

FORT BEND COUNTY FY 2009
COMMISSIONERS COURT AGENDA REQUEST FORM
Return Completed Form by E-Mail to: Agenda Coordinator, County Judge's Office

Date Submitted: 08/25/2009 Submitted By: P.Batts
Court Agenda Date: 09/01/09 Department: Engineering :
Phone Number: 281 633 7507

SUMMARY OF ITEM: Approve Payment of Invoice No. T060840 (Pay Estimate No. 1) in the amount of \$9,323.25 to Terracon regarding Greenbusch Road, Phase I, (from Katy Fleweller Road to Shadow Forest), Mobility Bond Project #732, Precinct 3. (Fund: 2007 Mobility Bonds) P.O.#33590
RENEWAL AGREEMENT/APPOINTMENT YES NO
REVIEWED BY COUNTY ATTORNEY'S OFFICE: YES NO

FINANCIAL SUMMARY:
BUDGETED ITEM: YES NO
FUNDNG SOURCE: Accounting Unit: Account Number:
Activity (If Applicable):
DESCRIPTION OF LAWSOM ACCOUNT: _____

Instructions to submit Agenda Request Form:
• Completely fill out agenda form: incomplete forms will not be processed.
• Agenda Request Forms should be submitted by e-mail, fax, or inter-office mail, and all back-up information must be provided by Wednesday at 2:00 p.m. to all those listed below.
• All original back-up must be received in the County Judge's Office by 2:00 p.m. on Wednesday.
DISTRIBUTION:
Original Form Submitted with back up to County Judge's Office (✓ when completed)
If by E-Mail to ospindon@co.fort-bend.tx.us If by Fax to (281) 341-8609
Distribute copies with back-up to all listed below. If by fax, send to numbers below:
 Auditor (281-341-3774) Comm. Pct. 1 (281-342-0587)
 Budget Officer (281-344-3954) Comm. Pct. 2 (281-403-8009)
 Facilities/Planning (281-633-7022) Comm. Pct. 3 (281-242-9060)
 Purchasing Agent (281-341-8642) Comm. Pct. 4 (281-980-9077)
 Information Technology (281-341-4526) County Clerk (281-341-8697)
 Other: County Atty (281-341-4557)

RECOMMENDATION / ACTION REQUESTED:
Special Handling Requested (specify):

Terracon

INVOICE

*OK
MAY
2009*

11555 Clay Road, Suite 100
Houston, TX 77043
713-690-8989

Project Manager: Jason Mills

Project: Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest

To: Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

REMIT TO:	
Invoice Number: T060840	
Terracon Consultants, Inc.	
P.O. Box 931277	
Kansas City, MO 64193-1277	
Federal E.I.N.: 42-1249917	

P.O. Number: 33590

Project Number:	92091181
Contract Amount:	\$85,077.00
Billed to Date:	\$9,323.25
Invoice Date:	8/07/2009
Services Through:	8/01/2009

Date	Report	Description of Services	Quantity	Rate	Total
7/20/09	92091181.0001	Technician, ACI - I, II, per hour	2.00	\$44.00	\$88.00
7/20/09	92091181.0001	Vehicle Charge, per hour	2.00	\$7.50	\$15.00
7/20/09	92091181.0001	Atterberg Limit, per test	1.00	\$53.00	\$53.00
7/20/09	92091181.0001	Standard Proctor (ASTM D-698), each	1.00	\$175.00	\$175.00
7/20/09	92091181.0002	Atterberg Limit, per test	1.00	\$53.00	\$53.00
7/20/09	92091181.0002	Standard Proctor (ASTM D-698), each	1.00	\$175.00	\$175.00
7/20/09	92091181.0003	Atterberg Limit, per test	1.00	\$53.00	\$53.00
7/20/09	92091181.0003	Standard Proctor (ASTM D-698), each	1.00	\$175.00	\$175.00
7/20/09	92091181.0004	Atterberg Limit, per test	1.00	\$53.00	\$53.00
7/20/09	92091181.0004	Standard Proctor (ASTM D-698), each	1.00	\$175.00	\$175.00
7/21/09	92091181.0005	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/21/09	92091181.0005	Technician, ACI - I, II, per hour - OT	3.00	\$66.00	\$198.00
7/21/09	92091181.0005	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/21/09	92091181.0005	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/21/09	92091181.0006	Technician, ACI - I, II, per hour	2.00	\$44.00	\$88.00
7/21/09	92091181.0006	Vehicle Charge, per hour	2.00	\$7.50	\$15.00
7/21/09	92091181.0006	Standard Proctor (ASTM D-698), Stabilized Soil, each	1.00	\$193.00	\$193.00
7/21/09	92091181.0007	Molding and Compressive Strength of Cement Stab. Sand, each	4.00	\$61.00	\$244.00
7/22/09	92091181.0008	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/22/09	92091181.0008	Technician, ACI - I, II, per hour - OT	3.50	\$66.00	\$231.00
7/22/09	92091181.0008	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/22/09	92091181.0008	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/23/09	92091181.0009	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/23/09	92091181.0009	Technician, ACI - I, II, per hour - OT	3.50	\$66.00	\$231.00
7/23/09	92091181.0009	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/23/09	92091181.0009	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/23/09	92091181.0010	Technician, ACI - I, II, per hour	1.50	\$44.00	\$66.00
7/23/09	92091181.0010	Vehicle Charge, per hour	1.50	\$7.50	\$11.25
7/23/09	92091181.0010	Standard Proctor (ASTM D-698), Stabilized Soil, each	1.00	\$193.00	\$193.00
7/23/09	92091181.0011	Molding and Compressive Strength of Cement Stab. Sand, each	4.00	\$61.00	\$244.00
7/24/09	92091181.0012	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00

We accept MasterCard, VISA, and Discover. Please call (800) 593-7777, option 12, with your electronic payment or credit card information.

TERMS: DUE UPON PRESENTATION OF INVOICE



INVOICE

Invoice Number: T060840
 Project Number: 92091181
 Project: Greenbusch Road
 Phase I
 FBC Project No 732

Project Manager: Jason Mills

Date	Report	Description of Services	Quantity	Rate	Total
Continued					
7/24/09	92091181.0012	Technician, ACI - I, II, per hour - OT	3.50	\$66.00	\$231.00
7/24/09	92091181.0012	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/24/09	92091181.0012	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/27/09	92091181.0013	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/27/09	92091181.0013	Technician, ACI - I, II, per hour - OT	2.00	\$66.00	\$132.00
7/27/09	92091181.0013	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/27/09	92091181.0013	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/28/09	92091181.0014	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/28/09	92091181.0014	Technician, ACI - I, II, per hour - OT	0.50	\$66.00	\$33.00
7/28/09	92091181.0014	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/28/09	92091181.0014	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/28/09	92091181.0015	Technician, ACI - I, II, per hour	2.00	\$44.00	\$88.00
7/28/09	92091181.0015	Vehicle Charge, per hour	2.00	\$7.50	\$15.00
7/28/09	92091181.0015	Molding and Compressive Strength of Cement Stab. Sand, each	4.00	\$61.00	\$244.00
7/29/09	92091181.0016	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/29/09	92091181.0016	Technician, ACI - I, II, per hour - OT	0.50	\$66.00	\$33.00
7/29/09	92091181.0016	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/29/09	92091181.0016	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/30/09	92091181.0017	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/30/09	92091181.0017	Technician, ACI - I, II, per hour - OT	2.00	\$66.00	\$132.00
7/30/09	92091181.0017	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/30/09	92091181.0017	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
7/30/09	92091181.0018	Molding and Compressive Strength of Cement Stab. Sand, each	4.00	\$61.00	\$244.00
7/31/09	92091181.0019	Technician, ACI - I, II, per hour	8.00	\$44.00	\$352.00
7/31/09	92091181.0019	Technician, ACI - I, II, per hour - OT	1.00	\$66.00	\$66.00
7/31/09	92091181.0019	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
7/31/09	92091181.0019	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
8/1/09	Month	Sr. Engineer, P.E., per hour	2.50	\$123.00	\$307.50
8/1/09	Month	Project Engineer, P.E., per hour	6.50	\$105.00	\$682.50
8/1/09	Month	Vehicle Charge, per hour	2.50	\$7.50	\$18.75
8/1/09	Month	Vehicle Charge, per hour	1.50	\$7.50	\$11.25

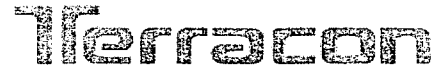
Invoice Total \$9,323.25

Statement of Account	
Contract Amount	\$85,077.00
Amount Previously Billed	\$0.00
Total Due this Invoice	\$9,323.25
Total Billed	\$9,323.25
Payments to Date	\$0.00
Total Due	\$9,323.25

We accept MasterCard, VISA, and Discover. Please call (800) 593-7777, option 12, with your electronic payment or credit card information.

TERMS: DUE UPON PRESENTATION OF INVOICE

LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT



Report Number: 92091181.0001
Service Date: 07/20/09
Report Date: 07/24/09

11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number 92091181

Material Information

Source of Material: Insitu
Proposed Use: Trench Backfill

Sample Information

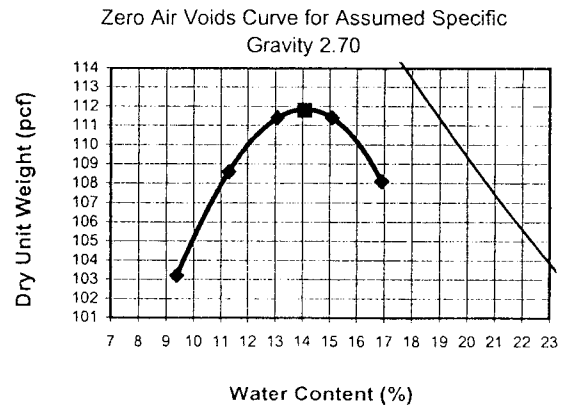
Sample Date: 07/20/09
Sampled By: Yohannes Ghebremeskel
Sample Location: Greenbusch Rd., Station 62+09 Outfall (0 to -4')
Sample Description: Light Gray Silty Clay

Laboratory Test Data

Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 111.8
Optimum Water Content (%): 14.1

	Result	Specifications
Liquid Limit:	40	
Plastic Limit:	13	
Plasticity Index:	27	
In-Place Moisture (%):		

USCS:



Comments:

Services: Obtain a sample of subgrade from the project site and return it to the laboratory. Prepare and test the sample for moisture-density relation (ASTM D698) and Atterberg limits (ASTM D4318).

Terracon Rep: Yohannes Ghebremeskel

Started: 0845

Reported To:

Finished: 1045

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering

(1) Durwood Greene Construction Co

(1) Durwood Greene Construction Co

(1) Schaumburg & Polk

Reviewed By:

Jason L. Mills
Project Manager

Test Methods: ASTM D698, ASTM D4318

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT

Terracon

Report Number: 92091181.0002

Service Date: 07/20/09

Report Date: 07/22/09

11555 Clay Road, Ste 100

Houston, TX 77043

713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number 92091181

Material Information

Source of Material: Insitu
Proposed Use: Trench Backfill

Sample Information

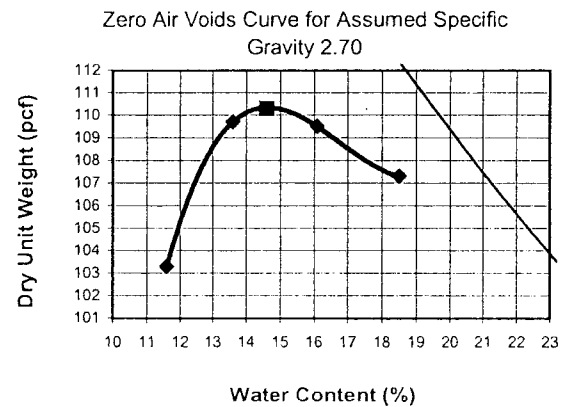
Sample Date: 07/20/09
Sampled By: Yohannes Ghebremeskel
Sample Location: Greenbusch Rd. Station 62+09 Outfall (-4' to -8')
Sample Description: Light Gray Silty Clay

Laboratory Test Data

Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 110.3
Optimum Water Content (%): 14.6

	Result	Specifications
Liquid Limit:	46	
Plastic Limit:	14	
Plasticity Index:	32	
In-Place Moisture (%):		

USCS:



Comments:

**Refer to report no. 92091181.0001 for time.

Services: Obtain a sample of backfill from the project site and return it to the laboratory. Prepare and test the sample for Moisture Density Relation (ASTM D698) and Atterberg limits (ASTM D4318).

Terracon Rep: Yohannes Ghebremeskel

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering

(1) Durwood Greene Construction Co

(1) Durwood Greene Construction Co

(1) Schaumburg & Polk

Reviewed By:

Jason L. Mills
Project Manager

Test Methods: ASTM D698, ASTM D4318

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT

Terracon

Report Number: 92091181.0003
Service Date: 07/20/09
Report Date: 07/22/09

11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number 92091181

Material Information

Source of Material: Insitu
Proposed Use: Trench Backfill

Sample Information

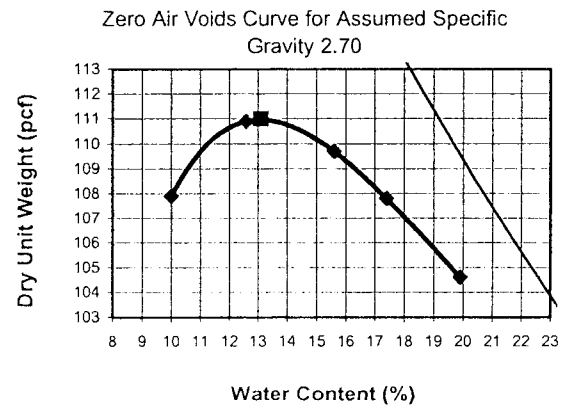
Sample Date: 07/20/09
Sampled By: Yohannes Ghebremeskel
Sample Location: Greenbusch Rd. Station 62+09 Outfall (-8' to -13')
Sample Description: Tan and Red Sandy Clay

Laboratory Test Data

Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 111.0
Optimum Water Content (%): 13.1

	Result	Specifications
Liquid Limit:	28	
Plastic Limit:	15	
Plasticity Index:	13	
In-Place Moisture (%):		

USCS:



Comments:

**Refer to report no. 92091181.0001 for time.

Services: Obtain a sample of backfill from the project site and return it to the laboratory. Prepare and test the sample for Moisture Density Relation (ASTM D698) and Atterberg limits (ASTM D4318).

Terracon Rep: Yohannes Ghebremeskel

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering

(1) Durwood Greene Construction Co

(1) Durwood Greene Construction Co

(1) Schaumburg & Polk

Started: **

Finished: **

Reviewed By:

Jason L. Mills
Project Manager

Test Methods: ASTM D698, ASTM D4318

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT

Terracon

Report Number: 92091181.0004
Service Date: 07/20/09
Report Date: 07/22/09

11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number 92091181

Material Information

Source of Material: Insitu
Proposed Use: Trench Backfill

Sample Information

Sample Date: 07/20/09
Sampled By: Yohannes Ghebremeskel
Sample Location: Greenbusch Rd. Station 62+09 Outfall (-13' to 14')
Sample Description: Red Sandy Clay

Laboratory Test Data

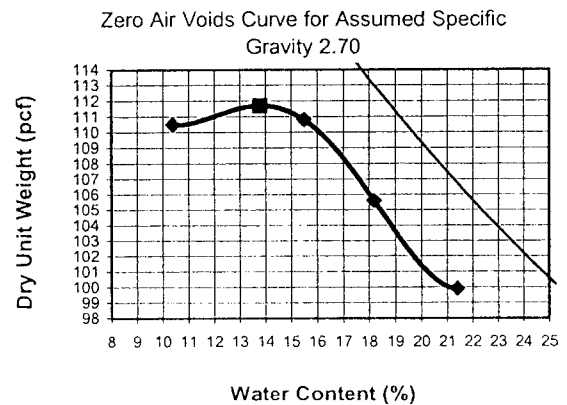
Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 111.7
Optimum Water Content (%): 13.8

Result

Liquid Limit: 27
Plastic Limit: 19
Plasticity Index: 8
In-Place Moisture (%):

Specifications

USCS:



Comments:

**Refer to report no. 92091181.0001 for time.

Services: Obtain a sample of backfill from the project site and return it to the laboratory. Prepare and test the sample for Moisture Density Relation (ASTM D698) and Atterberg limits (ASTM D4318).

Terracon Rep: Yohannes Ghebremeskel

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering (1) Durwood Greene Construction Co
(1) Durwood Greene Construction Co (1) Schaumburg & Polk

Started: **

Finished: **

Reviewed By:

Jason L. Mills
Project Manager

Test Methods: ASTM D698, ASTM D4318

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0005
Service Date: 07/21/09
Report Date: 07/24/09



11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0006	100 PSI Cment Stabilized Sand	ASTM D698	15.3	111.7	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
42" RCP, Storm Sewer Backfill									
1	50'S of Storm Manhole, Station 61+70	Bedding	1	6	119.6	13.1	12.3	106.5	95
2	50'S of Storm Manhole, Station 61+70	1/-9'	1	6	121.0	13.8	12.9	107.2	96

Datum: Top of Ground

Gauge ID: 31514

Std. Cnt. M: 681

Std. Cnt. D: 2880

Comments: Test results on this report meet project requirements as noted above.

Terracon's field representative was asked to wait on stand by time because they had to cross a 30" gas line.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering

(1) Durwood Greene Construction Co

(1) Durwood Greene Construction Co

(1) Schaumburg & Polk

Started: 0630

Finished: 1730

Lunch / Non-Chargeable:

Reviewed By:

Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT

Terracon

Report Number: 92091181.0006

Service Date: 07/21/09

Report Date: 07/22/09

11555 Clay Road, Ste 100

Houston, TX 77043

713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number 92091181

Material Information

Source of Material: Gulf Coast Plant 15
Proposed Use: Utility Backfill

Sample Information

Sample Date: 07/21/09 Sample Time: 1130
Sampled By: Bustillo, Henry
Sample Location: 42" RCP Outfall to Storm Manhole, Station
61+70
Sample Description: 100 PSI Cment Stabilized Sand

Laboratory Test Data

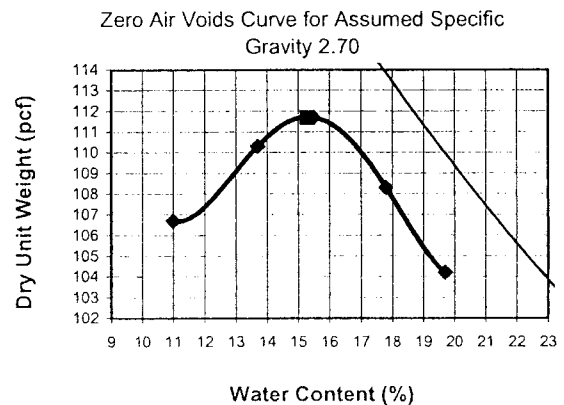
Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 111.7
Optimum Water Content (%): 15.3

Result

Specifications

Liquid Limit:
Plastic Limit:
Plasticity Index:
In-Place Moisture (%):

USCS:



Comments:

Services: Obtain a sample of sand cement backfill at the project site and return it to the laboratory. Prepare and test the sample for moisture-density relationship.

Terracon Rep: Bustillo, Henry

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering

(1) Durwood Greene Construction Co

(1) Durwood Greene Construction Co

(1) Schaumburg & Polk

Started: 1100

Finished: 1300

Reviewed By:

Jason L. Mills
Project Manager

Test Methods: ASTM D698

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

CSS-COMPRESSIVE REPORT

Report Number: 92091181.0007
Service Date: 07/21/09
Report Date: 07/28/09
Task:

Terracon

11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project No. 92091181

Material Information

Specified Strenght: 100 psi @ 2 days

Batch Time: 10:55 AM
Supplier: Gulf Coast Stabilized Materials
Truck No.: 780 Plant: 15
Ticket No.: 660090
Material Type: Cement Stabilized Sand

Sample Information

Time Sampled: 11:30 AM
Date Sampled: 7/21/09
Time Molded: 2:00 PM
Technician: Henry Bustillo
Weather Conditions:
Sample Location:
Placement Location: Utility Backfill, 42" RCP Outfall to Storm Manhole 61+70
Moisture Content: 11.0%

Test Method

Molding: ASTM D 558-Method "A" - As is Moisture
Compressive Strength: ASTM D 1633-In plastic bag at room temperature

Laboratory Test Data

Specimen ID.	Height (inches)	Diameter (inches)	Area (Sq. inches)	Date Tested	Test Age (days)	Maximum Load (lbs.)	Compressive Strength (psi)
A	4.55	4	12.57	7/23/09	2	2590	205
B	4.55	4	12.57	7/23/09	2	2600	205
C	4.55	4	12.57	7/28/09	7	3560	285
D	4.55	4	12.57	7/28/09	7	3510	280
Average (2-day)							205
Average (7-day)							285

Comments: **Refer to Report No. 92091181.0006

Services: Traveled to the project site to provide testing/observation services as requested.

Terracon Rep: Bustillo, Henry

Reported To:

Contractor: Durwood Greene

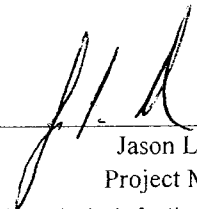
Report Distribution

(1) Fort Bend County Engineering, ndh@co.fort- (1) Durwood Greene Construction Co,
(1) Durwood Greene Construction Co, (1) Schaumburg & Polk, eknesek@spi-eng.com

Started: **

Finished: **

Reviewed By



Jason L. Mills
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0008
Service Date: 07/22/09
Report Date: 07/27/09



11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0003	Tan and Red Sandy Clay	ASTM D698	13.1	111.0	Not Specif	Min 95
2	92091181.0006	100 PSI Cment Stabilized Sand	ASTM D698	15.3	111.7	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
42" RCP Backfill, Outfall									
1	Station 0+60	2/-8'	1	8	124.3	15.0	13.7	109.3	98
2	Station 0+60	3/-7'	1	8	124.3	14.0	12.7	110.3	99
3	Station 0+60	4/-6'	1	8	124.5	14.9	13.6	109.6	99
4	Station 0+60	5/-5'	1	8	124.0	12.8	11.5	111.2	100
5	Station 0+60	6/-4'	1	8	123.3	13.9	12.7	109.4	99
6	Station 0+60	7/-3'	1	8	123.0	13.4	12.2	109.6	99
7	Station 0+60	8/-2'	1	8	121.7	12.9	11.9	108.8	98
8	Station 0+60	9/-1'	1	8	122.2	14.1	13.0	108.1	97
9	Station 0+60	Final	1	8	119.0	11.9	11.1	107.1	96
42" RCP Backfill, Greenbusch Rd.									
10	Station 61+20	Bedding	2	6	122.9	14.4	13.3	108.5	97
11	Station 61+00	1/-3'	1	8	123.5	14.3	13.1	109.2	98
12	Station 61+40	2/-2'	1	8	125.8	15.4	13.9	110.4	99

Datum: Top of Ground Gauge ID: 31514 Std. Cnt. M:680 Std. Cnt. D: 2908

Comments: Test results on this report meet project requirements as noted above.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas
Reported To:

Started: 0630
Finished: 1800

Lunch / Non-Chargeable:

Contractor: Durwood Greene

Report Distribution:

Reviewed By:

(1) Fort Bend County Engineering,
ndh@co.fort-bend.tx.us
(1) Durwood Greene Construction Co.,
smaynard@durwoodgreene.com

(1) Durwood Greene Construction Co.,
dmarchel@durwoodgreene.com
(1) Schaumburg & Polk, eknesek@spi-eng.com

Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0009
 Service Date: 07/23/09
 Report Date: 07/27/09



11555 Clay Road, Ste 100
 Houston, TX 77043
 713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
 Attn: Nathan Hatcher
 1124 Blume Rd
 Rosenberg, TX 77471

Project

Greenbusch Road Phase I
 FBC Project No 732
 From Katy Flewellen Rd to Shadow Forest
 Fort Bend County, TX
 Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0002	Light Gray Silty Clay	ASTM D698	14.6	110.3	Not Specif	Min 95
2	92091181.0003	Tan and Red Sandy Clay	ASTM D698	13.1	111.0	Not Specif	Min 95
3	92091181.0010	1.5 sk. Cement Stabilized Sand	ASTM D698	13.5	115.6	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
42" RCP Backfill, Greenbusch Rd.									
1	Station 59+60	Bedding	3	6	121.3	11.2	10.2	110.1	95
2	Station 57+60	Bedding	3	6	124.6	11.9	10.6	112.7	97
3	Station 58+00	1/-3'	1	8	119.0	13.6	12.9	105.4	96
4	Station 60+00	1/-3'	1	8	121.2	12.5	11.5	108.7	99
5	Station 60+50	2/-2'	1	8	124.7	13.5	12.1	111.2	100+
6	Station 58+50	2/-2'	1	8	118.5	12.8	12.1	105.7	96
7	Station 57+80	3/-1'	1	8	124.7	12.8	11.4	111.9	100+
8	Station 59+50	3/-1'	1	8	119.2	12.7	11.9	106.5	97
9	Station 61+20	3/-1'	2	8	122.5	13.8	12.7	108.7	98

Datum: Top of Ground

Gauge ID: 31514

Std. Cnt. M: 680

Std. Cnt. D: 2910

Comments: Test results on this report meet project requirements as noted above.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas

Started: 0630

Lunch / Non-Chargeable:

Reported To:

Finished: 1800

Contractor: Durwood Greene

Report Distribution:

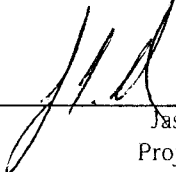
Reviewed By:

(1) Fort Bend County Engineering,
 ndh@co.fort-bend.tx.us

(1) Durwood Greene Construction Co.,
 dmarchel@durwoodgreene.com

(1) Durwood Greene Construction Co.,
 smaynard@durwoodgreene.com

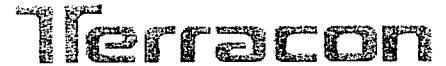
(1) Schaumburg & Polk, eknesek@spi-eng.com


 Jason L. Mills
 Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

LABORATORY COMPACTION CHARACTERISTICS OF SOIL REPORT



Report Number: 92091181.0010
Service Date: 07/23/09
Report Date: 07/24/09

11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number 92091181

Material Information

Source of Material: Gulf Coast Plant 15
Proposed Use: Utility Backfill

Sample Information

Sample Date: 07/23/09
Sampled By: Nestor I. Gamez
Sample Location: 42" RCP, Greenbusch Station 60+00

Sample Description: 1.5 Sack Cement Stabilized Sand

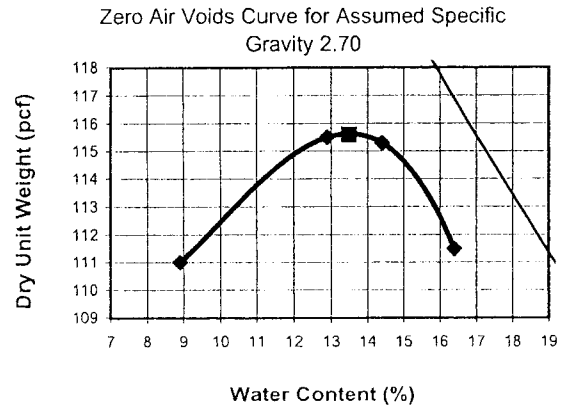
Laboratory Test Data

Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 115.6
Optimum Water Content (%): 13.5

Result Specifications

Liquid Limit:
Plastic Limit:
Plasticity Index:
In-Place Moisture (%):

USCS:



Comments:

Services: Obtain a sample of sand cement backfill at the project site and return it to the laboratory. Prepare and test the sample for moisture-density relationship.

Terracon Rep: Nestor I. Gamez
Reported To:
Contractor: Durwood Greene

Started: 0800
Finished: 0930

Report Distribution:

- (1) Fort Bend County Engineering, ndh@co.fort-bend.tx.us
- (1) Durwood Greene Construction Co, smaynard@durwoodgreene.com
- (1) Durwood Greene Construction Co, dmarchel@durwoodgreene.com
- (1) Schaumburg & Polk, eknesek@spi-eng.com

Reviewed By:

Jason L. Mills
Project Manager

Test Methods: ASTM D698

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

CSS-COMPRESSIVE REPORT

Report Number: 92091181.0011
Service Date: 07/23/09
Report Date: 07/31/09
Task:

Terracon

11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project No. 92091181

Material Information

Specified Strength: 100 psi @ 2 days

Batch Time: 8:18 AM
Supplier: Gulf Coast Stabilized Materials
Truck No.: 873 Plant: 15
Ticket No.: 660429
Material Type: Cement Stabilized Sand

Sample Information

Time Sampled: 8:49 AM
Date Sampled: 7/23/09
Time Molded: 11:00 AM
Technician: Nestor I. Gamez
Weather Conditions: Cloudy
Sample Location: Stock Pile
Placement Location: Green Busch (Station 60+00)
42" RCP
Moisture Content: 12.9%

Test Method

Molding: ASTM D 558-Method "A" - As is Moisture
Compressive Strength: ASTM D 1633-In plastic bag at room temperature

Laboratory Test Data

Specimen ID.	Height (inches)	Diameter (inches)	Area (Sq. inches)	Date Tested	Test Age (days)	Maximum Load (lbs.)	Compressive Strength (psi)
A	4.58	4	12.57	7/25/09	2	2040	165
B	4.58	4	12.57	7/25/09	2	2060	165
C	4.57	4	12.57	7/30/09	7	3430	275
D	4.57	4	12.57	7/30/09	7	3340	265
Average (2-day)							165
Average (7-day)							270

Comments:

**Refer to report 92091181.0010 for time.

Services: Traveled to the project site to provide testing/observation services as requested.

Terracon Rep: Nestor I. Gamez

Reported To:

Contractor: Durwood Greene

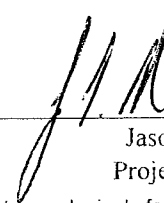
Started: **

Finished: **

Report Distribution

(1) Fort Bend County Engineering, ndh@co.fort- (1) Durwood Greene Construction Co,
(1) Durwood Greene Construction Co, (1) Schaumburg & Polk, cknesek@spi-eng.com

Reviewed By



Jason L. Mills
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0012
Service Date: 07/24/09
Report Date: 07/28/09



11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0002	Light Gray Silty Clay	ASTM D698	14.6	110.3	Not Specif.	Min 95
2	92091181.0010	1.5 sk. Cement Stabilized Sand	ASTM D698	13.5	115.6	Not Specif.	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
42" RCP Backfill, Greenbusch Rd.									
1	Station 61+50	Final	1	8	119.9	13.1	12.3	106.8	97
2	Station 59+50	Final	1	8	117.3	12.2	11.6	105.1	95
3	Station 58+00	Final	1	8	117.8	12.5	11.9	105.3	95
4	Station 56+00	Bedding	2	6	123.0	12.0	10.8	111.0	96
5	Station 56+80	1/-3'	1	8	122.3	14.5	13.5	107.8	98
6	Station 55+20	2/-2'	1	8	125.2	15.8	14.4	109.4	99
7	Station 56+00	3/-1'	1	8	125.3	16.7	15.4	108.6	98
8	Station 55+50	Final	1	8	128.9	16.6	14.8	112.3	100+

Datum: Top of Ground

Gauge ID: 31514

Std. Cnt. M: 678

Std. Cnt. D: 2896

Comments: Test results on this report meet project requirements as noted above.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering,
ndh@co.fort-bend.tx.us

(1) Durwood Greene Construction Co.,
sinaynard@durwoodgreene.com

(1) Durwood Greene Construction Co.,
dmarchel@durwoodgreene.com

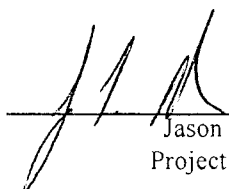
(1) Schaumburg & Polk, eknesek@spi-eng.com

Started: 0630

Finished: 1800

Lunch / Non-Chargeable:

Reviewed By:


Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0013
Service Date: 07/27/09
Report Date: 07/29/09



11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0002	Light Gray Silty Clay	ASTM D698	14.6	110.3	Not Specif	Min 95
2	92091181.0010	1.5 sk. Cement Stabilized Sand	ASTM D698	13.5	115.6	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
42" RCP Storm Backfill, Greenbusch Rd.									
1	Station 54+00	Bedding	2	6	126.0	14.9	13.4	111.1	96
2	Station 54+80	1/-3'	1	8	124.2	13.1	11.8	111.1	100+
3	Station 53+00	2/-2'	1	8	123.1	14.1	12.9	109.0	99
4	Station 53+50	3/-1'	1	8	120.1	13.1	12.2	107.0	97

Datum: Top of Ground

Gauge ID: 31514

Std. Cnt. M: 677

Std. Cnt. D: 2892

Comments: Test results on this report meet project requirements as noted above.

Services: Perform nuclear density tests on HMAC surface coarse and obtain cores to determine density and lift thickness.

Terracon Rep.: Omar Dimas

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering,
ndh@co.fort-bend.tx.us
(1) Durwood Greene Construction Co.,
smaynard@durwoodgreene.com

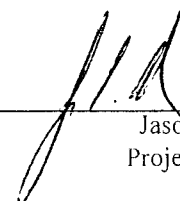
(1) Durwood Greene Construction Co.,
dmarchel@durwoodgreene.com
(1) Schaumburg & Polk, eknesek@spi-eng.com

Started: 0630

Finished: 1830

Lunch / Non-Chargeable: 2.00

Reviewed By:


Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0014
Service Date: 07/28/09
Report Date: 07/29/09

Terracon

11555 Clay Road, Ste 100
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0002	Light Gray Silty Clay	ASTM D698	14.6	110.3	Not Specif	Min 95
2	92091181.0010	1.5 sk. Cement Stabilized Sand	ASTM D698	13.5	115.6	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
42" RCP Backfill, Greenbusch Rd.									
1	Station 51+60	Bedding	2	6	123.9	13.2	11.9	110.7	96
2	Station 52+00	1/-3'	1	8	126.8	16.7	15.2	110.1	100
3	Station 52+50	2/-2'	1	8	125.2	16.8	15.5	108.4	98
4	Station 51+50	3/-1'	1	8	125.0	16.0	14.7	109.0	99
5	Station 52+80	Final	1	8	121.5	14.8	13.9	106.7	97
36" RCP Backfill, Greenbusch Rd.									
6	Station 51+00	Bedding	2	6	126.8	14.4	12.8	112.4	97
7	Station 50+60	1/-3'	1	8	124.1	15.5	14.3	108.6	98
8	Station 50+80	2/-2'	1	8	126.7	17.0	15.5	109.7	99
9	Station 50+60	3/-1'	1	8	124.9	15.7	14.4	109.2	99
10	Station 51+00	Final	1	8	130.0	17.0	15.0	113.0	100+

Datum: Top of Ground

Gauge ID: 31514

Std. Cnt. M: 681

Std. Cnt. D: 2888

Comments: Test results on this report meet project requirements as noted above.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering,
ndh@co.fort-bend.tx.us
(1) Durwood Greene Construction Co,
smaynard@durwoodgreene.com

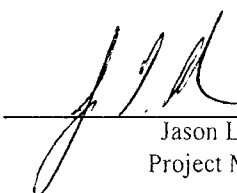
(1) Durwood Greene Construction Co,
dmarchel@durwoodgreene.com
(1) Schaumburg & Polk, eknesek@spi-eng.com

Started: 1000

Finished: 1830

Lunch / Non-Chargeable:

Reviewed By:



Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

CSS-COMPRESSIVE STRENGTH REPORT

Report Number: 92091181.0015
Service Date: 07/28/09
Report Date: 08/09/09
Task:



11555 Clay Road
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project No. 92091181

Material Information

Specified Strength: 100 psi @ 2 days

Batch Time: 8:09 AM
Supplier: Gulf Coast Stabilized Materials
Truck No.: 860 Plant: 15
Ticket No.: 660967
Material Type: Cement Stabilized Sand

Sample Information

Time Sampled: 9:10 AM
Date Sampled: 7/28/09
Time Molded: 10:00 AM
Technician: Henry Bustillo
Weather Conditions: Partly Cloudy
Sample Location: Storm Sewer Greenbush Rd 52+50
Placement Location: Storm Sewer Greenbush Rd 52+50
Moisture Content: 11.5%

Test Method

Molding: ASTM D 558-Method "A" - As is Moisture
Compressive Strength: ASTM D 1633-In plastic bag at room temperature

Laboratory Test Data

Specimen ID.	Height (inches)	Diameter (inches)	Area (Sq. inches)	Date Tested	Test Age (days)	Maximum Load (lbs.)	Compressive Strength (psi)
A	4.55	4	12.57	7/30/09	2	3880	310
B	4.55	4	12.57	7/30/09	2	4030	320
C	4.55	4	12.57	8/4/09	7	5730	455
D	4.55	4	12.57	8/4/09	7	5640	450
Average (2-day)							315
Average (7-day)							455

Comments:

Services: Traveled to the project site to provide testing/observation services as requested.

Terracon Rep: Bustillo, Henry

Reported To:

Contractor: Durwood Greene

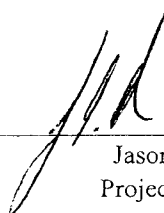
Started: 800

Finished: 1000

Report Distribution

- (1) Fort Bend County Engineering, ndh@co.fort-
- (1) Durwood Greene Construction Co,
- (1) Durwood Greene Construction Co,
- (1) Schaumburg & Polk, cknesek@spi-eng.com

Reviewed By


Jason L. Mills
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0016
Service Date: 07/29/09
Report Date: 08/04/09



11555 Clay Road
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0002	Light Gray Silty Clay	ASTM D698	14.6	110.3	Not Specif	Min 95
2	92091181.0010	1.5 Sack Cement Stabilized Sand	ASTM D698	13.5	115.6	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
36" Storm RCP, Greenbusch Rd.									
1	Station 49+50	Bedding	2	6	126.5	14.4	12.8	112.1	97
2	Station 50+00	1/-2'	2	8	122.8	12.3	11.1	110.5	96
3	Station 49+00	2/-1'	2	8	125.8	14.5	13.0	111.3	96
4	Station 49+20	Final	1	8	124.2	12.5	11.2	111.7	100+
5	Station 48+50	Bedding	2	6	124.4	13.5	12.2	110.9	96
6	Station 48+00	1/-2'	2	8	122.2	12.2	11.1	110.0	95
7	Station 48+80	2/-1'	2	8	125.3	13.4	12.0	111.9	97
8	Station 48+20	Final	1	8	121.8	14.1	13.1	107.7	98

Datum: Top of Proposed Subgrade

Gauge ID: 31514

Std. Cnt. M: 685

Std. Cnt. D: 2891

Comments: Test results on this report meet project requirements as noted above.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering,
ndh@co.fort-bend.tx.us

(1) Durwood Greene Construction Co.,
smaynard@durwoodgreene.com

(1) Durwood Greene Construction Co.,
dmarchel@durwoodgreene.com

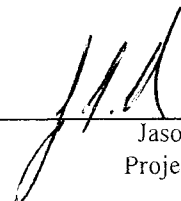
(1) Schaumburg & Polk, eknesek@spi-eng.com

Started: 0900

Finished: 1800

Lunch / Non-Chargeable: 0.50

Reviewed By:


Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0017
Service Date: 07/30/09
Report Date: 08/04/09

Terracon

11555 Clay Road
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0002	Light Gray Silty Clay	ASTM D698	14.6	110.3	Not Specif	Min 95
2	92091181.0010	1.5 Sack Cement Stabilized Sand	ASTM D698	13.5	115.6	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
36" RCP Backfill, Greenbusch Rd.									
1	Station 47+50	Bedding	2	6	124.3	12.7	11.4	111.6	97
2	Station 47+80	1/-2'	2	8	121.9	11.8	10.7	110.1	95
3	Station 47+20	2/-1'	2	8	122.1	11.2	10.1	110.9	96
4	Station 47+60	Final	1	8	126.8	17.3	15.8	109.5	99

Datum: Top of Proposed Subgrade

Gauge ID: 31514

Std. Cnt. M: 684

Std. Cnt. D: 2901

Comments: Test results on this report meet project requirements as noted above.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering,
ndls@co.fort-bend.tx.us
(1) Durwood Greene Construction Co.,
smaynard@durwoodgreene.com

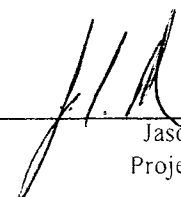
(1) Durwood Greene Construction Co.,
dmarchel@durwoodgreene.com
(1) Schaumburg & Polk, eknesek@spi-eng.com

Started: 0800

Finished: 1830

Lunch / Non-Chargeable: 0.50

Reviewed By:


Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

CSS-COMPRESSIVE STRENGTH REPORT

Report Number: 92091181.0018
Service Date: 07/30/09
Report Date: 08/05/09
Task:



11555 Clay Road
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project No. 92091181

Material Information

Specified Strength: 100 psi @ 2 days

Batch Time: 7:16 AM
Supplier: Gulf Coast Stabilized Materials
Truck No.: 789 Plant: 15
Ticket No.: 661234
Material Type: Cement Stabilized Sand

Sample Information

Time Sampled: 8:30 AM
Date Sampled: 7/31/09
Time Molded: 9:50 AM
Technician: Omar Dimas
Weather Conditions: Cloudy
Sample Location: Onsite Stockpile
Placement Location: Greenbush Rd Station 47+80
36" RCP
Moisture Content: 11.2%

Test Method

Molding: ASTM D 558-Method "A" - As is Moisture
Compressive Strength: ASTM D 1633-In plastic bag at room temperature

Laboratory Test Data

Specimen ID.	Height (inches)	Diameter (inches)	Area (Sq. inches)	Date Tested	Test Age (days)	Maximum Load (lbs.)	Compressive Strength (psi)
A	4.55	4	12.57	8/2/09	2	4830	385
B	4.55	4	12.57	8/2/09	2	4800	380
C			0.00	8/7/09	7		
D			0.00	8/7/09	7		
Average (2-day)							385
Average (7-day)							

Comments:

**Refer to report 92091181.0017 for time.

Services: Traveled to the project site to provide testing/observation services as requested.

Terracon Rep: Omar Dimas

Reported To:

Contractor: Durwood Greene

Started: **

Finished: **

Report Distribution

(1) Fort Bend County Engineering, ndh@co.fort- (1) Durwood Greene Construction Co,
(1) Durwood Greene Construction Co, (1) Schaumburg & Polk, eknesek@spi-eng.com

Reviewed By

Jason L. Mills
Project Manager

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD DENSITY TEST REPORT

Report Number: 92091181.0019
Service Date: 07/31/09
Report Date: 08/04/09

Terracon

11555 Clay Road
Houston, TX 77043
713-690-8989 Reg No: F-3272

Client

Fort Bend County Engineering
Attn: Nathan Hatcher
1124 Blume Rd
Rosenberg, TX 77471

Project

Greenbusch Road Phase I
FBC Project No 732
From Katy Flewellen Rd to Shadow Forest
Fort Bend County, TX
Project Number: 92091181

Material Information

Mat. No.	Proctor Ref. No.	Classification and Description	Laboratory Test Method	Lab Test Data		Project Requirements	
				Optimum Water Content (%)	Max. Lab Dry Unit Weight (pcf)	Water Content (%)	Minimum Compaction (%)
1	92091181.0003	Tan and Red Sandy Clay	ASTM D698	13.1	111.0	Not Specif	Min 95
2	92091181.0010	1.5 Sack Cement Stabilized Sand	ASTM D698	13.5	115.6	Not Specif	Min 95

Field Test Data

Test No.	Test Location	Lift / Elev.	Mat. No.	Probe Depth (in)	Wet Density (pcf)	Water Content (pcf)	Water Content (%)	Dry Unit Weight (pcf)	Percent Compaction (%)
36" RCP, Greenbusch Rd.									
1	Station 46+50	Bedding	2	6	123.3	12.3	11.1	111.0	96
2	Station 46+20	1/-2'	2	8	121.5	11.2	10.2	110.3	95
3	Station 46+80	2/-1'	2	8	122.5	11.6	10.5	110.9	96
4	Station 46+50	Final	1	8	126.2	16.4	14.9	109.8	99

Datum: Top of Proposed Subgrade

Gauge ID: 31514

Std. Cnt. M: 681

Std. Cnt. D: 2884

Comments: Test results on this report meet project requirements as noted above.

Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Omar Dimas

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering,
ndh@co.fort-bend.tx.us

(1) Durwood Greene Construction Co.,
smaynard@durwoodgreene.com

(1) Durwood Greene Construction Co.,
dmarchel@durwoodgreene.com

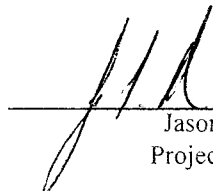
(1) Schaumburg & Polk, eknesek@spi-eng.com

Started: 0700

Finished: 1630

Lunch / Non-Chargeable: 0.50

Reviewed By:

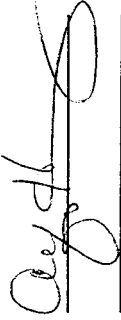

Jason L. Mills
Project Manager

Test Methods: ASTM D6938

The tests were performed in general accordance with applicable ASTM, AASHTO, or DOT test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

TERRACON CONSULTANTS, INC.

Name: Hernandez, Alfonso (003728)

Signature: 

Week Ending: 30-May-2009

TIME & MILEAGE REPORT

Home Office: TER-Houston (0092)

Approved: _____

PTO Balance: 185.02 (23-May-2009)

Project Name	Project No	Task	WC	Day							Total Hours	Total Miles	Per Comp	
				Sunday	Monday	Tuesday	wednesday	Thursday	Friday	Saturday				
Paid Leave	92090900	0	292	8.00								8.00	0	0
General Administration	92090200	0	221		4.50	2.25	2.25	3.50	2.75			13.00	0	0
Client Development	92090100	0	201		4.00	2.00	2.00	2.00				8.00	0	0
Westchase Park Phase I	92081142	0	018		0.50		0.50					1.00	0	0
Methodist West Houston H	92081425	0	018		0.50		0.50					1.00	0	0
City Centre Building I	92071392	0	015		0.50		1.00					1.50	0	0
Methodist Willowbrook Ex	92071459	0	018			0.25	0.25					0.25	0	0
City Hall Town Center	92091118	0	018			0.25	0.25					0.25	0	0
Spears Rd Regional Pump	92081389	0	018			0.25	0.25		0.50			0.75	0	0
Legacy at Memorial	92081019	0	015			2.50	2.50		2.00			4.50	0	0
Greenbusch Road Phase I	92091181	0	017			2.50	2.50	31				2.50	31	0
Client Development	92090100	0	204				1.00					1.00	0	0
Human Resources	92090400	0	244				1.00		1.00			2.00	0	0
Human Resources	92090400	0	241				2.50	32				2.50	32	0
Human Resources	92090400	0	244				1.00		1.00			1.00	0	0
Totals:				8.00	10.00	11.00	31	10.00	32	8.25		47.25	63	0

Chargeable % 24.87

Mileage (Non-Chargeable only)

Project No	Task No	Mileage Type	Purpose	Total Miles
92090400	0	P	SAME Public Agency Committee Meeting Travel round trip to HESS and back to Terracon Office	32
Total:				32

Comments



By Project

Project No	Task	Comments	Total Hours
92090100	0	Commercial IFG Meeting	1
92090400	0	SCOG CMET Committee Meetings	2

TERRACON CONSULTANTS, INC.
 Name: Mills, Jason L (004792)
 Home Office: TER-Houston (0092)

Signature:  week Ending: 25-Jul-2009
 Approved:  PTO Balance: 141.36 (18-Jul-2009)

Project Name	Project No	Task	WC	Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Total	
				Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles
General Administration	92090200	0	221			3.00												3.00	0
Greenbusch Road Phase I	92091181	0	017			2.00												2.00	0
General Administration	92090200	0	227			1.50												1.50	0
HCTRA Contract 552	92091209	0	018			1.50												1.50	0
TX Childrens Hospital w	92081380	0	017			1.50	20											1.50	20
HCTRA Contract 552	92091209	0	018				0.75											0.75	0
Greenbusch Road Phase I	92091181	0	017			1.50	40											1.50	40
Client Development	92090100	0	203			1.00												1.00	0
Greenbusch Road Phase I	92091181	0	018			0.50			1.00									1.50	0
TX Childrens Hospital w	92081380	0	018			0.50			0.50									1.00	0
East West Mobility Phase	92091167	0	018			0.50			0.50									1.00	0
Kroger SW010 Fuel Statio	92091208	0	018			0.50			0.50									1.00	0
Telfair Section 29A WS&D	92091214	0	018			0.50			0.50									1.00	0
BTC II Public Sanitary &	92091161	0	018			0.50			0.50									1.00	0
Schlumberger Bldg 150	92091211	0	018			0.50			0.50									1.00	0
Kroger SW 010	92091072	0	018			1.25			1.25									2.50	0
Schlumberger Bldg 150	92091211	0	018						1.00									1.00	0
BTC II Access Rd & Drain	92091230	0	018						1.00									1.00	0
Telfair Section 29A WS&D	92091214	0	018						1.00									1.00	0
HCTRA Contract 552	92091209	0	018						1.50									1.50	0
TX Childrens Hospital w	92081380	0	018						0.50									0.50	0
Human Resources	92090400	0	246						1.00									1.00	0
Client Development	92090100	0	201						1.00					2.00				4.00	0
General Administration	92090200	0	221						1.00									1.00	0
HCTRA Contract 552	92091209	0	018						1.50									1.50	0
Recreation Center Pool a	92081532	0	018						1.00									1.00	0
Client Development	92090100	0	203						3.00									3.00	0
Human Resources	92090400	0	241						1.00									1.00	0
Human Resources	92090400	0	241						1.00									1.00	0
Telfair Section 15 WS&D	92081429	0	018						0.50									0.50	0
Schlumberger Bldg 150	92091211	0	018						0.50									0.50	0
III Forks Restaurant	92091166	0	018						0.50									0.50	0
Kroger SW 010	92091072	0	018						0.50									0.50	0
Telfair Main Lake Pedest	92091133	0	018						0.50									0.50	0
Telfair Section 29A WS&D	92091214	0	018						0.50									0.50	0
East West Mobility Phase	92091167	0	018						0.50									0.50	0



TERRACON CONSULTANTS, Name: Mills, Jason L (004792) Signature:  25-Jul-2009
 INC. TIME & MILEAGE REPORT Home Office: TER-Houston (0092) Approved:  PTO Balance: 141.36 (18-Jul-2009)

Project	Task	Chargeable %	9.50	20	8.00	40	9.00	8.00	43.50	60	0			
BTC II Access Rd & Drain	92091230	0	0	0	0	0	0	0.50	0	0	0			
Greenbusch Road Phase I	92091181	0	0	0	0	0	0	0.50	0	0	0			
Telfair Section 29A WS&D	92091214	0	0	0	0	0	0	1.00	0	0	0			
Client Development	92090100	0	0	0	0	0	0	1.00	0	0	0			
Totals:											8.00	43.50	60	0


Chargeable % 59.77

Comments

By Project	Project No	Task	Comments	Total Hours
	92090200	0	Timesheets	3
	92090200	0	Remove WIP	1.50
	92090100	0	Houston Zoo Overview	1
	92091181	0	Look Up Specs	1.50
	92090100	0	Autozone Prints and Geotech	4
	92090400	0	HCA Meeting	3
	92090400	0	IFG Meeting	1
	92090100	0	McGraw Hill	1

TERRACON CONSULTANTS, Name: Mills, Jason L (004792) Signature:  Week Ending: 01-Aug-2009
 TIME & MILEAGE REPORT Home Office: TER-Houston (0092) Approved:  PTO Balance: 144.44 (25-Jul-2009)

Project Name	Project No	Task	WC	Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Total	
				Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles	Hours	Miles
General Administration	92090200	0	221	4.00														4.00	0
FBTC Access Dr to serve	92091251	0	024	2.00														2.00	0
Kroger SW 010	92091072	0	018	0.50														0.50	0
Cement Stabilized Sand P	92091252	0	024	1.00				0.50										1.50	0
Public Roadway & Drainag	92091194	0	018	1.00				0.50										1.50	0
Recreation Center Pool a	92081532	0	018	0.50														0.50	0
Fairbanks N Houston wate	92091250	0	024	0.50														0.50	0
Telfair Section 15 WS&D	92081429	0	018	0.50														0.50	0
TX Childrens Hospital w	92081380	0	018	1.00														1.00	0
Client Development	92090100	0	201	1.00														1.00	0
BTC II Access Rd & Drain	92091230	0	017	2.00	50													2.00	50
Telfair Section 29A WS&D	92091214	0	017	2.00	60													2.00	60
TX Childrens Hospital w	92081380	0	018	1.00														1.00	0
O2 Tank Foundations	92091254	0	024	0.50														0.50	0
Client Development	92090100	0	204	1.00														1.00	0
Client Development	92090100	0	204	1.00														1.00	0
Cement Stabilized Sand P	92091252	0	130	5.00	90													5.00	90
Schlumberger Bldg 150	92091211	0	018	0.50														0.50	0
Cement Stabilized Sand P	92091252	0	018	0.50														0.50	0
Fairbanks N Houston wate	92091250	0	024	2.00														2.00	0
General Administration	92090200	0	219	1.00														1.00	0
TX Childrens Hospital w	92081380	0	024	1.00														1.00	0
Cement Stabilized Sand L	92091256	0	024	0.50														0.50	0
NW Medical Office Comple	92091223	0	018															0.50	0
Fairbanks N Houston wate	92091250	0	018	0.50														0.50	0
III Forks Restaurant	92091166	0	018	0.50														0.50	0
East West Mobility Phase	92091167	0	018	0.50														0.50	0
BTC II Access Rd & Drain	92091230	0	018	0.50														0.50	0
Kroger SW 010	92091072	0	018	0.50														0.50	0
Telfair Section 29A WS&D	92091214	0	018	0.50														0.50	0
Greenbusch Road Phase I	92091181	0	018	1.00														1.00	0
TX Childrens Hospital w	92081380	0	018	1.00														1.00	0
HCTRA Contract 552	92091209	0	018	0.50														0.50	0
Client Development	92090100	0	201	1.00														1.00	0
Cardiff Ranch Sec I Ph I	92091232	0	018															0.50	0
Client Development	92090100	0	203															1.00	0

TERRACON CONSULTANTS, Name: Mills, Jason L (004792) week Ending: 01-Aug-2009
 INC. Signature: 
 TIME & MILEAGE REPORT Home Office: TER-Houston (0092) PTO Balance: 144.44 (25-Jul-2009)

Project No	Task	Comments	12.00	8.50	110	10.50	90	10.00	7.00	0.50	3.00	1.00	1.00	1.50	1.50	0	0	0	0	0
East West Mobility Phase	92091167	0	018							0.50						0	0			
Client Development	92090100	0	203							3.00						0	0			
Cement Stabilized Sand P	92091252	0	018							1.00						0	0			
General Administration	92090200	0	221							1.00						0	0			
Seabourne Creek Park Ent	92091263	0	024							1.50						0	0			
Houston Oaks Misc Testin	92091262	0	024							1.50						0	0			
Totals:				12.00	8.50	110	10.50	90	10.00	7.00						48.00	200	0	0	0

Chargeable % 70.83

Comments

By Project	Project No	Task	Comments	Total Hours
	92090200	0	Timesheets	4
	92090100	0	Houston Zoo Proposal Revision	1
	92090100	0	McGraw Hill	1
	92090100	0	Research BPI	1
	92090200	0	Edit Templates	1
	92081380	0	APR Review	1
	92090100	0	Houston Zoo Spread Sheet	1
	92090100	0	NewQuest	3