

FORT BEND COUNTY FY 2010
COMMISSIONERS COURT AGENDA REQUEST FORM

Return Completed Form by E-Mail to: Agenda Coordinator, County Judge's Office

Date Submitted: 12/16/2009	Submitted By: P. Batts
Court Agenda Date: 12/22/2009	Department: Engineering
	Phone Number: 281 633 7507

SUMMARY OF ITEM: Approve Payment of Invoice No. T084344 (Pay Estimate No.4) in the amount of \$4,976.25 to Terracon regarding Greenbusch Road, Phase I, (from Katy Flewellen Road to Shadow Forest), Mobility Bond Project #732, Precinct 3. (Fund: Mobility Bonds) Lawson P.O.#33590

RENEWAL AGREEMENT/APPOINTMENT YES NO

REVIEWED BY COUNTY ATTORNEY'S OFFICE: YES NO

List Supporting Documents Attached:

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:

- | | |
|--|--|
| <input type="checkbox"/> Auditor (281-341-3774) | <input type="checkbox"/> Comm. Pct. 1 (281-342-0587) |
| <input type="checkbox"/> Budget Officer (281-344-3954) | <input type="checkbox"/> Comm. Pct. 2 (281-403-8009) |
| <input type="checkbox"/> Facilities/Planning (281-633-7022) | <input type="checkbox"/> Comm. Pct. 3 (281-242-9060) |
| <input type="checkbox"/> Purchasing Agent (281-341-8642) | <input type="checkbox"/> Comm. Pct. 4 (281-980-9077) |
| <input type="checkbox"/> Information Technology (281-341-4526) | <input type="checkbox"/> County Clerk (281-341-8697) |
| <input type="checkbox"/> Other: | <input type="checkbox"/> County Atty (281-341-4557) |

RECOMMENDATION / ACTION REQUESTED:

Special Handling Requested (specify):



INVOICE

OK
NOV
12/15/09

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: T084344
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:	\$29,545.75
Invoice Date:	11/20/2009
Services Through:	11/14/2009

Date	Report	Description of Services	Quantity	Rate	Total
10/3/09	Week Ending	Project Manager, per hour	1.00	\$105.00	\$105.00
11/2/09	92091181.0055	Atterberg Limit, per test	1.00	\$53.00	\$53.00
11/2/09	92091181.0056	Technician - Level II, per hour	1.50	\$50.00	\$75.00
11/2/09	92091181.0056	Vehicle Charge, per hour	1.50	\$7.50	\$11.25
11/2/09	92091181.0056	Atterberg Limit, per test	1.00	\$53.00	\$53.00
11/3/09	92091181.0057	Technician, ACI - I, II, per hour	4.00	\$44.00	\$176.00
11/3/09	92091181.0057	Vehicle Charge, per hour	3.00	\$7.50	\$22.50
11/6/09	92091181.0058	Technician - Level II, per hour	8.00	\$50.00	\$400.00
11/6/09	92091181.0058	Technician - Level II, per hour - OT	2.00	\$75.00	\$150.00
11/6/09	92091181.0058	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
11/6/09	92091181.0059	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
11/7/09	Week Ending	Sr. Engineer, P.E., per hour	0.50	\$123.00	\$61.50
11/7/09	Week Ending	Project Manager, per hour	2.00	\$105.00	\$210.00
11/9/09	92091181.0062	Technician - Level II, per hour	5.00	\$50.00	\$250.00
11/9/09	92091181.0062	Vehicle Charge, per hour	5.00	\$7.50	\$37.50
11/9/09	92091181.0062	Nuclear Density Gauge, per hour	5.00	\$9.00	\$45.00
11/9/09	92091181.0061	Atterberg Limit, per test	1.00	\$53.00	\$53.00
11/9/09	92091181.0061	Standard Proctor (ASTM D-698), each	1.00	\$175.00	\$175.00
11/10/09	92091181.0060	Technician - Level II, per hour	8.00	\$50.00	\$400.00
11/10/09	92091181.0060	Technician - Level II, per hour - OT	1.50	\$75.00	\$112.50
11/10/09	92091181.0060	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
11/11/09	92091181.0064	Technician - Level II, per hour	8.00	\$50.00	\$400.00
11/11/09	92091181.0064	Technician - Level II, per hour - OT	1.00	\$75.00	\$75.00
11/11/09	92091181.0064	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
11/11/09	92091181.0064	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
11/12/09	92091181.0067	Technician - Level II, per hour	8.00	\$50.00	\$400.00
11/12/09	92091181.0067	Technician - Level II, per hour - OT	3.00	\$75.00	\$225.00
11/12/09	92091181.0067	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
11/12/09	92091181.0067	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
11/12/09	92091181.0070	Atterberg Limit, per test	1.00	\$53.00	\$53.00
11/12/09	92091181.0070	Standard Proctor (ASTM D-698), each	1.00	\$175.00	\$175.00
11/13/09	92091181.0071	Technician - Level II, per hour	8.00	\$50.00	\$400.00
11/13/09	92091181.0071	Technician - Level II, per hour - OT	1.50	\$75.00	\$112.50

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: T084344
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					
11/13/09	92091181.0071	Vehicle Charge, per hour	8.00	\$7.50	\$60.00
11/13/09	92091181.0071	Nuclear Density Gauge, per hour	8.00	\$9.00	\$72.00
11/14/09	Week Ending	Project Manager, per hour	1.50	\$105.00	\$157.50

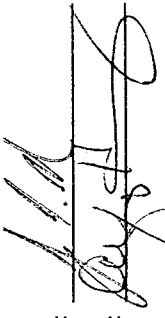
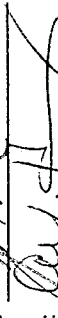
Invoice Total **\$4,976.25**

Statement of Account	
Contract Amount	\$85,077.00
Amount Previously Billed	\$24,569.50
Total Due this Invoice	\$4,976.25
Total Billed	\$29,545.75
Payments to Date	\$17,038.25
Total Due	\$12,507.50

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

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

Signature:  Week Ending: 03-Oct-2009
 Approved:  PTO Balance: 108.16 (26-Sep-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
Paid Leave	92090900	0	290			8.00												8.00	0
Client Development	92090100	0	201							2.00								2.00	0
walgreens No 12015	92091307	0	018							0.50								0.50	0
Client Development	92090100	0	201							0.50		0.50						1.00	0
Easton Ave Phase 2 Part	92091292	0	024							0.25								0.25	0
Telfair Section 15B Pavi	92091291	0	024							0.25								0.25	0
Telfair Section 29A Pavi	92091278	0	024							0.25								0.25	0
McDonalds - SCTC 42-2760	92091212	0	024							0.25								0.25	0
McDonalds Bridge City	92091200	0	024							0.25								0.25	0
Misc Lightweight Roofing	92081156	0	024							0.25								0.25	0
The Centre at Post Oak	92091322	0	024							0.25								0.25	0
Misc Lab Testing	92061141	0	024							0.25								0.25	0
walgreens No 13062 Moist	92091312	0	024							0.25								0.25	0
walgreens No 12015	92091307	0	024							0.25								0.25	0
New Foundation Supports	92091305	0	024							0.25								0.25	0
Aker Solutions Office Ex	92091294	0	024							0.25								0.25	0
Alcon Houston Supply Cha	92091273	0	024							0.50								0.50	0
East West Mobility Phase	92091167	0	024							0.50								0.50	0
Seabourne Creek Park Add	92091104	0	024							0.25								0.25	0
LA Fitness at West Rd Si	92081459	0	024							0.25								0.25	0
TX Childrens Hospital w	92081380	0	024							0.50								0.50	0
Embassy Suites Mat Tempe	92091306	0	024							0.25								0.25	0
west Tavener Road	92091283	0	024							0.50								0.50	0
Houston Zoo African Fore	92091269	0	024							0.50								0.50	0
Greenbusch Road Phase I	92091181	0	024					0.50										1.00	0
Embassy Suites Hotel Fou	92091164	0	024							0.50								0.50	0
Port of Houston Bayport	92091147	0	024							0.25								0.25	0
Port of Houston Bayport	92091149	0	024							0.25								0.25	0
Port of Houston Bayport	92091287	0	024							0.25								0.25	0
Embassy Suites Mat Tempe	92091306	0	018									1.00						1.00	0
Port of Houston Bayport	92091149	0	018									0.50						0.50	0
west Tavener Road	92091283	0	018					0.50										1.50	0
East West Mobility Phase	92091167	0	018									0.50						0.50	0
Aker Solutions Office Ex	92091294	0	018					0.50										1.00	0
McDonalds - SCTC 42-2760	92091212	0	018									0.50						0.50	0
McDonalds Bridge City	92091200	0	018									0.50						0.50	0



November 4, 2009

Fort Bend County Engineering
Attn. Mr. Nathan Hatcher
1124 Blume Road
Rosenberg, Texas 77471

RE: **Recommendation for Pavement Subgrade Stabilization
Greenbusch Road Phase I
FBC Project No. 732
From Katy Flewellen Road to Shadow Forest
Fort Bend County, Texas
Terracon Report No. 92091181.0055 and 92091181.0056**

Dear Mr. Hatcher:

On November 4, 2009, Terracon Consultants, Inc. (Terracon) obtained samples of the proposed pavement subgrade at Katy Flewellen station 19+36 and Greenbusch station 29+50. The samples were tested for Atterberg Limits to assist in determining the type of chemical treatment best suited for the material. The soil samples consisted of dark gray silty clay with a liquid limit of 38 percent and a plasticity index of 19 percent, and tan silty clay with a liquid limit of 27 percent and a plasticity index of 13 percent.

In accordance with our Geotechnical report, we recommend stabilizing the subgrade with 6 percent lime solids for soils with a plasticity index greater than or equal to 15 percent. The treated soil should be allowed to slake at least 48 hours after the placement of lime. Based on a soil dry unit weight of 111.0 pcf for the subgrade soils (Terracon report number 92091181.0003), the amount of lime solids needed is 30 pounds per square yard for a 6-inch depth. For soils with a plasticity index less than 15 percent we recommend stabilizing the subgrade with 3 percent lime and 7 percent flyash. The amount of lime-flyash needed is 50 pounds per square yard for a 6-inch depth.

Please call us at 713-690-8989 if you have any questions or comments regarding our recommendation.

Sincerely,
Terracon Consultants, Inc.
(Texas Firm Registration No. F-3272)


Jason L. Mills
Project Manager
Construction Services



Alfonso Hernandez, P.E.
Construction Services Manager
11-5-09

Terracon Consultants, Inc. 11555 Clay Road, Suite 100 Houston, Texas 77043
P [713] 690 8989 F [713] 690 8787 terracon.com

PROOFROLL OBSERVATION REPORT

Report Number: 92091181.0057
Service Date: 11/03/09
Report Date: 11/04/09

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

On November 3, 2009, a representative of Terracon was present at the above referenced project site to observe proofrolling operations. The area that was proofrolled was identified as the 200'x200' south side of Greenbush, station 61+00. The area was reported to be stripped of vegetation, roots and other deleterious materials to an approximate depth of 2 inches. The exposed subgrade soil consisted of brown sandy clay. The site contractor provided a off road loaded dump truck to perform the proofrolling operations. The operator was instructed to make slow overlapping passes across the subgrade. The Terracon technician observed the equipment during the proofrolling operations. Terracon did not observe excessive deflection or "pumping" of the subgrade soils. The contractor's superintendent, Hector Garcia of Durwood Greene was notified of the results.

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

Terracon Rep.: Recinos, Carlos
Reported To:
Contractor: Durwood Greene

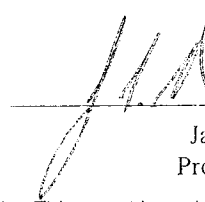
Report Distribution:

(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 **Lunch / Non-Chargeable:**
Finished: 1000

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.

LIME SLURRY OBSERVATION REPORT



Report Number: 92091181.0058
Service Date: 11/06/09
Report Date: 11/09/09
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

General Contractor: Durwood Greene
Treatment Location: Katy Flewellen
Mix Description: Lime Slurry
Material Supplier: Chem Lime

Recommended Application Rate (lb/yd²): 30
Recommended Treatment Depth (in): 6

Report of Observation

Ticket No.	Load Net Weight	Slurry (lb/gal)	%Dry Solids	Dry Solids (lb)	Placement Location	Area (yd ²)	Application Rate(lb/yd ²)
105644463	52080	11.204	47%	24478	Sta 16+72 - 14+50 EB Lane	666	37
105643354	50000	11.262	48%	24000	Sta 16+72 - 19+36 EB Lane	792	30
105644493	48740	11.328	48%	23395	Sta 15+21 - 17+20 WB Lane	777	30

Comments:

*Does not comply with recommended rate of application

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

Terracon Rep: Richard A. Monroe

Reported To:

Contractor: Durwood Greene

Started: 600

Lunch/Nonchargeable: 0.50

Finished: 1630

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: 92091181.0059
 Service Date: 11/06/09
 Report Date: 11/09/09



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	92091181.0001	Light Gray Silty Clay	ASTM D698	14.1	111.8	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 (%)
Fill for Temporary Detour, Greenbusch Lane, SB									
1	Station 49+00	-1'	1	6	128.0	16.7	15.0	111.3	100
2	Station 50+00	-1'	1	6	129.4	15.2	13.3	114.2	100+
3	Station 51+00	-1'	1	6	128.0	17.0	15.3	111.0	99
4	Station 52+00	-1'	1	6	130.0	16.8	14.8	113.2	100+
5	Station 52+00	Final	1	6	128.8	15.1	13.3	113.7	100+
6	Station 51+00	Final	1	6	124.8	15.5	14.2	109.3	98
7	Station 49+75	Final	1	6	127.7	16.0	14.3	111.7	100
8	Station 53+75	-2'	1	6	123.3	15.5	14.4	107.8	96
9	Station 57+00	-2'	1	6	125.4	16.7	15.4	108.7	97

Datum: Grade

Gauge ID: 37092

Std. Cnt. M: 731

Std. Cnt. D: 2547

Comments: Test results on this report meet project requirements as noted above.
 **Refer to report no. 92091181.0058 for time.

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

Terracon Rep.: Richard A. Monroe
 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: **
 Finished: **

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.

TERRACON CONSULTANTS, INC.
 Name: Hernandez, Alfonso (003728)
 Home Office: TER-Houston (0092)

Signature:  Week Ending: 07-Nov-2009
 Approved: _____ PTO Balance: 223.86 (31-Oct-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	4.25		4.25		5.25		5.00		6.00		6.00		6.00		26.50	0
Client Development	92090100	0	201	1.00		1.00		1.00		1.00		0.75						3.75	0
NHCRWA Project 68-3	92091190	0	018	0.50		0.50		0.50		0.50								1.00	0
Louetta Regional Water P	92091021	0	018	0.50		0.50		0.50		0.50								1.00	0
HCTRA Contract 552	92091209	0	018	1.75		1.75				2.00				3.50				7.25	0
Spears Rd Regional Pump	92081389	0	018					0.50										0.50	0
Telfair Section 15B Pavi	92091291	0	015					0.50				1.25						1.75	0
Methodist West Houston H	92081424	0	018					0.25										0.25	0
Alex's Bistro at City Ce	92091276	0	015					0.50										0.50	0
HCFCD Job 09/0114, Preci	92091219	0	018							0.50				0.50				1.00	0
Greenbusch Road Phase I	92091181	0	015							0.50								0.50	0
Totals:				8.00		8.00		8.00		10.00		8.00		10.00		44.00		44.00	0

Chargeable % 31.25

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	Hours
General Administration	92090200	0	221	2.00										3.00				5.00	0	
East West Mobility Phase	92091167	0	018	0.75														0.75	0	
Embassy Suites Hotel Fou	92091164	0	018	0.75		0.50		0.50				0.50						2.25	0	
Houston Zoo African Fore	92091269	0	018	0.50														0.50	0	
East West Mobility Phase	92091167	0	018	0.50		0.50		0.50										1.50	0	
Walgreens No 12015	92091307	0	018	0.50										0.50				1.00	0	
Chimney Hills MUD	92091373	0	024	0.50														0.50	0	
Telfair Section 15B Pavi	92091291	0	018	1.25						0.50								1.75	0	
Easton Ave Ph 2 Fill	92091199	0	018	0.50														0.50	0	
Methodist West Houston H	92081424	0	018			1.00												1.00	0	
Proposed State Highway I	92091346	0	018			3.00												3.00	0	
Client Development	92090100	0	201			2.00												2.00	0	
Whataburger 2008900	92091360	0	018	0.50		2.50		25	0.50					0.50				4.00	25	
University Blvd Ph 2 Ret	92091106	0	018			0.50												0.50	0	
Floor Slab Reconst AT&T	92091368	0	018			1.00												1.00	0	
Easton Ave Phase 2 Part	92091292	0	018			0.50												0.50	0	
westheimer Lakes Retail	92091357	0	018			1.00												1.00	0	
Misc Cell Towers	92081280	0	018			1.00												1.00	0	
HCTRA Contract 552	92091209	0	018			0.50						1.00		1.25				2.75	0	
Computer Room Structural	92091367	0	018			1.50												1.50	0	
Greenbusch Road Phase I	92091181	0	018			1.50						0.50						2.00	0	
Telfair Section 15B Pavi	92091291	0	018			1.00												1.00	0	
Misc Lab Testing	92061141	0	018									0.50						0.50	0	
West Tavener Road	92091283	0	018			0.50						0.50		0.50				1.00	0	
Client Development	92090100	0	201			2.00												2.00	0	
TX Childrens Hospital W	92081380	0	018			1.00						1.00		2.50	20			3.50	20	
Port of Houston Bayport	92091147	0	018			0.50						0.50						0.50	0	
Human Resources	92090400	0	246			0.50						0.50						0.50	0	
General Administration	92090200	0	221			1.00						1.00						1.00	0	
Alcon Houston Supply Cha	92091273	0	018											0.50				0.50	0	
Midtown Duplexes Anita S	92091362	0	018											1.50				1.50	0	
Alcon Houston Supply Cha	92091273	0	024											0.25				0.25	0	
Port of Houston Bayport	92091351	0	024											0.50				0.50	0	
Totals:				7.75	10.00	25	10.00	8.00	11.00	20	46.75	45	0							

Chargeable % 77.54

FIELD DENSITY TEST REPORT

Report Number: 92091181.0062
 Service Date: 11/09/09
 Report Date: 11/10/09



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	92091181.0001	Light Gray Silty Clay	ASTM D698	14.1	111.8	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 (%)
Fill for Temporary Detour, Greenbusch SB									
1	Station 54+00	Final	1	6	121.4	13.9	12.9	107.5	96
2	Station 56+00	Final	1	6	129.4	16.5	14.6	112.9	100+
3	Station 59+00	Final	1	6	129.7	19.7	17.9	110.0	98

Datum: Gauge ID: 37092 Std. Cnt. M: 729 Std. Cnt. D: 2540
 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.: Richard A. Monroe
 Reported To:

Started: 0700
 Finished: 1200

Lunch / Non-Chargeable:

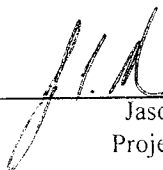
Contractor: Durwood Greene

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

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

Report Number: 92091181.0061
Service Date: 11/09/09
Report Date: 11/12/09



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

Source of Material: Onsite
Proposed Use: Treated Subgrade

Sample Information

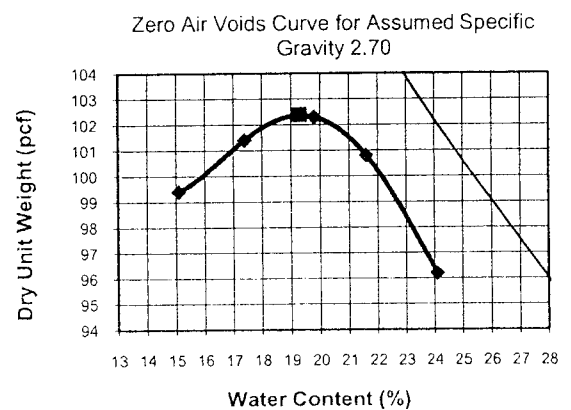
Sample Date: 11/09/09 Sample Time: 1100
Sampled By: Richard A. Monroe
Sample Location: Katy Flewellen E Bound Ln, Station 8+00 to 19+00
Sample Description: Light Gray Silty Clay with Lime

Laboratory Test Data

Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 102.4
Optimum Water Content (%): 19.3

	Result	Specifications
Liquid Limit:	38	
Plastic Limit:	29	
Plasticity Index:	9	
In-Place Moisture (%):		

USCS:



Comments:

**Refer to report 92091181.0062 for time.

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

Terracon Rep: Richard A. Monroe

Reported To:

Contractor: Durwood Greene

Report Distribution:

(1) Fort Bend County Engineering, ndh@fco.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: **
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.

GRADATIONS REPORT

Report Number: 92091181.0060
Service Date: 11/10/09
Report Date: 11/11/09
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

On November 10, 2009, a Terracon representative secured two (2) samples of pulver-mixed lime treated soil for testing to determine the gradation. The test results are shown below.

Location: Katy Flewellen WB Lane - Station 17+00

Sieve Size:	1 3/4	Sieve Size:	3/4	Sieve Size:	No. 4
Percent Passing:	100%	Percent Passing:	98%	Percent Passing:	60%

Location: Katy Flewellen WB Lane - Station 19+00

Sieve Size:	1 3/4	Sieve Size:	3/4	Sieve Size:	No. 4
Percent Passing:	100%	Percent Passing:	96%	Percent Passing:	60%

Specification Requirements:

1 3/4 Sieve = Minimum	100%	Passing
3/4 Sieve = Minimum	85%	Passing
No. 4 Sieve = Minimum	60%	Passing

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

Terracon Rep: Richard A. Monroe

Reported To:

Contractor: Durwood Greene

Started: 700

Lunch/Nonchargeable: 0.50

Finished: 1700

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: 92091181.0064
 Service Date: 11/11/09
 Report Date: 11/12/09



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	92091181.0061	Light Gray Silty Clay with Lime	ASTM D698	19.3	102.4	Opt +3	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 (%)
Stabilized Subgrade, Katy Flewellen WB									
1	Station 15+80	Final	1	6	120.9	19.3	19.0 *	101.6	99
2	Station 16+50	Final	1	6	121.0	18.8	18.4 *	102.2	100
3	Station 17+80	Final	1	6	124.2	20.2	19.4	104.0	100+
4	Station 18+45	Final	1	6	121.2	22.5	22.8 *	98.7	96
5	Station 19+20	Final	1	6	119.0	21.5	22.1	97.5	95

Datum: Gauge ID: 37092 Std. Cnt. M: 709 Std. Cnt. D: 2566

Comments: An asterisk (*) appears next to the test results which do not meet the project requirements as noted above.

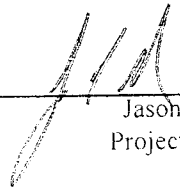
Services: Perform in-place density and moisture content tests to determine degree of compaction and material moisture condition.

Terracon Rep.: Richard A. Monroe
 Reported To:
 Contractor: Durwood Greene

Started: 0700
 Finished: 1630

Lunch / Non-Chargeable: 0.50

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, cknesek@spi-eng.com

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: 92091181.0067
Service Date: 11/12/09
Report Date: 11/17/09



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	92091181.0061	Light Gray Silty Clay with Lime	ASTM D698	19.3	102.4	Opt. +3	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 (%)
Katy Flewellen WB Lane									
1	Retests - Station 15+80	Final	1	6	122.1	19.8	19.4	102.3	100
2	Retests - Station 16+50	Final	1	6	120.2	21.5	21.8	98.7	96
3	Retests - Station 18+45	Final	1	6	119.9	21.6	22.0	98.3	96

Datum: Gauge ID: 37092 Std. Cnt. M: 726 Std. Cnt. D: 2574
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.: Richard A. Monroe
Reported To:

Started: 0600
Finished: 1730

Lunch / Non-Chargeable: 0.50

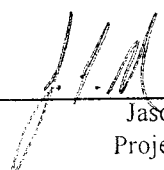
Contractor: Durwood Greene

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

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: 92091181.0070
Service Date: 11/12/09
Report Date: 11/18/09

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

Source of Material: Jobsite Remix
Proposed Use: Treated Subgrade

Sample Information

Sample Date: 11/12/09 Sample Time: 800
Sampled By: Richard A. Monroe
Sample Location: Greenbusch Rd. S. Bound Ln. Sta 29+50

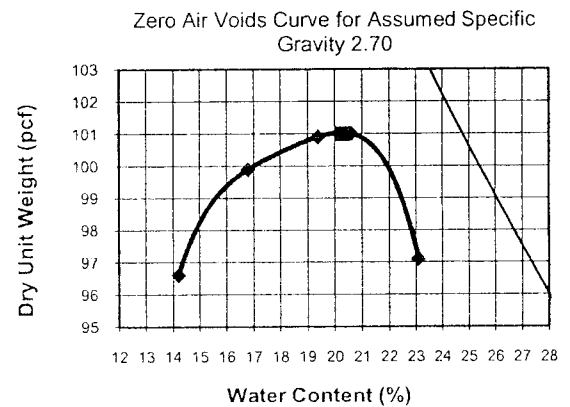
Sample Description: Light Gray Silty Sandy Clay with Lime

Laboratory Test Data

Test Procedure: ASTM D698
Test Method: Method A
Sample Preparation: Wet
Rammer Type: Mechanical
Maximum Dry Unit Weight (pcf): 101.0
Optimum Water Content (%): 20.3

	Result	Specifications
Liquid Limit:	36	
Plastic Limit:	25	
Plasticity Index:	11	
In-Place Moisture (%):		

USCS:



Comments:

**Refer to report 92091181.0067 for time.

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

Terracon Rep: Richard A. Monroe

Reported To:

Contractor: Durwood Greene

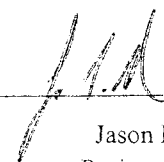
Report Distribution:

(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: **
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: 92091181.0071
 Service Date: 11/13/09
 Report Date: 11/17/09



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	92091181.0003	Tan and Red Sandy Clay	ASTM D698	13.1	111.0	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 (%)
Ditch Backfill, Greenbusch Rd. SB									
1	Station 38+80	-2'	1	6	126.1	15.3	13.8	110.8	100
2	Station 40+05	-2'	1	6	127.4	17.4	15.8	110.0	99
3	Station 41+20	-2'	1	6	124.0	11.5	10.2	112.5	100+
4	Station 38+50	-1'	1	6	124.9	17.0	15.8	107.9	97
5	Station 40+20	-1'	1	6	124.7	12.7	11.3	112.0	100+
6	Station 41+50	-1'	1	6	125.3	11.8	10.4	113.5	100+

Datum:

Gauge ID: 37092 Std. Cnt. M: 718 Std. Cnt. D: 2539

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.: Richard A. Monroe
 Reported To:

Started: 0700
 Finished: 1700

Lunch / Non-Chargeable: 0.50

Contractor: Durwood Greene

Report Distribution:

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

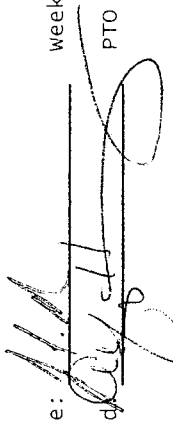

(1) Durwood Greene Construction Co,
 dmarchel@durwoodgreene.com
 (1) Schaumburg & Polk, eknesek@spi-eng.com

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, Name: Mills, Jason L (004792) Signature:  week Ending: 14-Nov-2009
 INC. PTO Balance: 110.64 (07-Nov-2009)
 TIME & MILEAGE REPORT Home Office: TER-Houston (0092) Approved: 

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	Hours
walgreens No 12015	92091307	0	018			1.00				0.50								1.50	0	0
General Administration	92090200	0	221			3.00												3.00	0	0
Greenbusch Road Phase I	92091181	0	018			0.50		0.50										1.50	0	0
Port of Houston Bayport	92091351	0	018			0.50		1.00										1.50	0	0
HCTRA Contract 552	92091209	0	018			1.00				0.50								1.50	0	0
East West Mobility Phase	92091167	0	018			0.25												0.25	0	0
West Tavener Road	92091283	0	018			0.25												0.25	0	0
Misc Cell Towers	92081280	0	018			0.25												0.25	0	0
Telfair Section 15B WS&D	92091347	0	018			0.25												0.25	0	0
TX Childrens Hospital w	92081380	0	018			1.50												1.50	0	0
Client Development	92090100	0	201			1.00												1.00	0	0
East West Mobility Phase	92091167	0	017					1.50	12									1.50	12	0
Houston Zoo African Fore	92091269	0	017					3.00	45	0.50								3.50	45	0
AT&T Lake Houston Pkwy R	92091383	0	024					0.25										0.25	0	0
Cement Stabilized Sand P	92091382	0	018					0.25										0.25	0	0
Smart Shop Store	92091376	0	017					2.00										2.00	0	0
General Administration	92090200	0	221					2.00										2.00	0	0
Embassy Suites Hotel Fou	92091164	0	018							0.50								0.50	0	0
Whataburger 2008900	92091360	0	018					0.50										0.50	0	0
Proposed State Highway I	92091346	0	018					0.50										0.50	0	0
Easton Ave Phase 2 Part	92091292	0	018					0.50										0.50	0	0
Seabourne Creek Park Add	92091104	0	018					0.50										0.50	0	0
Whataburger Restaurant	92091385	0	024					2.50	30									2.50	30	0
Client Development	92090100	0	201					3.00										3.00	0	0
Paid Leave	92090900	0	290								8.00							8.00	0	0
Chargeable % 45.65				Totals:		9.50		10.50	57	10.00	30	8.00		8.00				46.00	87	0

Comments