



# INVOICE

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

*OK  
7/23/10*

Project Manager: Jason Mills

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

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

## REMIT TO:

**Invoice Number: T136685**

**Terracon Consultants, Inc.**  
**PO Box 843358**  
**Kansas City, MO 64184-3358**

**Federal E.I.N.: 42-1249917**

P.O. Number: 33590

Project Number: 92091181  
Contract Amount: \$85,077.00  
Billed to Date: \$89,846.19  
Invoice Date: 7/16/2010  
Services Through: 7/10/2010

Date	Report	Description of Services	Quantity	Rate	Total
6/17/10	92091181.0226	Technician - Level II, per hour	4.00	\$50.00	\$200.00
6/17/10	92091181.0226	Vehicle Charge, per hour	2.00	\$7.50	\$15.00
6/17/10	92091181.0226	Compressive Strength, per cylinder	3.00	\$15.00	\$45.00
6/18/10	92091181.0226A	Technician, Non-Certified, per hour	1.25	\$37.00	\$46.25
6/18/10	92091181.0226A	Vehicle Charge, per hour	1.25	\$7.50	\$9.38
6/18/10	92091181.0227	Concrete Cores, each	3.00	\$90.00	\$270.00
6/18/10	92091181.0227	Asphalt Cores, each	7.00	\$80.00	\$560.00
6/18/10	92091181.0227	Measuring Thickness of Asphalt Cores, each	6.00	\$8.00	\$48.00
6/18/10	92091181.0227	Measuring Thickness of Concrete Cores (ASTM C-174), each	3.00	\$11.00	\$33.00
6/19/10	Week Ending	Project Manager, per hour	2.50	\$105.00	\$262.50
6/19/10	Week Ending	Vehicle Charge, per hour	2.50	\$7.50	\$18.75
6/26/10	Week Ending	Project Manager, per hour	1.75	\$105.00	\$183.75
6/30/10	92091181.0228	Concrete Cores, each	2.00	\$90.00	\$180.00
6/30/10	92091181.0228	Measuring Thickness of Concrete Cores (ASTM C-174), each	2.00	\$11.00	\$22.00
7/3/10	Week Ending	Project Manager, per hour	0.50	\$105.00	\$52.50

**Invoice Total** **\$1,946.13**

## Statement of Account

Contract Amount	\$85,077.00
Amount Previously Billed	\$87,900.06
Total Due this Invoice	\$1,946.13
Total Billed	\$89,846.19
Payments to Date	\$81,338.68
<b>Total Due</b>	<b>\$8,507.51</b>

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**

# CONCRETE COMPRESSIVE STRENGTH TEST REPORT

Report Number: 92091181.0226  
Service Date: 06/17/10  
Report Date: 07/15/10 Revision 1 - 28-day results

# 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

Specified Strength: 3,000 psi @ 28 days  
  
Mix ID: 4500F  
Supplier: TXI  
Batch Time: 0740 Plant: 10  
Truck No.: 5014 Ticket No.: 10103969

## Sample Information

Sample Date: 06/17/10 Sample Time: 0815  
Sampled By: \*\*  
Weather Conditions: Clear  
Accumulative Yards: 20 Batch Size (cy): 10  
Placement Method: Direct Discharge  
Water Added Before (gal): 15  
Water Added After (gal): 0  
Sample Location: 15' S, 10' E from NW Corner of Driveway  
Placement Location: Driveway from Katy Flewellen to Carriage Inn

## Field Test Data

Test	Result	Specification
Slump (in):	6 *	4 ± 1
Air Content (%):	3.0	4 ± 1.5
Concrete Temp. (F):	85	
Ambient Temp. (F):	80	
Plastic Unit Wt. (pcf):		

\* = Field Test Results do not meet project specifications.

## Laboratory Test Data

Set No.	Specimen ID	Diameter (in)	Area (sq in)	Date Received	Date Tested	Age at Test (days)	Maximum Load (lbs)	Compressive Strength (psi)	Fracture Type
1	A	6.00	28.27	06/18/10	06/24/10	7	98,130	3,470	2
1	B	6.00	28.27	06/18/10	07/15/10	28	136,250	4,820	4
1	C	6.00	28.27	06/18/10	07/15/10	28	134,520	4,760	4
						Average (28 days)		4,790	
1	D			06/18/10		Hold			

Comments: Compressive strength of 28 day cylinders complies with the specified strength. Not tested for plastic unit weight.

Cylinder D was destroyed on site and the rest of the cylinders were damaged however, we will test the specimens at 7 and 28 days.

## Samples Made By: Terracon

Services: Obtain samples of fresh concrete at the placement locations (ASTM C-172), perform required field tests and cast, cure, and test compressive strength samples (ASTM C-31 (with the exception of Section 10.1.2), C-39, C-617).

Terracon Rep.: \*\*

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@spl-eng.com

Started: 0630

Finished: 0830

Reviewed By:

Jason L. Mills  
Project Manager

Test Methods: ASTM C138, ASTM C143, ASTM C173, ASTM C1064

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.

## SAMPLE PICK-UP REPORT

**Report Number:** 92091181.0226A  
**Service Date:** 06/18/10  
**Report Date:** 06/24/10

# 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 June 18, 2010, a Terracon representative was present at the above referenced project to obtain one (1) set of four (4) concrete cylinders cast on June 17, 2010. The samples were returned to the laboratory for processing and proper curing as specified.

Please note cylinder D was destroyed and cylinders A, B, and C were damaged.

**Services:** Pick up of material sample as requested and/or required by the project specifications.

**Terracon Rep.:** Cruz, Carlos

**Reported To:**

**Contractor:** Durwood Greene

#### **Report Distribution:**

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

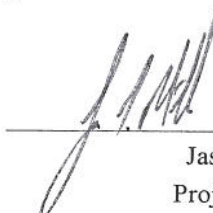
(1) Durwood Greene Construction Co,  
dmarchel@durwoodgreene.com  
(1) Schaumburg & Polk, eknesek@spi-  
eng.com

**Started:** 1230

**Finished:** 1345

**Lunch/NC:**

**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.



# CONCRETE CORE THICKNESS REPORT

Report Number: 92091181.0227  
Service Date: 06/18/10  
Report Date: 06/24/10  
Task:

# 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 No. 92091181

Reference Measurements: 10 - 0.6 = 9.4

Core No.	Location	1	2	3	4	5	6	7	8	9	Avg. of 9 (0.1 in.)	Core Length, Inches
1	Pin Oak Rd, SB, IL Sta. 22+00	0.90	0.90	0.85	0.90	0.80	0.90	0.85	0.90	0.90	0.9	8.5
2	Existing Katy Flewellen, Sta. 9+18	0.85	0.85	0.80	0.85	0.85	0.85	0.90	0.80	0.90	0.9	8.6
3	Katy Flewellen, Sta. 13+18	1.80	1.70	1.75	1.80	1.75	1.80	1.75	1.75	1.75	1.8 *	7.6

Specification Requirements:  
Minimum Thickness of 8 Inches

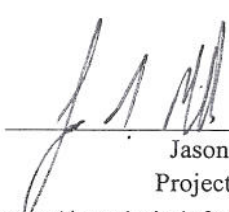
Services: n/a  
Terracon Rep: \*\*  
Reported To:  
Contractor: Durwood Greene

Started: \*\*  
Finished: \*\*  
Lunch/NC:

## Report Distribution

(1) Fort Bend County Engineering, (1) Durwood Greene Construction Co,  
(1) Durwood Greene Construction Co, (1) Schaumburg & Polk, eknesek@spi-

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.

# ASPHALT DENSITY TESTING REPORT

Report Number: 92091181.0227  
Service Date: 06/18/10  
Report Date: 06/28/10  
Task:

# 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 No. 92091181

## Project Data

Contractor: Durwood Greene  
Supplier: American Materials  
Mixture Type: Various  
Specification: Harris County

Date Placed: Various

## Report of Tests Asphalt Concrete Cores

Test No.	Locations	Thickness	Unit	(PCF)	In-Place
		Inches D 3549		Reference TEX-227-F	Density % of TEX-227-F
1	Existing Katy Flewellen Station 7+93 Lt, Surface	1.9		154.3	93%
2	Existing Katy Flewellen Station 6+58 Rt, Surface	1.7		154.3	92%
3	Existing Katy Flewellen Station 6+58 Rt, Bottom	0.9	*	154.3	95%
4	Katy Flewellen, Station 6+30, Surface	1.1	*	154.3	95%
5	Katy Flewellen, Station 9+40, Surface	2.4		154.3	93%
6	Katy Flewellen, Station 11+24, Surface	1.0	*	154.3	91% *
7	Katy Flewellen, Station 11+24, Bottom	1.1	*	154.3	93%
8	Existing Greenbusch Station 11+00, Surface	1.4	*	154.3	89% *
9	Existing Greenbusch Station 11+00, Base	5.5	*	153.2	97%
10	Existing Greenbusch 12+30, Surface	1.7		154.3	91% *
11	Existing Greenbusch 12+30, Bottom	1.5		154.3	91% *

### Specification Requirements:

Density 92% to 98%

Thickness 8" of Base and two lifts at 1.5" of Surface

Services: n/a

Terracon Rep: \*\*

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: \*\*

Lunch/Nonchargeable:

Finished: \*\*

Reviewed By

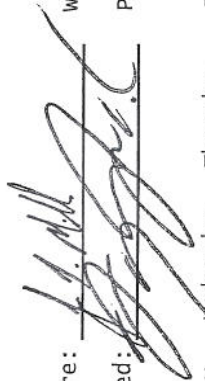
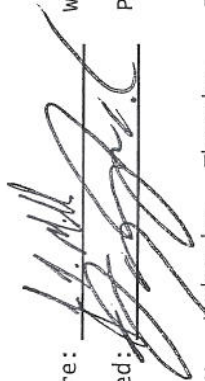
Jason L. Mills  
Project Manager

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TERRACON CONSULTANTS, INC. Name: Mills, Jason L (004792) Week Ending: 26-Jun-2010  
 TIME & MILEAGE REPORT Office: TER-Houston (0092) PTO Balance: 73.20 (19-Jun-2010)

Signature:   
 Approved: 

Project Name	Project No	Task	WC	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total	Miles	Per Comp
Paid Leave	92100900	0	290	8.00	8.00	8.00	8.00	0.50	0.50	0.50	24.00	0	0
The Cheesecake Factory	92101178	0	018					0.50			0.50	0	0
Echo Lane South	92101199	0	018					0.50			0.50	0	0
Halliburton North Belt C	92101091	0	018					1.00			1.00	0	0
Westwood Country Club C1	92091400	0	018					0.50			0.50	0	0
Misc Cell Towers	92081280	0	018					0.50			0.50	0	0
Walgreens Store	92101157	0	018					0.50			0.50	0	0
NRG Reliant	92101177	0	018					0.50			0.50	0	0
Houston Zoo African Fore	92091269	0	018					0.50			0.50	0	0
Regional Lift Station No	92101038	0	018					0.50			0.50	0	0
Greenbusch Road Phase I	92091181	0	018					0.50	1.25		1.75	0	0
Human Resources	92100400	0	241					3.00	29		3.00	29	0
Human Resources	92100400	0	246					1.00			1.00	0	0
Bishop Lifting Products	92101200	0	018						1.00		1.00	0	0
Human Resources	92100400	0	247						0.50		0.50	0	0
Houston Premium Outlets	92101061	0	018						0.50		0.50	0	0
Halliburton North Belt C	92101091	0	017						5.00	67	5.00	67	0
Client Development	92100100	0	201						1.25		1.25	0	0
Human Resources	92100400	0	243						0.50		0.50	0	0
Totals:				8.00	8.00	8.00	8.00	9.50	29	10.00	43.50	96	0

Current week Chg % 30.5 Budget Chg % 70.0 YTD Actual Chg % 65.7 Trailing 12 weeks Actual Chg % 65.0

Mileage (Non-Chargeable only)

Project No	Task No	Mileage Type	Purpose
92100400	0	P	Meeting

Total Miles  
 29  
 Total:  
 29

Comments

By Project

Project No	Task	Comments
92100400	0	HCA

Total Hours  
 3

## LENGTH OF CONCRETE CORE REPORT

Report Number: 92091181.0228  
Service Date: 06/30/10  
Report Date: 06/30/10  
Task:

# 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 No. 92091181

As requested, Terracon obtained two cores, from Katy Flewellen Road from Station 11+68 to 14+68. The length of each core was determined in accordance with ASTM C 174. The nine individual measurements represent the difference from the overall core length and the "Reference Measurement" noted below. The core length was calculated from the average of the nine measurements.

Specified Length: 8 Inches  
Reference Measurement: 10 - 0.6 = 9.4

Core No.	Location	1	2	3	4	5	6	7	8	9	Avg. of 9 (0.1 in.)	Core Length, Inches
3A	Katy Flewellen Station 11+68	1.50	1.55	1.50	1.40	1.50	1.50	1.50	1.50	1.50	1.5 *	7.9
3B	Katy Flewellen Station 14+68	1.10	1.10	1.10	1.10	1.10	1.05	1.00	1.10	1.10	1.1	8.3

According to Harris County Item 360.17, "If the core is deficient by more than 0.2 inches but not more than 0.75 inches from the plan thickness, take 2 additional cores from the unit (500 foot length) at intervals of at least 150 feet and at locations selected by the Engineer, and determine the thickness of the unit for payment purposes by averaging the thickness of the 3 cores (See Table for "Deficient Pavement Thickness price Adjustment Factor")".

On Terracon report 92091181.0227 core no. 3 measured at 7.6 inches. In accordance with Harris County Item 360.17 the average of the core in question and the additional cores obtained (referenced above) is 7.9 inches.

\* Length does not meet the specified length.

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

Terracon Rep:

Started: \*\*

Reported To:

Finished: \*\*

Contractor: Durwood Greene

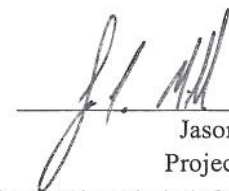
Lunch/NC:

### Report Distribution

(1) Fort Bend County Engineering,  
(1) Durwood Greene Construction Co,

(1) Durwood Greene Construction Co,  
(1) Schaumburg & Polk, eknesek@spi-

Reviewed By:



Jason L. Mills  
Project Manager

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

Signature:  Week Ending: 03-Jul-2010  
Approved:  PTO Balance: 52.28 (26-Jun-2010)

Project Name	Project No	Task	WC	Sunday Hours Miles	Monday Hours Miles	Tuesday Hours Miles	Wednesday Hours Miles	Thursday Hours Miles	Friday Hours Miles	Saturday Hours Miles	Total Hours	Total Miles
General Administration	92100200	0	221	2.00							2.00	0
Child Nutrition and Ware	92091075	0	018	0.50							0.50	0
Halliburton North Belt C	92101091	0	018	0.50		2.00	2.00	1.00	1.25		6.75	20
Regional Lift station No	92101038	0	018	0.50			1.00		0.50		2.00	0
Easton Ave Bridge at Bul	92101013	0	018	0.50							0.50	0
Greenbusch Road Phase I	92091181	0	018	0.50							0.50	0
NRG Reliant	92101177	0	018	0.50							0.50	0
Client Development	92100100	0	201	3.00				1.50			4.50	0
Bishop Lifting Products	92101200	0	018	0.50							0.50	0
Houston Zoo African Fore	92091269	0	018	0.50			0.50				1.50	0
Human Resources	92100400	0	243	1.00		0.50					2.50	0
walgreens Store	92101157	0	018			0.50					1.00	0
TX Childrens Hospital W	92081380	0	018			0.50					0.50	0
General Administration	92100200	0	219	0.50							0.50	0
Misc Lab Testing	92061141	0	018	0.50					1.00		1.50	0
McDonalds 42-2867	92101222	0	024	3.00							3.00	0
Misc Lab Testing	92061141	0	130				4.00	64			4.00	64
Houston Oaks Misc Testin	92091262	0	018			0.50					0.50	0
Metal Building - 6 Acre	92091426	0	018			0.50		0.50			1.00	0
Misc Lab Testing	92061141	0	024			1.50					1.50	0
Cy Fair ISD Pkg A 2009 B	92091331	0	017					1.00	15		1.00	15
Cy Fair ISD Pkg A 2009 B	92091331	0	024					0.50			0.50	0
Creekside at Cross Creek	92101160	0	017					3.50	56		3.50	56
Houston Premium Outlets	92101061	0	018					0.50			0.50	0
General Administration	92100200	0	221					1.50			2.50	0
Halliburton North Belt C	92101091	0	017						3.50	56	3.50	56
Client Development	92100100	0	204						2.25		2.25	0
Totals:				10.00		9.00	10.50	64	10.00	71	49.00	155

Current week Chg % 70.9 Budget Chg % 70.0 YTD Actual Chg % 64.4 Trailing 12 Weeks Actual Chg % 64.6

Comments