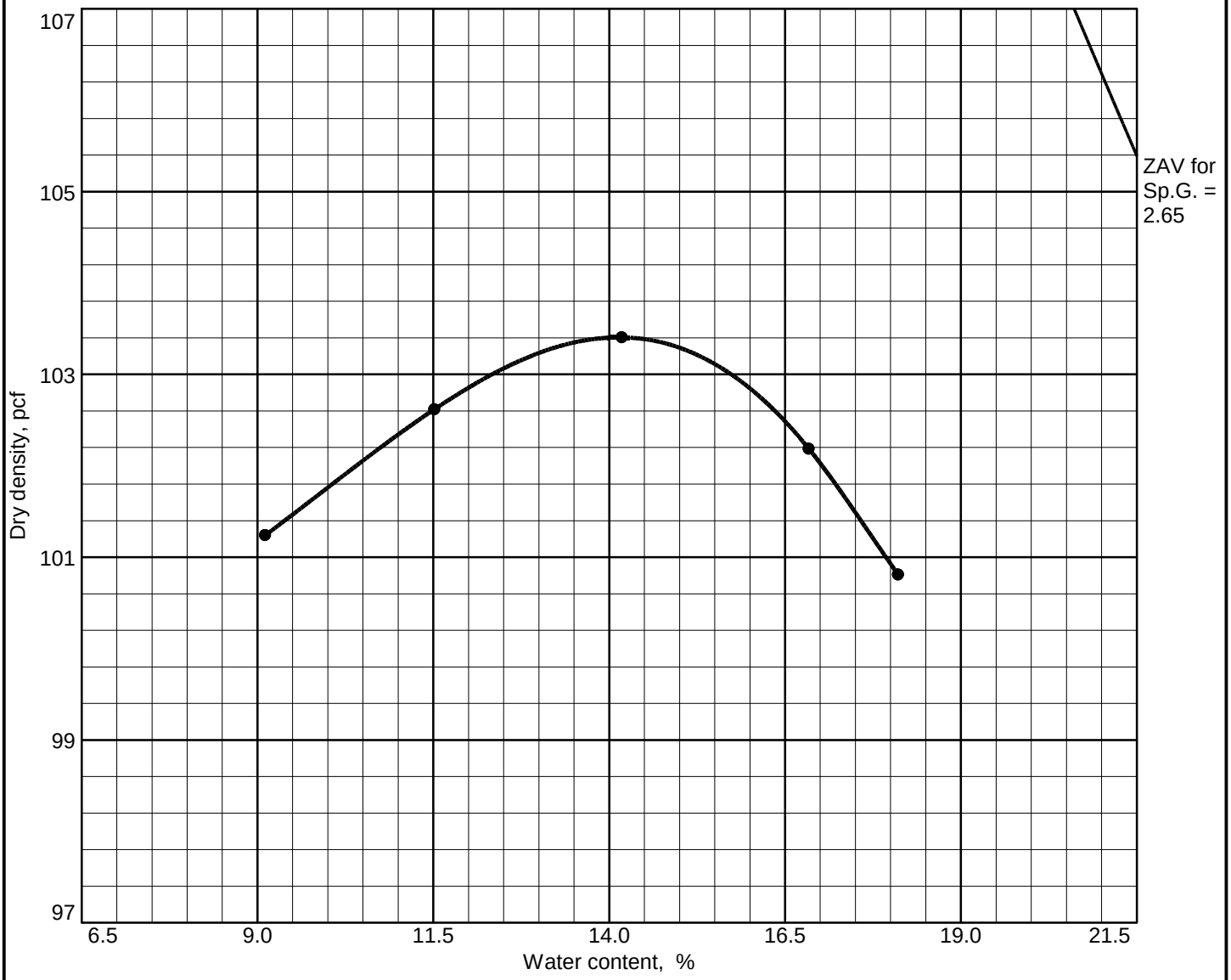
Proctor-#5

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)



Test specification: ASTM D 698-00a Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > No.4	% < No.200
	USCS	AASHTO						
1'BFG	SM		23.5		NP	NP	0.0	12.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 103.4 pcf Optimum moisture = 14.1 %	Gray-Tan Silty fine SAND with trace clay

Project No. EC10-166T **Client:** CDM

Project: Dare County Landfill Phase {CELL} 4

● **Location:** Center of Lot-#1

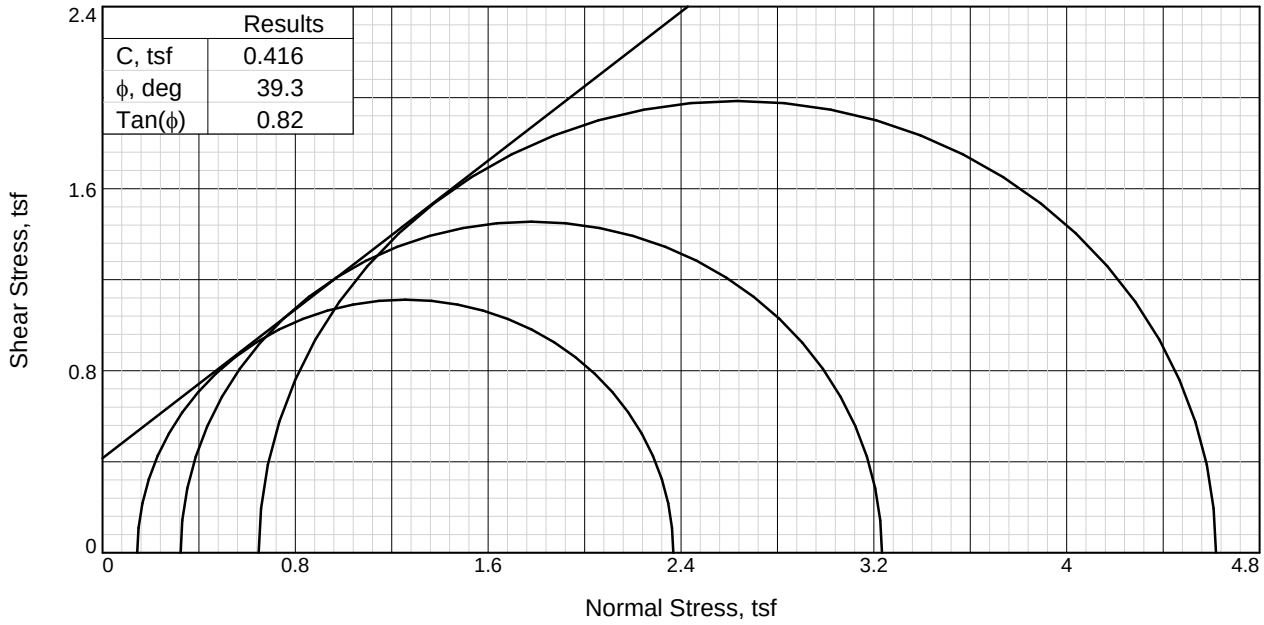
Remarks:

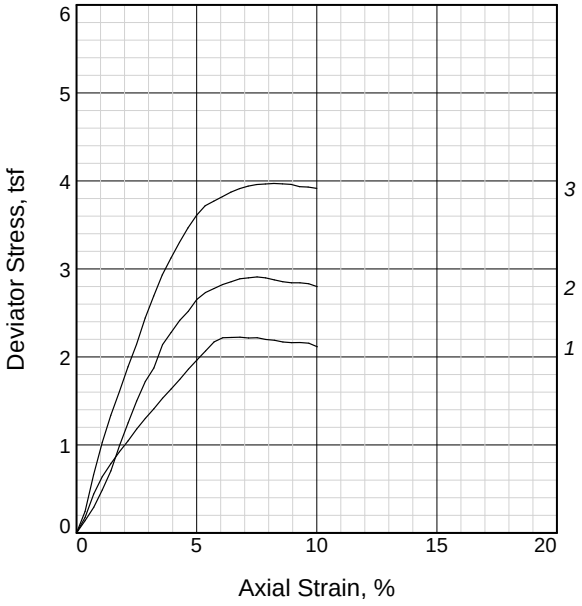
Proctor-#6

MOISTURE DENSITY RELATIONSHIP (PROCTOR CURVE)

GET SOLUTIONS, INC.

Figure





Sample No.		1	2	3
Initial	Water Content, %	16.6	16.6	16.6
	Dry Density, pcf	98.3	98.2	98.2
	Saturation, %	64.5	64.4	64.4
	Void Ratio	0.6835	0.6841	0.6839
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	25.3	25.4	25.8
	Dry Density, pcf	99.1	98.8	98.2
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.6700	0.6742	0.6839
	Diameter, in.	2.79	2.79	2.80
	Height, in.	5.59	5.59	5.60
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		2.22	2.91	3.97
Ult. Stress, tsf				
σ_1 Failure, tsf		2.37	3.23	4.62
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained
Sample Type: Recompacted
Description: Tan Silty fine SAND (SM)

Assumed Specific Gravity= 2.65
Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

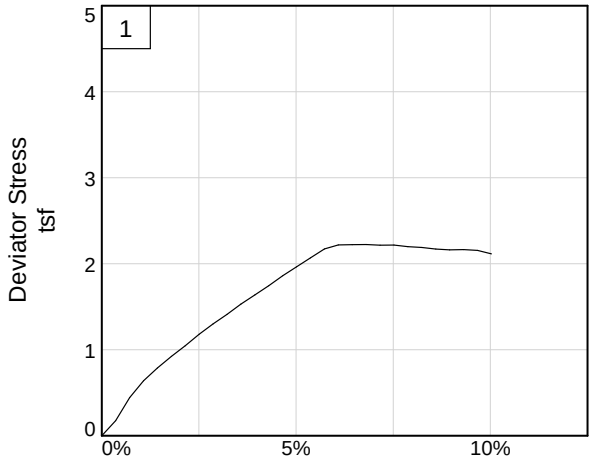
Location: App170'South from North End and 82'West from East Edge
Sample Number: Proctor No. 1
Proj. No.: EC10-166T **Date Sampled:**

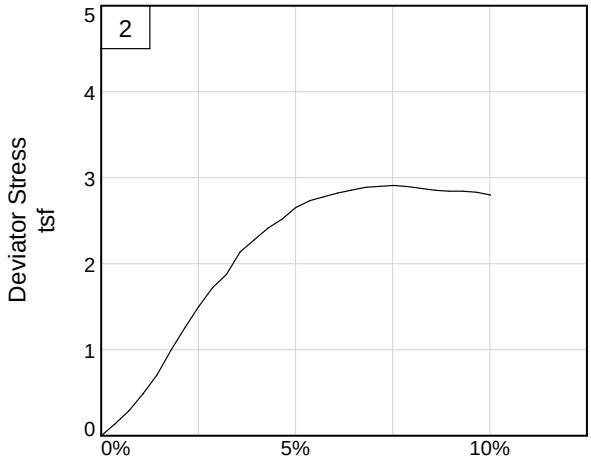
TRIAXIAL SHEAR TEST REPORT

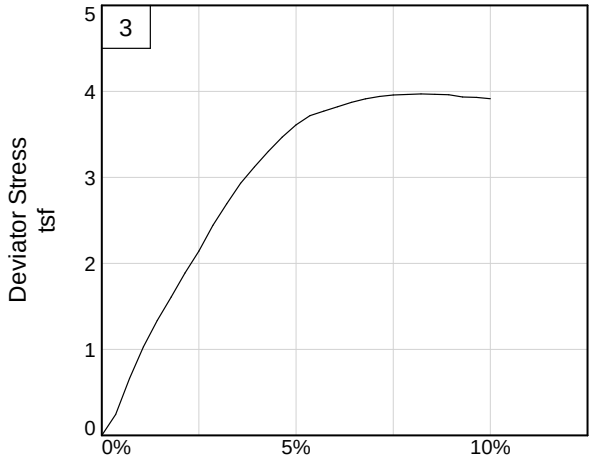
GET SOLUTIONS, INC.

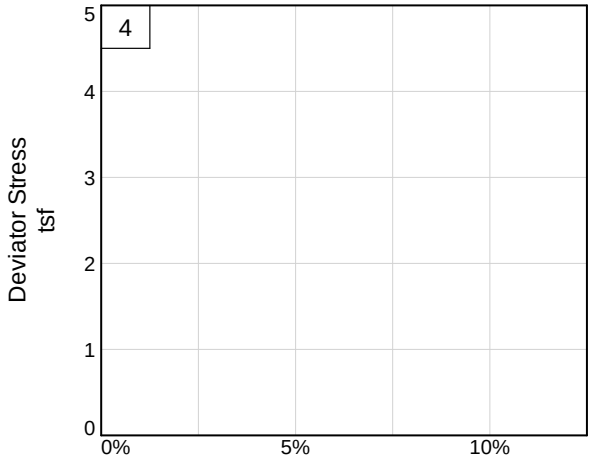
Figure T1

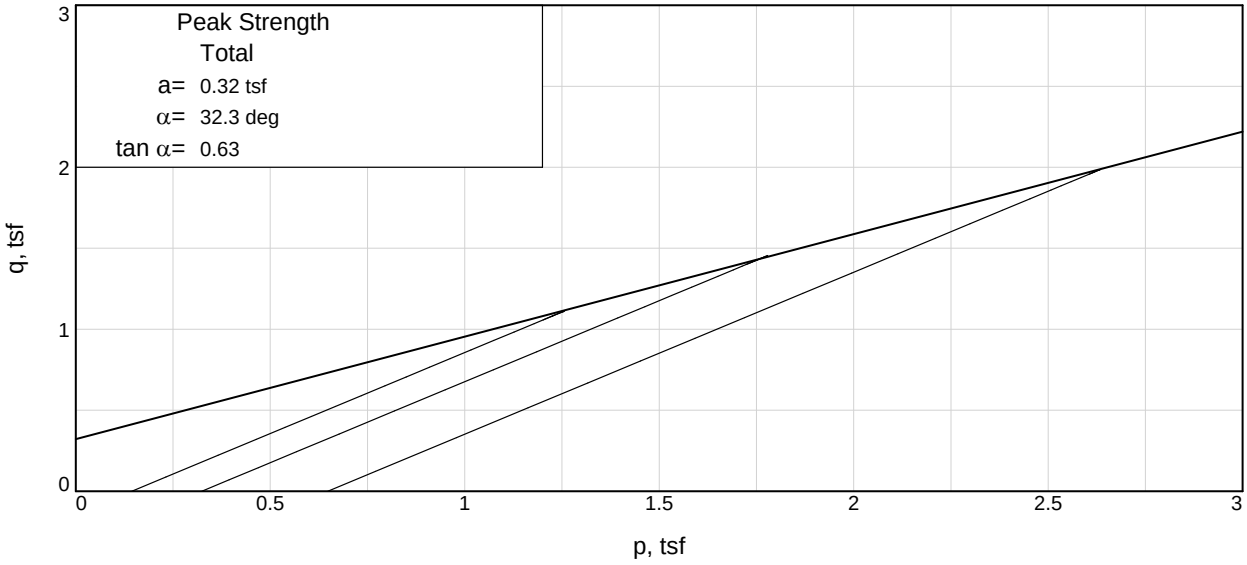
Tested By: PB **Checked By:** GS







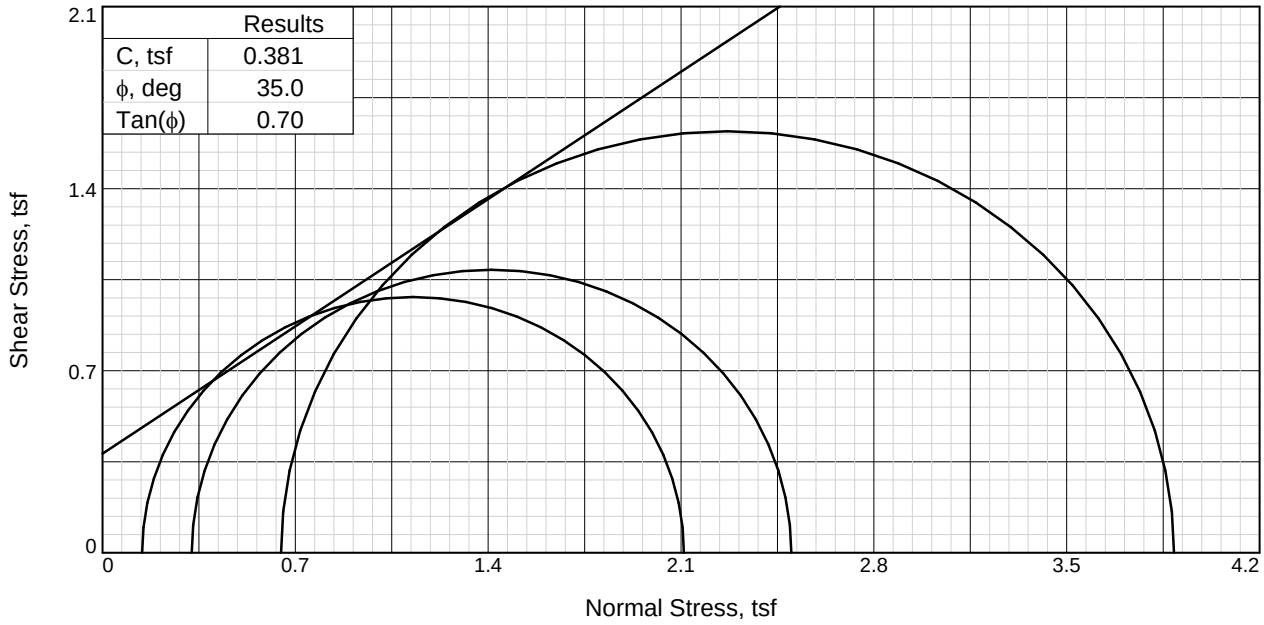


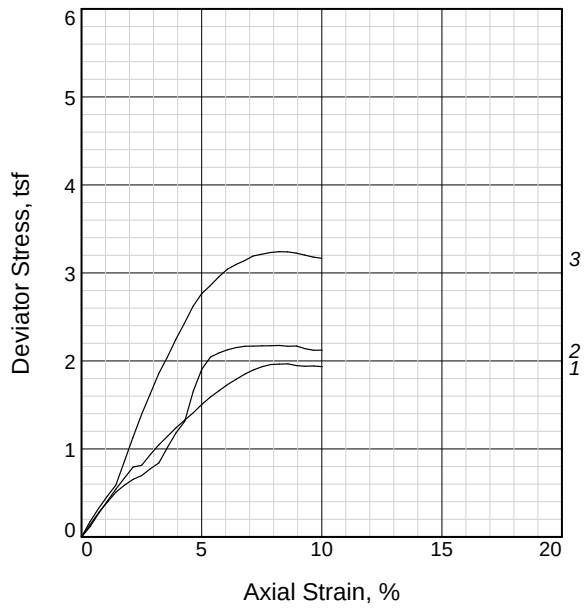


Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App170'South from North End and 82'West from East Edge
Sample Number: Proctor No. 1
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS





Sample No.		1	2	3
Initial	Water Content, %	17.8	17.8	17.8
	Dry Density, pcf	93.8	93.8	93.9
	Saturation, %	61.9	61.8	62.0
	Void Ratio	0.7629	0.7645	0.7623
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	28.3	28.5	28.8
	Dry Density, pcf	94.6	94.3	93.9
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.7488	0.7542	0.7623
	Diameter, in.	2.79	2.79	2.80
	Height, in.	5.58	5.59	5.60
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		1.97	2.18	3.24
Ult. Stress, tsf				
σ_1 Failure, tsf		2.11	2.50	3.89
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained
Sample Type: Recompacted
Description: Gray Poorly Graded fine to medium SAND (SP)

Assumed Specific Gravity= 2.65
Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

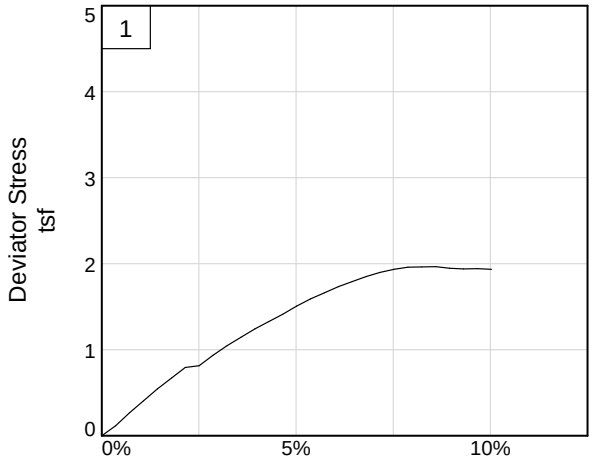
Location: App55'South from North End and 20'East from West Edge
Sample Number: Proctor No. 2
Proj. No.: EC10-166T **Date Sampled:**

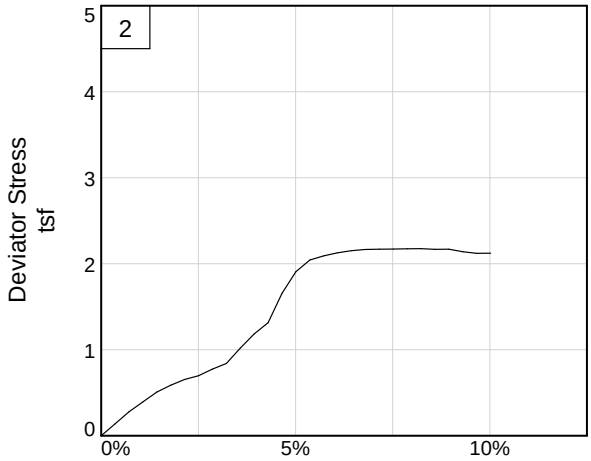
TRIAXIAL SHEAR TEST REPORT

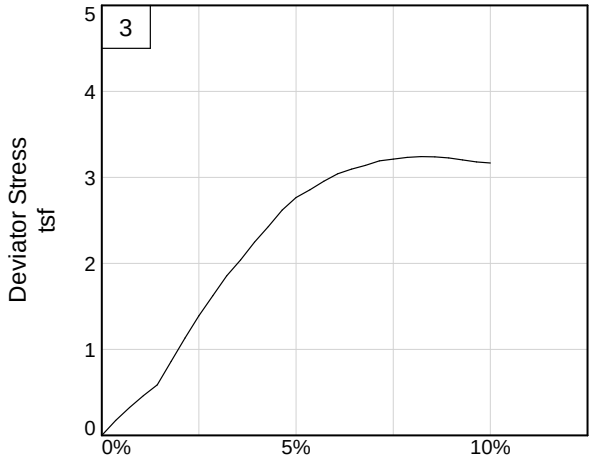
GET SOLUTIONS, INC.

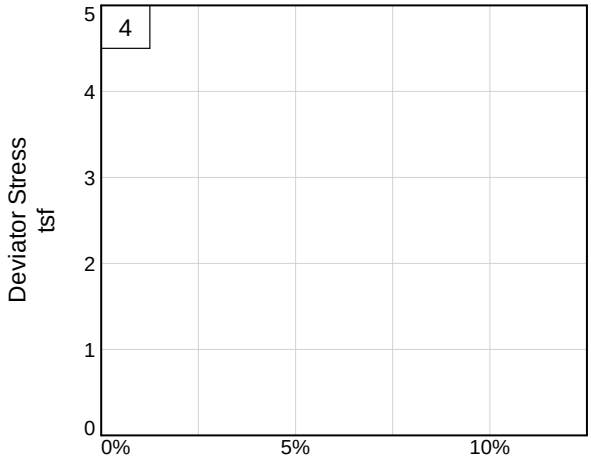
Figure T2

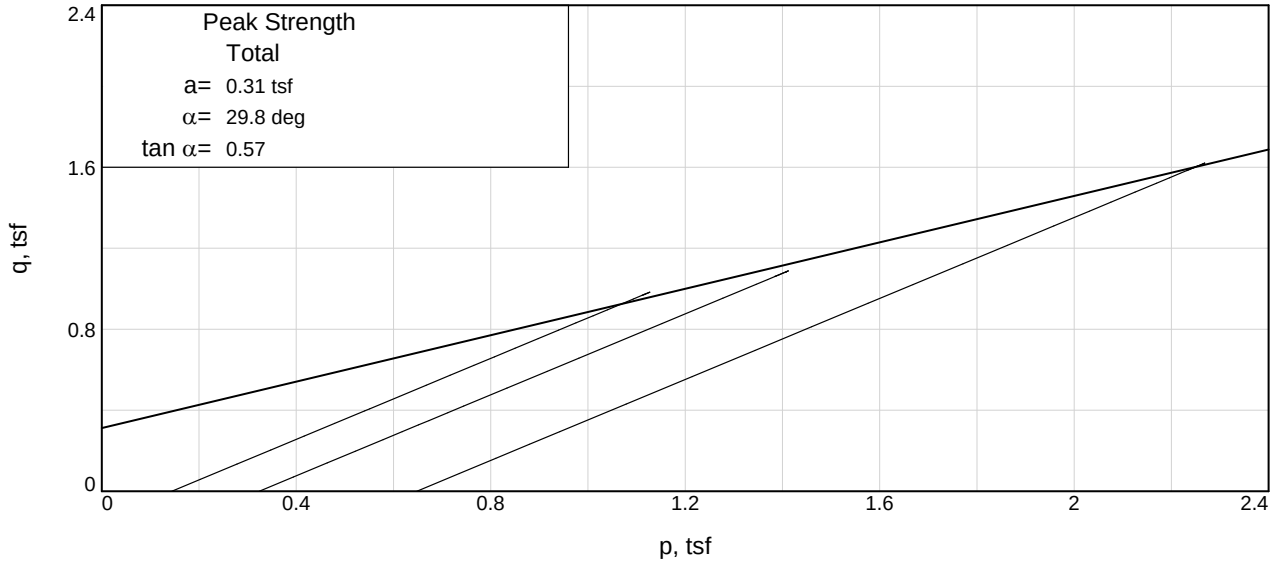
Tested By: PB **Checked By:** GS







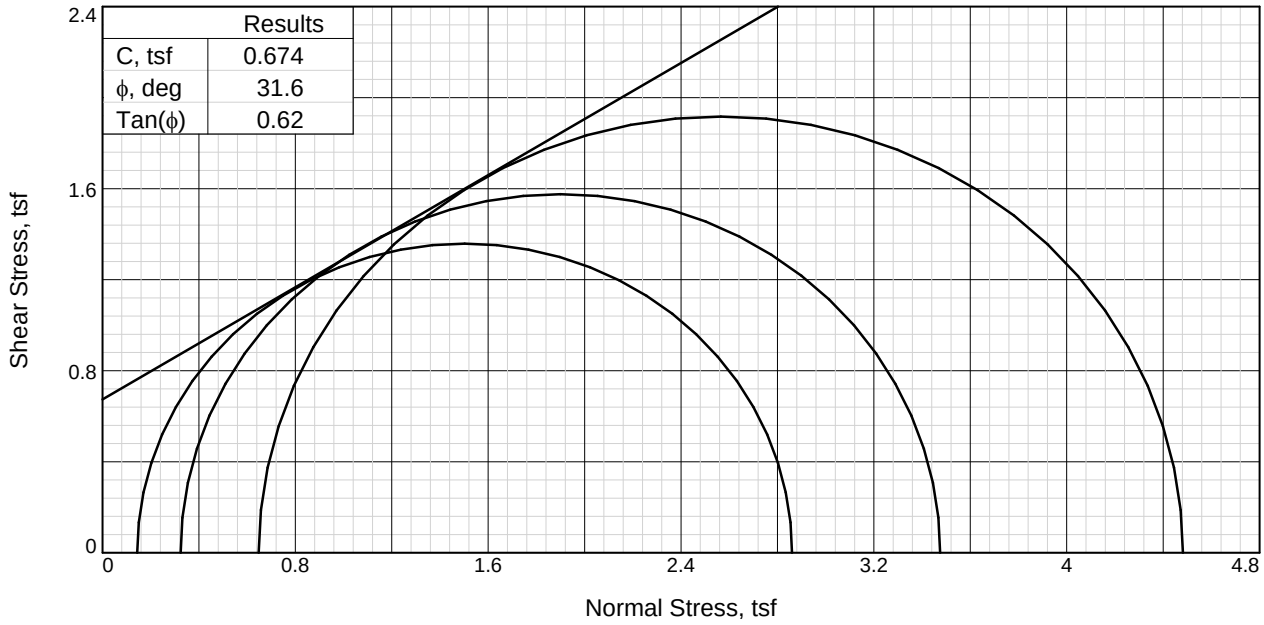


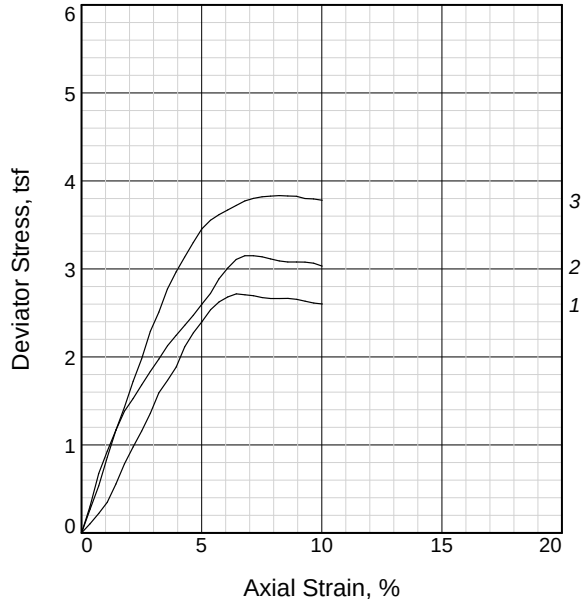


Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App55'South from North End and 20'East from West Edge
Sample Number: Proctor No. 2
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS





Sample No.		1	2	3
Initial	Water Content, %	14.3	14.3	14.3
	Dry Density, pcf	100.1	100.0	100.0
	Saturation, %	57.8	57.8	57.7
	Void Ratio	0.6530	0.6538	0.6551
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	24.1	24.3	24.4
	Dry Density, pcf	100.9	100.6	100.5
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.6398	0.6441	0.6462
	Diameter, in.	2.79	2.79	2.79
	Height, in.	5.58	5.59	5.59
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		2.72	3.15	3.83
Ult. Stress, tsf				
σ_1 Failure, tsf		2.86	3.48	4.48
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained
Sample Type: Recompacted
Description: Gray Silty fine to medium SAND (SM) with marine shell fragments

Assumed Specific Gravity= 2.65
Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

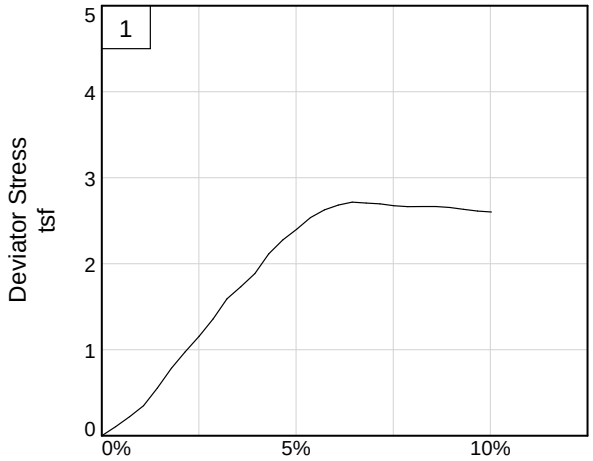
Location: App973'South from North End and 95'West from East Edge
Sample Number: Proctor No. 3
Proj. No.: EC10-166T **Date Sampled:**

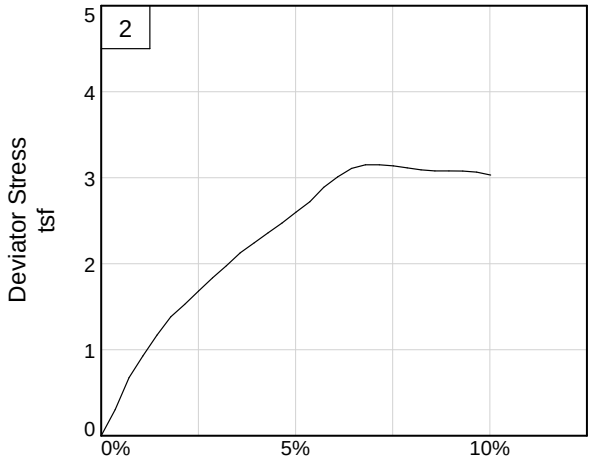
TRIAXIAL SHEAR TEST REPORT

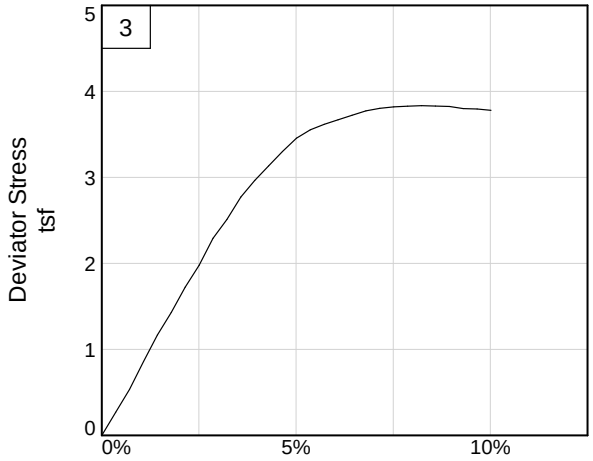
GET SOLUTIONS, INC.

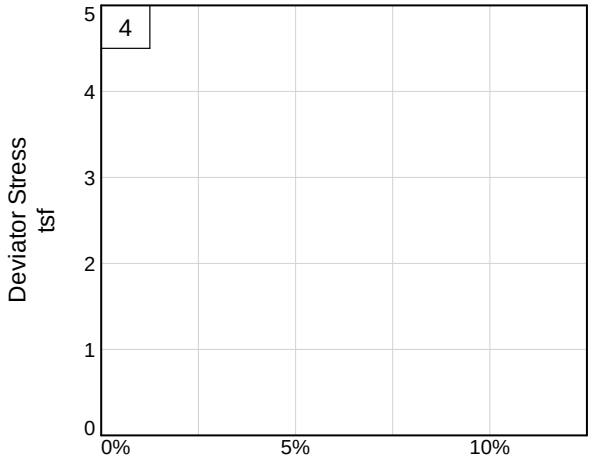
Figure T3

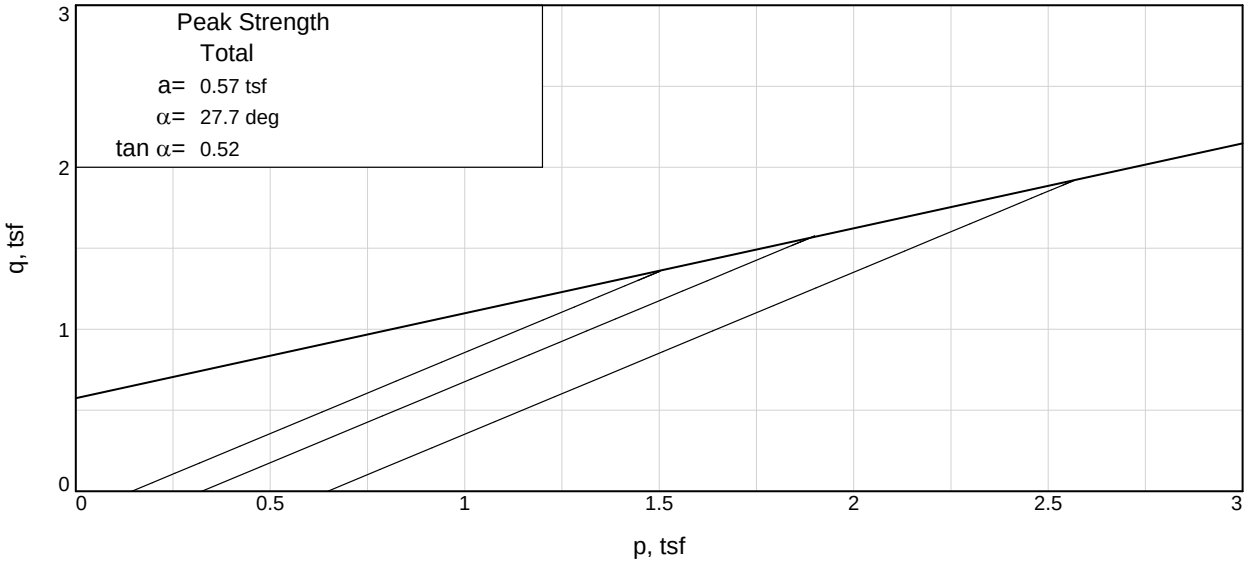
Tested By: PB **Checked By:** GS







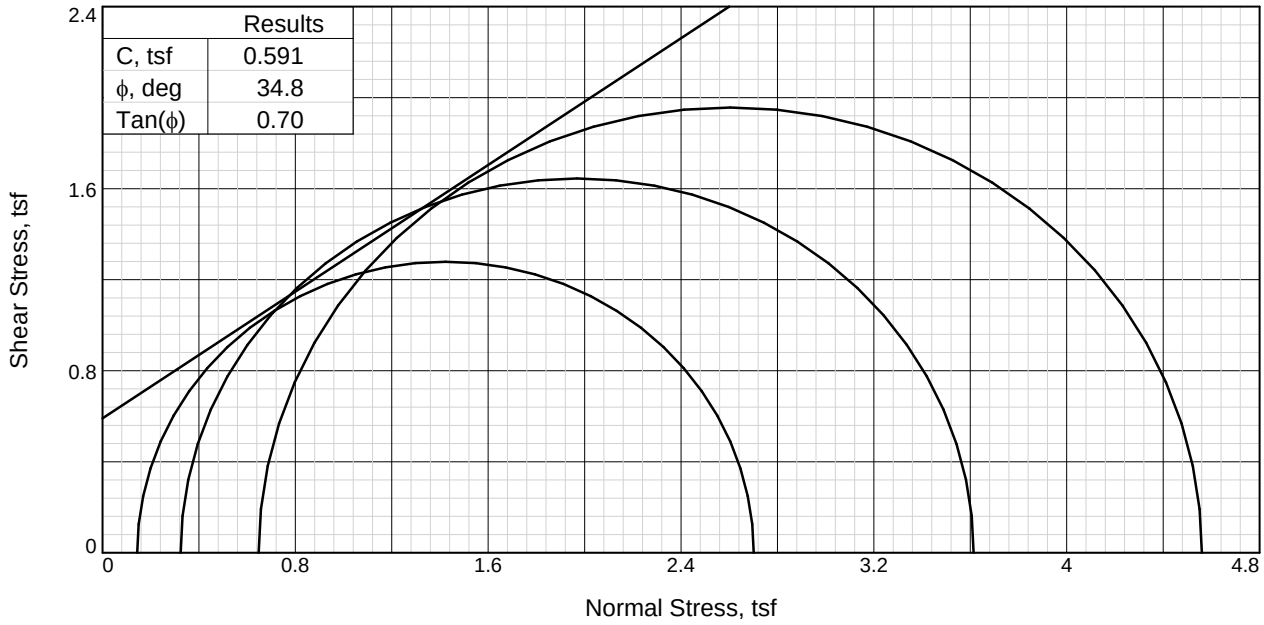


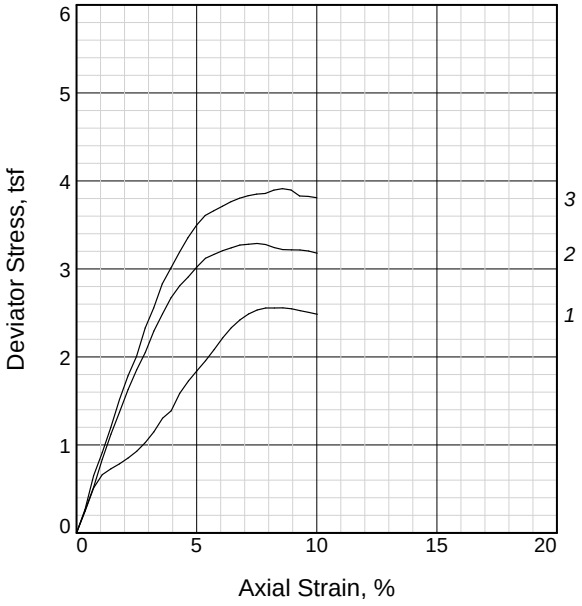


Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App973'South from North End and 95'West from East Edge
Sample Number: Proctor No. 3
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS





Sample No.		1	2	3
Initial	Water Content, %	13.2	13.2	13.2
	Dry Density, pcf	98.5	98.6	98.5
	Saturation, %	51.7	51.7	51.6
	Void Ratio	0.6794	0.6785	0.6800
	Diameter, in.	2.80	2.80	2.80
	Height, in.	5.60	5.60	5.60
At Test	Water Content, %	25.1	25.2	25.7
	Dry Density, pcf	99.3	99.1	98.5
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.6659	0.6686	0.6800
	Diameter, in.	2.79	2.79	2.80
	Height, in.	5.58	5.59	5.60
Strain rate, in./min.		0.06	0.06	0.06
Back Pressure, tsf		0.07	0.11	0.22
Cell Pressure, tsf		0.22	0.43	0.86
Fail. Stress, tsf		2.56	3.29	3.91
Ult. Stress, tsf				
σ_1 Failure, tsf		2.70	3.61	4.56
σ_3 Failure, tsf		0.14	0.32	0.65

Type of Test:
Consolidated Undrained

Sample Type: Recompacted

Description: Gray-Tan Silty fine SAND (SM) with Clay

Assumed Specific Gravity= 2.65

Remarks:

Client: CDM

Project: Dare County Landfill Phae (Cell) 4

Location: App156'North from South End and 51'East from West Edge

Sample Number: Proctor No. 4

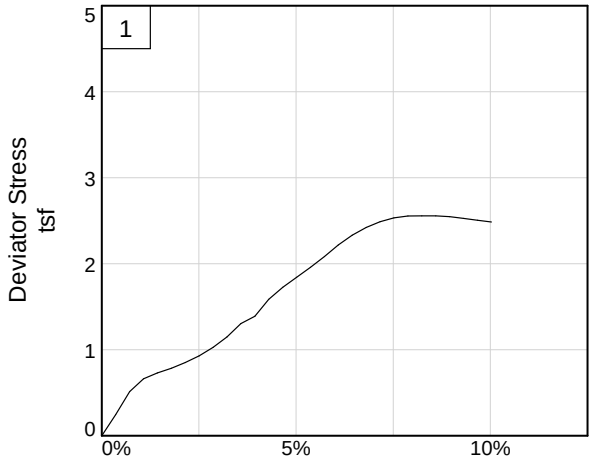
Proj. No.: EC10-166T **Date Sampled:**

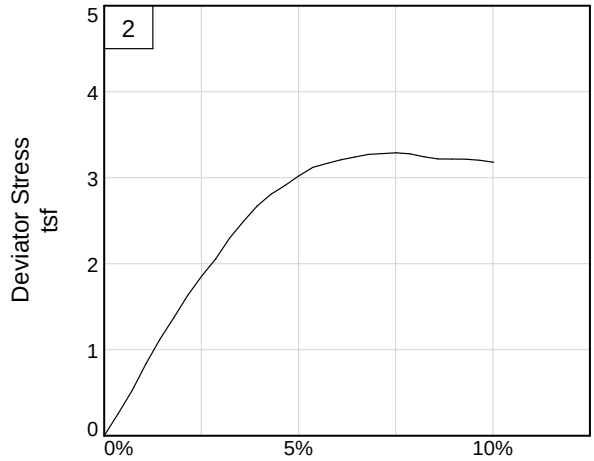
TRIAXIAL SHEAR TEST REPORT

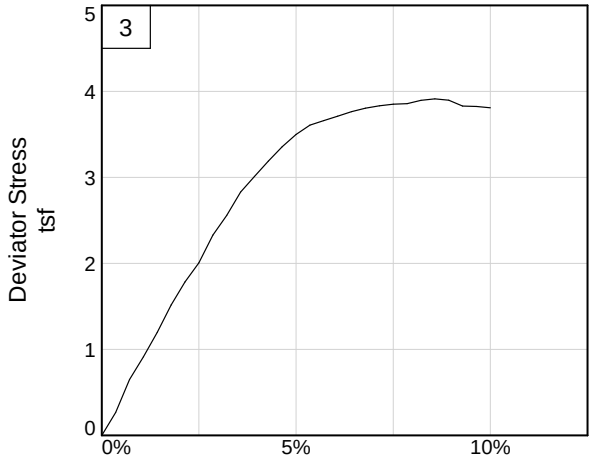
GET SOLUTIONS, INC.

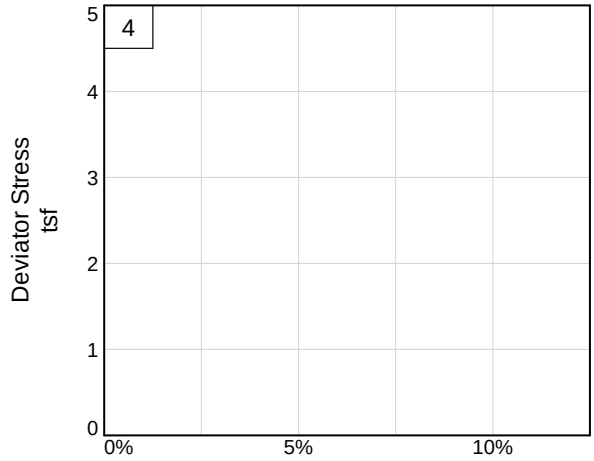
Figure T4

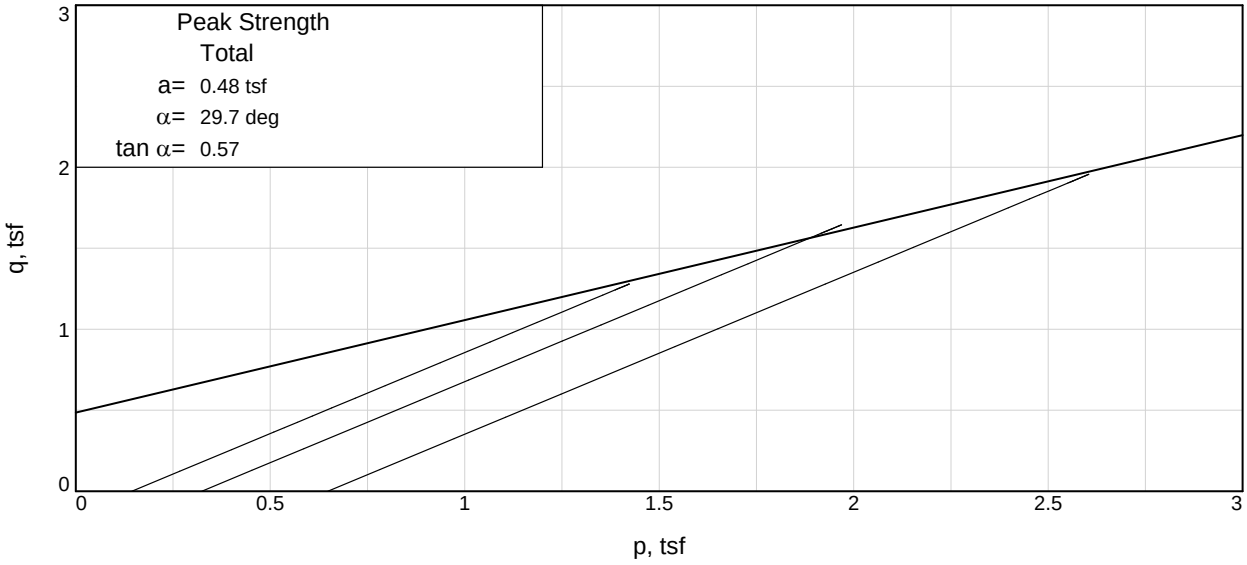
Tested By: PB **Checked By:** GS











Client: CDM
Project: Dare County Landfill Phae (Cell) 4
Location: App156'North from South End and 51'East from West Edge
Sample Number: Proctor No. 4
Project No.: EC10-166T
Figure _____

GET Solutions, Inc.

Tested By: PB **Checked By:** GS

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/29/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear Temp. (˚F)
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	13.7	97.1	110.5	2	95%	98%	X		2' BFG	35º 50.182' N 75º 49.134' W
2	8.8	103.3	112.3	3	95%	98%	X		2' BFG	35º 50.182' N 75º 49.149' W
3	8.9	105.2	114.4	3	95%	100+%	X		2' BFG	35º 50.181' N 75º 49.160' W
4	14.9	102.8	118.1	3	95%	98%	X		2' BFG	35º 50.148' N 75º 49.129' W
5	14.5	103.9	118.9	3	95%	99%	X		2' BFG	35º 50.146' N 75º 49.142' W
6	14.6	104.8	120.1	3	95%	99%	X		2' BFG	35º 50.146' N 75º 49.155' W
7	13.5	105.4	119.7	3	95%	100%	X		2' BFG	35º 50.094' N 75º 49.123' W
8	13.0	105.6	119.3	3	95%	100%	X		2' BFG	35º 50.094' N 75º 49.137' W
9	12.9	105.8	119.4	3	95%	100%	X		2' BFG	35º 50.055' N 75º 49.115' W
10	13.6	104.7	118.9	3	95%	99%	X		2' BFG	35º 50.052' N 75º 49.127' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3 4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3 103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6%	17.8%	14.3% 13.2%
Description of Material Tested:	Tan SAND, Gray SAND	Field Testing Procedure:	ASTM D 6938		
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth		
Gauge Standardization counts:	Moisture: 659 Density: 2642		□ B) Backscatter		

Gauge make/model/serial #:	Troxler	3430	32867
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/29/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear Temp. (˚F)
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
11	7.2	107.3	115.1	3	95%	100+%	X		2' BFG	35º 50.946' N 75º 49.096' W
12	8.3	104.8	113.5	3	95%	100%	X		2' BFG	35º 50.969' N 75º 49.104' W
13	6.2	111.9	118.8	3	95%	100+%	X		2' BFG	35º 50.010' N 75º 49.113' W
14	9.2	108.9	118.9	3	95%	100+%	X		2' BFG	35º 50.022' N 75º 49.141' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3	4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6%	17.8%	14.3%	13.2%
Description of Material Tested:	Tan SAND, Gray SAND	Field Testing Procedure:	ASTM D 6938			
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth			
Gauge Standardization counts:	Moisture: 659 Density: 2642		□ B) Backscatter			

Gauge make/model/serial #:	Troxler	3430	32867
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/30/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 66
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	13.3	111.4	126.3	3	95%	100+%	x		3' BFG	35º 49.944' N 75º 49.098' W
2	11.0	111.0	124.1	3	95%	100+%	x		4' BFG	35º 49.944' N 75º 49.098' W
3	13.8	110.9	125.9	3	95%	100+%	x		5' BFG	35º 49.944' N 75º 49.098' W
4	10.9	111.4	123.5	3	95%	100+%	x		3' BFG	35º 50.001' N 75º 49.107' W
5	12.4	110.7	124.4	3	95%	100+%	x		4' BFG	35º 50.001' N 75º 49.107' W
6	12.7	110.6	124.7	3	95%	100+%	x		3' BFG	35º 50.042' N 75º 49.113' W
7	12.2	110.9	124.5	3	95%	100+%	x		4' BFG	35º 50.042'N 75º 49.113'W
8	15.6	109.3	126.3	3	95%	100+%	x		3' BFG	35º 50.100' N 75º 49.122' W
9	15.9	110.6	124.9	3	95%	100+%	x		4' BFG	35º 50.100' N 75º 49.122' W
10	15.2	108.4	124.9	3	95%	100+%	x		5' BFG	35º 50.100' N 75º 49.122' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Vibratory Roller	Proctor Number:	1	2	3	4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6%	17.8%	14.3%	13.2%
Description of Material Tested:	Gray SAND	Field Testing Procedure:	ASTM D 6938			
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth			
Gauge Standardization counts:	Moisture: 655 — Density: 2604		□ B) Backscatter			

Gauge make/model/serial #:	MAKE	MODEL	SERIAL #
	Troxler	3430	32867

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/30/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 66
Grading Contractor:	Glover	General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
11	10.9	110.2	122.2	3	95%	100+%	x		3' BFG	35º 50.142' N 75º 49.127' W
12	15.2	110.8	127.6	3	95%	100+%	x		4' BFG	35º 50.142' N 75º 49.127' W
13	11.1	109.7	121.8	3	95%	100+%	x		3' BFG	35º 50.188' N 75º 49.134' W
14	12.7	111.3	125.5	3	95%	100+%	x		4' BFG	35º 50.188' N 75º 49.134' W
15	13.6	111.9	126.2	3	95%	100+%	x		5' BFG	35º 50.188' N 75º 49.134' W
16	13.8	106.6	121.2	3	95%	100+%	x		3' BFG	35º 50.177' N 75º 49.162' W
17	13.6	109.1	123.9	3	95%	100+%	x		4' BFG	35º 50.177' N 75º 49.162' W
18	11.8	110.8	123.9	3	95%	100+%	x		3' BFG	35º 50.131' N 75º 49.157' W
19	13.7	108.5	123.5	3	95%	100+%	x		4' BFG	35º 50.131' N 75º 49.157' W
20	13.6	109.0	122.6	3	95%	100+%	x		5' BFG	35º 50.131' N 75º 49.157' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1 2 3 4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4 98.7 105.3 103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6% 17.8% 14.3% 13.2%
Description of Material Tested:	Gray SAND	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 655		□ B) Backscatter
Gauge make/model/serial #:	Troxler / 3430 / 32867 (MAKE / MODEL / SERIAL #)		

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	4/30/10
Project Location:	Dare County North Carolina	Technician:	R. Woodard
Client:	CDM	Job Number:	EC10-166T
General Contractor:		Weather:	Clear — Temp. (˚F) 66
Grading Contractor:		General Test Location:	Cell 4 pad

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
21	20.2	106.4	127.9	3	95%	100+%	x		3' BFG	35º 50.086' N 75º 49.153' W
22	16.8	107.5	125.5	3	95%	100+%	x		4' BFG	35º 50.086' N 75º 49.153' W
23	13.2	110.2	124.7	3	95%	100+%	x		3' BFG	35º 50.031' N 75º 49.145' W
24	14.2	109.6	123.7	3	95%	100+%	x		4' BFG	35º 50.031' N 75º 49.145' W
25	13.7	109.8	124.8	3	95%	100+%	x		3' BFG	35º 50.044' N 75º 49.125' W
26	12.6	111.1	125.8	3	95%	100+%	x		4' BFG	35º 50.044' N 75º 49.125' W
27	14.8	108.9	124.9	3	95%	100+%	x		3' BFG	35º 50.095' N 75º 49.134' W
28	14.9	109.5	124.1	3	95%	100+%	x		4' BFG	35º 50.095' N 75º 49.134' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1 2 3 4
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4 98.7 105.3 103.7
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.6% 17.8% 14.3% 13.2%
Description of Material Tested:	Gray SAND	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 655 Density: 2604		□ B) Backscatter

Gauge make/model/serial #:	Troxler	3430	32867
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
504 East Elizabeth Street; Suite 2
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	5/25/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Overcast Temp. (˚F) 75
Grading Contractor:	Glover	General Test Location:	Lots 2, 4, 6, 8, 10, 12, 14

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	17.6	99.8	117.4	2	95%	100+%	x		1' BFG	Approx. center of Lot 2' 35.40 05' N 75.49.125' W
2	22.4	101.0	123.6	6	95%	98%	x		2' BFG	Approx. center of Lot 2' 35.40 05' N 75.49.125' W
3	21.3	98.2	119.1	2	95%	100%	x		1' BFG	Approx. center of Lot 4 35.49.996' N 75.49.132' W
4	20.7	100.2	120.9	6	95%	97%	x		2' BFG	Approx. center of Lot 4 35.49.996' N 75.49.132' W
5	22.7	94.8	116.4	2	95%	96%	x		1' BFG	Approx. center of Lot 6 35.50.040' N 75.48.138' W
6	10.9	110.0	122.0	5	95%	100%	x		2' BFG	Approx. center of Lot 6 35.50.040' N 75.48.138' W
7	20.4	98.1	118.5	2	95%	99%	x		1' BFG	Approx. center of Lot 8 35.50.084' N 75.49.145' W
8	24.7	98.3	122.6	2	95%	100%	x		2' BFG	Approx. center of Lot 8 35.50.084' N 75.49.145' W
9	22.4	97.3	119.1	2	95%	98%	x		1' BFG	Approx. center of Lot 10 35.50.128' N 75.49.151' W
10	17.7	107.4	126.4	5	95%	99%	x		2' BFG	Approx. center of Lot 10 35.50.128' N 75.49.151' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3	4	5	6
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7	108.5	103.4
Test Elevation Established By:	Geotechnics	Optimum Moisture (%):	16.6%	17.8%	4.3%	13.2%	16.0%	14.1%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938					
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth					
Gauge Standardization counts:	Moisture: 602 Density: 2754		□ B) Backscatter					
Gauge make/model/serial #:	Troxler / 3430 / 31918 (MAKE / MODEL / SERIAL #)							

Remarks:

G E T Solutions, Inc.
504 East Elizabeth Street; Suite 2
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	5/25/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Overcast Temp. (˚F) 75
Grading Contractor:	Glover	General Test Location:	Lots 2, 4, 6, 8, 10, 12, 14

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
11	20.3	100.8	121.4	6	95%	97%	X		1' BFG	Approx. center of lot 12 35.50.173' N 75.49.157' W
12	19.9	99.7	119.5	6	95%	96%	X		2' BFG	Approx. center of lot 12 35.50.173' N 75.49.157' W
13	21.8	97.2	118.4	2	95%	98%	x		1' BFG	Approx. center of lot 14 35.50.215' N 75.49.164' W
14	18.6	101.3	120.1	6	95%	98%	x		2' BFG	Approx. center of lot 14 35.50.215' N 75.49.164' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	1	2	3	4	5	6
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	103.4	98.7	105.3	103.7	108.5	103.4
Test Elevation Established By:	Geotechnics	Optimum Moisture (%):	16.6%	17.8%	4.3%	13.2%	16.0%	14.1%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938					
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth					
Gauge Standardization counts:	Moisture: 602 Density: 2754		□ B) Backscatter					
Gauge make/model/serial #:	Troxler / 3430 / 31918 (MAKE / MODEL / SERIAL #)							

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	6/11/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear Temp. (˚F) 75
Grading Contractor:	Glover	General Test Location:	Cell 4 Pad; Sub-Lots 5, 6, 7, 8, 9, 10

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	17.8	105.3	119.8	5	95%	97%	x		FG	Lot 5; 35.50.027' N 74.49.115' W
2	11.0	111.8	124.1	5	95%	100+%	x		FG	Lot 4; 35.50.027' N 75.49.137' W
3	15.9	104.9	121.5	5	95%	97%	x		FG	Lot 7 35.50.070' N 75.49.117' W
4	14.3	107.6	123.0	5	95%	99%	x		FG	Lot 6 35.50.068' N 75.49.140' W
5	16.1	105.1	122.0	5	95%	97%	x		FG	Lot 9 35.50.121' N 75.49.122' W
6	13.1	108.7	122.9	5	95%	100%	x		FG	Lot 10 35.50.119' N 75.49.147' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	5
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	108.5
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	16.0%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 602		Density: 2768
			☐ B) Backscatter

Gauge make/model/serial #:	Troxler	3430	31918
	MAKE	MODEL	SERIAL #

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	6/14/10
Project Location:	Dare County North Carolina	Technician:	G. Gallop
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 90
Grading Contractor:	Glover	General Test Location:	Cell 4

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	16.3	101.8	118.4	6	95%	98%	x		FG	35º 49.969 N / 75º 49.101' W
2	21.4	102.3	124.2	6	95%	99%	x		1' BFG	35º 49.969' N / 75º 49.101' W
3	13.8	101.6	115.7	6	95%	98%	x		FG	35º 50.000' N / 75º 49.110' W
4	25.7	95.2	119.7	2	95%	96%	x		1' BFG	35º 50.000' N / 75º 49.110' W
5	11.3	105.9	117.9	5	95%	98%	x		FG	35º 50.053' N / 75º 49.115' W
6	26.0	95.0	119.7	2	95%	96%	x		1' BFG	35º 50.053' N / 75º 49.115' W
7	11.7	104.8	117.0	5	95%	96%	x		FG	35º 50.084' N / 75º 49.123' W
8	24.7	96.4	120.2	2	95%	98%	x		1' BFG	35º 50.084' N / 75º 49.123' W
9	10.9	108.0	119.8	5	95%	99%	x		FG	35º 50.137' N / 75º 49.127' W
10	17.3	99.8	117.6	6	95%	96%	x		1' BFG	35º 50.137' N / 75º 49.127' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	2 5 6
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	98.7 108.5 103.4
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	17.8% 16.0% 14.1%
Description of Material Tested:	On-site Excavated Soils	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: 705 Density: 2497		□ B) Backscatter
Gauge make/model/serial #:	Troxler / 3430 / 31918 (MAKE / MODEL / SERIAL #)		

Remarks:

G E T Solutions, Inc.
106 Capital Trace; Unit E
Elizabeth City, North Carolina 27909
Tel: (252) 335-9765
Fax:(252) 335-9766

COMPACTION TEST REPORT

Project:	Dare County Landfill - Phase (Cell) 4	Date:	6/17/10
Project Location:	Dare County North Carolina	Technician:	J. Meads
Client:	CDM	Job Number:	EC10-166T
General Contractor:	Glover	Weather:	Clear — Temp. (˚F) 89
Grading Contractor:	Glover	General Test Location:	Cell 4

Test Number	Moisture (%)	Dry Density (pcf)	Wet Density (pcf)	Proctor Number	% Proctor		Pass	Fail	Test Elevation*	Test Location (Grid, Coordinates, Roadway Station, etc.)
					Spec	Actual				
1	13.5	105.0	119.2	5	95%	97%	x		FG	Lot 12; 35º 50.166' N 75º 49.158' W
2	14.1	107.6	122.8	5	95%	99%	x		FG	Lot 14; 35º 50.211' N 75º 49.164' W
3	11.9	108.0	120.9	5	95%	99%	X		FG	Lot 15; 35º 50.258' N 75º 49.146' W
4	13.5	106.9	121.3	5	95%	98%	X		1' BFG	Lot 15; 35º 50.258' N 75º 49.146' W
5	15.0	104.5	120.2	3	95%	100%	x		2' BFG	Lot 15; 35º 50.258' N 75º 49.146' W
6	15.3	104.0	119.9	3	95%	100%	x		3' BFG	Lot 15; 35º 50.258' N 75º 49.146' W
7	9.7	108.5	119.0	5	95%	100%	x		FG	Lot 16; 35º 50.253' N 75º 49.171' W
8	12.0	105.5	118.1	5	95%	97%	x		1' FG	Lot 16; 35º 50.253' N 75º 49.171' W
9	12.8	103.4	116.6	3	95%	100%	x		2' FG	Lot 16; 35º 50.253' N 75º 49.171' W
10	15.0	103.0	118.5	3	95%	100%	x		3' FG	Lot 16; 35º 50.253' N 75º 49.171' W

* Note: BFF = Below Finish Floor, BFG = Below Finish Grade, FG = Finished Grade, BOF = Base of Footing

Compaction Equipment Used:	Roller	Proctor Number:	3 5
Test Location Established By:	GET Solutions Inc.	Max. Dry Density (pcf):	105.3 108.5
Test Elevation Established By:	GET Solutions Inc.	Optimum Moisture (%):	14.3% 16.0%
Description of Material Tested:	Onsite excavated soils	Field Testing Procedure:	ASTM D 6938
Proctor Type:	ASTM D698	Field Testing Method:	■ A) Direct transmission & test depth
Gauge Standardization counts:	Moisture: Density:		□ B) Backscatter

Gauge make/model/serial #:	MAKE	MODEL	SERIAL #
	Troxler	3430	31918

Remarks: