

PO 209461
DMS
REC 649962

AGENDA



P.O. Box 2724
McAllen, TX 78502
(956) 585-3773

Invoice

Date	Invoice #
11/3/2022	4432

Please send remittance with copy of invoice to:

Attn: Mrs. Aisha Gonzalez
P.O. Box 2724
McAllen, TX 78502

Bill To:
Fort Bend County
301 Jackson Street
Richmond, TX 77469

Project Info:
*Task Order #1: Fort Bend County -CMT Services for
Madden Road Project 17416*
B2Z JOB: 8031
PO #: 209461

Billing Period **October 2022**

Description	Contract	Previous Applications	Current Completed	Total Completed	% Complete
Labor	\$ 48,390.50	\$ 21,290.00	\$ 9,840.50	\$ 31,130.50	64.3%
Construction Material Testing (CMT)	\$ 15,297.00	\$ 10,101.00	\$ 3,111.00	\$ 13,212.00	86.4%
Total For This Billing Period					\$12,951.50

Work Authorization ~ Summary

<u>TO No.</u>	<u>WA Amount</u>	<u>Previously Inv.</u>	<u>Percent Complete</u>	<u>Remaining Balance</u>
1	\$63,687.50	\$31,391.00	69.6%	\$19,345.00


Aisha Gonzalez - President



P.O. Box 2724
 McAllen, Tx. 78502
 (956) 585-3773

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Fort Bend County
 301 Jackson Street
 Richmond, TX 77469

Project Info:

Task Order No: Fort Bend County -CMT Services for
 Madden Road Project 17416
 B2Z Job #: 8031
 PO #: 209461

Billing Period September - October 2022

Report #	Date	Qty	Billing Code	Unit Type	Unit Rate	Extension
MR-2A, MR-2A-1	10/3/2022		LABOR			
		1.5	**Project Engineer (Oversight)		\$ 165.00	\$ 247.50
		4	Laboratory/Field Technician	Hour	\$ 90.00	\$ 360.00
		10	Field Technician (Level 1-8)		\$ 65.00	\$ 650.00
		8	Vehicle Charge	Hour	\$ 12.00	\$ 96.00
		1.5	**Admin/Clerical		\$ 70.00	\$ 105.00
			MATERIALS			
			-SOILS			
		8	In-Place Density		\$ 12.00	\$ 96.00
			-HMAC			
		1	Asphalt Content (%)		\$ 92.00	\$ 92.00
		1	Gradation		\$ 230.00	\$ 230.00
		2	In-Place Air Voids		\$ 61.00	\$ 122.00
		2	Lab Molded Density		\$ 61.00	\$ 122.00
MR-3A, MR-3A-1	10/4/2022		LABOR			
		1	**Project Engineer (Oversight)		\$ 165.00	\$ 165.00
		4	Laboratory/Field Technician	Hour	\$ 90.00	\$ 360.00
		4	Field Technician (Level 1-8)		\$ 65.00	\$ 260.00
		4	Vehicle Charge	Hour	\$ 12.00	\$ 48.00
		1	**Admin/Clerical		\$ 70.00	\$ 70.00
			MATERIALS			
			-SOILS			
		4	In-Place Density		\$ 12.00	\$ 48.00
			-HMAC			
		1	Asphalt Content (%)		\$ 92.00	\$ 92.00
		1	Gradation		\$ 230.00	\$ 230.00
		2	In-Place Air Voids		\$ 61.00	\$ 122.00
		2	Lab Molded Density		\$ 61.00	\$ 122.00
MR-6C	10/20/2022		LABOR			
		0.5	**Project Engineer (Oversight)		\$ 165.00	\$ 82.50
		4	Laboratory/Field Technician		\$ 90.00	\$ 360.00
		0	Field Technician (Level 1-8)		\$ 65.00	\$ -
		4	Vehicle Charge		\$ 12.00	\$ 48.00
		0.5	**Admin/Clerical		\$ 70.00	\$ 35.00
			MATERIALS			
			-SOILS			
			-HMAC			
			-CONCRETE			
		4	*Strength		\$ 20.00	\$ 80.00

Report #	Date	Qty	Billing Code	Unit Type	Unit Rate	Extension
MR-21S, MR-21S-1	9/29/2022		LABOR			
		1	**Project Engineer (Oversight)		\$ 165.00	\$ 165.00
		6	Laboratory/Field Technician	Hour	\$ 90.00	\$ 540.00
		6	Vehicle Charge	Hour	\$ 12.00	\$ 72.00
		1	**Admin/Clerical		\$ 70.00	\$ 70.00
			MATERIALS -SOILS			
		6	Measuring Thickness of Pavement Layer		\$ 53.00	\$ 318.00
		6	In-Place Density		\$ 12.00	\$ 72.00
MR22S, MR-22S-1	9/29/2022		LABOR			
		1	**Project Engineer (Oversight)		\$ 165.00	\$ 165.00
		4	Laboratory/Field Technician	Hour	\$ 90.00	\$ 360.00
		4	Vehicle Charge	Hour	\$ 12.00	\$ 48.00
		1	**Admin/Clerical		\$ 70.00	\$ 70.00
			MATERIALS -SOILS			
			Pulverization Gradation		\$ 65.00	\$ -
		7	Measuring Thickness of Pavement Layer		\$ 53.00	\$ 371.00
		4	In-Place Density		\$ 12.00	\$ 48.00
MR-23S, MR-23S-1	9/30/2022		LABOR			
		0.5	**Project Engineer (Oversight)		\$ 165.00	\$ 82.50
		5	Laboratory/Field Technician	Hour	\$ 90.00	\$ 450.00
		5	Vehicle Charge	Hour	\$ 12.00	\$ 60.00
		0.5	**Admin/Clerical		\$ 70.00	\$ 35.00
			MATERIALS -SOILS			
		3	Measuring Thickness of Pavement Layer		\$ 53.00	\$ 159.00
		5	In-Place Density		\$ 12.00	\$ 60.00
MR-26S	10/17/2022		LABOR			
		0.5	**Project Engineer (Oversight)		\$ 165.00	\$ 82.50
		7	Laboratory/Field Technician	Hour	\$ 90.00	\$ 630.00
		7	Vehicle Charge	Hour	\$ 12.00	\$ 84.00
		0.5	**Admin/Clerical		\$ 70.00	\$ 35.00
			MATERIALS -SOILS			
		7	In-Place Density		\$ 12.00	\$ 84.00
MR-27S & MR- 27S-1	10/12/2022		LABOR			
		1	**Project Engineer (Oversight)		\$ 165.00	\$ 165.00
		11	Laboratory/Field Technician	Hour	\$ 90.00	\$ 990.00
		3	Vehicle Charge	Hour	\$ 12.00	\$ 36.00
		1	**Admin/Clerical		\$ 70.00	\$ 70.00
			MATERIALS -CONCRETE			
		1	Decantation		\$ 56.00	\$ 56.00
		1	Deleterious Matl.		\$ 56.00	\$ 56.00
		1	Fineness Mod.		\$ 51.00	\$ 51.00
		1	Sand Equivalent		\$ 74.00	\$ 74.00
		2	Sieve Analysis		\$ 62.00	\$ 124.00

Report #	Date	Qty	Billing Code	Unit Type	Unit Rate	Extension
MR-28S	10/18/2022		LABOR			
		0.5	**Project Engineer (Oversight)		\$ 165.00	\$ 82.50
		7.5	Laboratory/Field Technician	Hour	\$ 90.00	\$ 675.00
		7.5	Vehicle Charge	Hour	\$ 12.00	\$ 90.00
		0.5	**Admin/Clerical		\$ 70.00	\$ 35.00
			MATERIALS			
			-SOILS			
		7.5	In-Place Density		\$ 12.00	\$ 90.00
MR-29S	10/18/2022		LABOR			
		0.5	**Project Engineer (Oversight)		\$ 165.00	\$ 82.50
		7.5	Laboratory/Field Technician	Hour	\$ 90.00	\$ 675.00
		7.5	Vehicle Charge	Hour	\$ 12.00	\$ 90.00
		0.5	**Admin/Clerical		\$ 70.00	\$ 35.00
			MATERIALS			
			-SOILS			
		7.5	In-Place Density		\$ 12.00	\$ 90.00
MR-30S	10/20/2022		LABOR			
		0.5	**Project Engineer (Oversight)		\$ 165.00	\$ 82.50
		8.5	Laboratory/Field Technician	Hour	\$ 90.00	\$ 765.00
		8	Vehicle Charge	Hour	\$ 12.00	\$ 96.00
		0.5	**Admin/Clerical		\$ 70.00	\$ 35.00
			MATERIALS			
			-SOILS			
		8.5	In-Place Density		\$ 12.00	\$ 102.00
Total For This Billing Period						\$12,951.50

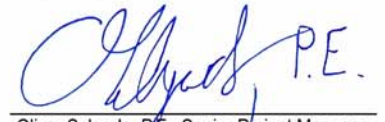

 Aisha Gonzalez - President

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
58		09/28/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.0	121.3	134.6	8	98.9	95	DP/MP
59		09/28/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	12.1	121.0	135.6	8	98.7	95	DP/MP
60		09/28/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	10.2	124.1	136.8	8	101.2	95	DP/MP
61		09/28/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	12.8	123.7	139.5	8	100.9	95	DP/MP
62		09/28/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.8	121.6	135.9	8	99.2	95	DP/MP
63		09/28/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.5	119.7	133.5	8	97.6	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician									
58	Roadway: Madden Rd Sta. 109+00 SBLN, Cement Treated Base 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Robert Ramirez									
59	Roadway: Madden Rd Sta. 110+00 SBLN, Cement Treated Base 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Robert Ramirez									
60	Roadway: Madden Rd Sta. 111+00 SBLN, Cement Treated Base 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Robert Ramirez									
61	Roadway: Madden Rd Sta. 112+00 SBLN, Cement Treated Base 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Robert Ramirez									
62	Roadway: Madden Rd Sta. 113+50 SBLN, Cement Treated Base 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Robert Ramirez									
63	Roadway: Madden Rd Sta. 114+50 SBLN, Cement Treated Base 1st Lift			Instrotek / 3500 Xplorer / 4015 / 01/25/2022	Robert Ramirez									

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 58: Fort Bend County Inspector, Brett Buskey

Reviewed by: 

Respectfully Submitted by B2Z Engineering

 P.E.
 Oliver Salgado, P.E., Senior Project Manager

Houston Office

1304 Langham Creek Drive
Suite 130
Houston, TX 77084
Phone: 281-717-4016

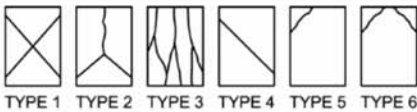
Client:

Fort Bend County
Attn: County Judge
401 Jackson Street, 1st Floor
Richmond,, TX 77469

Project:

8031 (17416)
Fort Bend County ~ Madden Rd CMT
Various
Houston, TX

Sample Details										
Set #:	9	Technician:	Jason Ybarra	Batched:	08:23 CDT					
Specimen Size:	6 x 12 Cast Cylinder	Cast By:	Robert Ramirez	Sampled:	09:40 CDT					
Specimens In Set:	4	Date Cast:	10/11/22	Cast:	09:44 CDT					
Truck / Ticket #:	10073228 / 47324192	Sampled From:	Chute	Truck Empty:	10:10 CDT					
Contractor:	Triple A Asphalt	Placement Method:	Chute	Placement Time:	107 (min)					
Location										
Placement Location:	Roadway									
Location Details:	Slope Paving @ Headwall Sta: 119+75									
Sample Location / Notes:	Slope Paving @ Headwall Sta: 119+75									
Batch Log					Specifications					
Supplier:	Cemex	Mix Design:	Class A - 3000	Strength:	3000 (psi)					
On-Site Admixtures:	None									
Field Measurements										
Weather:	Sunny	Slump (in):	5	Plastic Unit Weight:						
Air Temperature (F):	75	Concrete Temp (F):	73	Air Content:	2.0					
				Load Volume:	10.00 (yd ³)					
Standard Cure					Field Cure					
Min / Max Temp (F):	74/122									
Lab Test Results										
Testing Lab: B2Z Houston Lab, 1304 Langham Creek Dr., Ste. 130, Houston, TX, 77084										
Specimen Number	Test Age Days	Test Date	Field / Lab Cure Days	Average Cylinder Diameter (in)	Cylinder Area (in ²)	Max Load (lbs)	Strength (psi)	Fracture Type	Break Remark	Capping Method
9-1	7	10/18/22	1 / 6	6.00	28.27	119,930	4,240	1	R3	1
9-2	7	10/18/22	1 / 6	6.00	28.27	118,370	4,190	1	R3	1
9-3	28	11/08/22	1 / 27							
9-4	28	11/08/22	1 / 27							
Test Age Average Strengths (psi): 7 Day - 4220										
									Capping Methods	
R3: The 7 day test results meets or exceeds the 28 day specified strength. Tested By: Jason Ybarra (1,2) Checked In : 10/12/2022 (1,2,3,4)									1: Neoprene Pad	



Reviewed by: *[Signature]*

Respectfully Submitted by B2Z Engineering

[Signature] P.E.
Oliver Salgado, P.E., Senior Project Manager

Client:
Fort Bend County
Attn: County Judge
401 Jackson Street, 1st Floor
Richmond, TX 77469

Project:
8031 (17416)
Fort Bend County ~ Madden Rd CMT
Various
Houston, TX

General Information

Sample Date: 10/04/2022	Sample Number: 2321
Sampled From: Material Transfer Vehicle	Material Description: Type D
Technican: Jason Ybarra	Location Details: Type D Surface Sta: 113+25

Lot Number: 1	Sublot Number: 1
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Sieve Analysis

Sieve Size	Cumulative % Retained	% Passing	Specifications
3/4"	0.0	100.0	100
1/2"	0.0	100.0	100 - 98
3/8"	2.6	97.4	100 - 85
No. 4	30.3	69.7	70 - 50
No. 8	59.1	40.9	46 - 35
No. 30	81.7	18.3	29 - 15
No. 50	96.3	3.7	20 - 7
No. 200	99.7	0.3	7 - 2

Asphalt Content (Ignition Method) 5.0	Theoretical Maximum Specific Gravity Rice Gravity: 2.432
Lab Density of Compacted Bituminous Mixtures	
Average Ga: 2.350	Average Density: 96.7
Average Voids: 3.3	

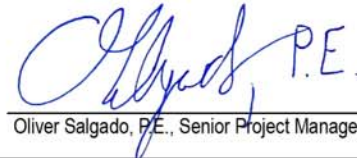
Test Completed Date: 10/04/2022	Test Completed By: Jason Ybarra
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Test Results: The test is for informational purposes.

Test Method (As Applicable):
Tex-200-F ; Tex-236-F ;
Tex-227-F ; Tex-207-F

Reviewed by 

Respectfully Submitted by B2Z Engineering


 P.E.
Oliver Salgado, P.E., Senior Project Manager

This report applies only to the standards or procedures indicated and to the sample(s) tested and/or observed and are not necessarily indicative of the qualities of apparently identical or similar products or procedures, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and are not to be reproduced without written permission.

Test Results															
Test #	Retest Of	Test Date	Test Location	Material	Mix Design	Thickness (in)	Max Density (pcf)	Max Density Source	In Place Density (pcf)	Probe Depth (in)	Percent Comp.	Min/Max Comp. (%)	Remark	Gauge SN	Technician
27		10/04/22	Roadway: Madden Rd. Sta. 113+25, Driveway 1st Lift	Type D		2	152.7	Supplied Value	142.8	Asphalt	93.5	91 / 97	DP	255	Robert Ramirez
28		10/04/22	Roadway: Madden Rd. Sta. 114+50, Driveway 1st Lift	Type D		2	152.7	Supplied Value	141.9	Asphalt	92.9	91 / 97	DP	255	Robert Ramirez
29		10/04/22	Roadway: Madden Rd. Sta. 104+00, Driveway 1st Lift	Type D		2	152.7	Supplied Value	142.9	Asphalt	93.6	91 / 97	DP	255	Robert Ramirez
30		10/04/22	Roadway: Madden Rd. Sta. 113+50, Driveway 1st Lift	Type D		2	152.7	Supplied Value	141.7	Asphalt	92.8	91 / 97	DP	255	Robert Ramirez
31		10/04/22	Roadway: Madden Rd. Sta. 114+00, Driveway 1st Lift	Type D		2	152.7	Supplied Value	141.5	Asphalt	92.7	91 / 97	DP	255	Robert Ramirez
32		10/04/22	Roadway: Madden Rd. Sta. 103+50, Driveway 1st Lift	Type D		2	152.7	Supplied Value	142.2	Asphalt	93.1	91 / 97	DP	255	Robert Ramirez
Remarks								Comments							
DP: Lab Density Pass								Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter" 27: Fort Bend County Inspector, Brett Buskey							
Gauge Information															
Gauge SN	Make	Model	Density Count	Moisture Count	Standard Count Date	Last Calibration Date	Last Calibrated By								
255	Instrotek	NoNuke	2266	NA	10/04/22	04/08/22	InstroTek, Inc.								

Reviewed by: 

Respectfully Submitted by B2Z Engineering

 P.E.
 Oliver Salgado, P.E., Senior Project Manager

Client:
 Fort Bend County
 Attn: County Judge
 401 Jackson Street, 1st Floor
 Richmond,, TX 77469

Project:
 8031 (17416)
 Fort Bend County ~ Madden Rd CMT
 Various
 Houston, TX

General Information

Sample Date: 10/03/2022	Sample Number: 2305
Sampled From: Truck At Plant	Material Description: Type D
Technican: Jason Ybarra	Location Details: Type D - Surface

Lot Number: 1	Sublot Number: 1
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Sieve Analysis

Sieve Size	Cumulative % Retained	% Passing	Specifications
3/4"	0.0	100.0	100.0
1/2"	0.0	100.0	98.0 - 100.0
3/8"	1.5	98.5	85.0 - 100.0
No. 4	24.6	75.4	50.0 - 70.0
No. 8	53.0	47.0	35.0 - 46.0
No. 30	69.4	30.6	15.0 - 29.0
No. 50	80.1	19.9	7.0 - 20.0
No. 200	95.5	4.5	2.0 - 7.0

Asphalt Content (Ignition Method) 5.0	Theoretical Maximum Specific Gravity Rice Gravity: 2.443
Lab Density of Compacted Bituminous Mixtures	
Average Ga: 2.352	Average Density: 96.3
Average Voids: 3.8	

Test Completed Date: 10/03/2022	Test Completed By:
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Test Results: The test is for informational purposes.

Test Method (As Applicable):
 Tex-200-F ; Tex-236-F ;
 Tex-227-F ; Tex-207-F

Reviewed by

Respectfully Submitted by B2Z Engineering

Oliver Salgado, P.E., Senior Project Manager

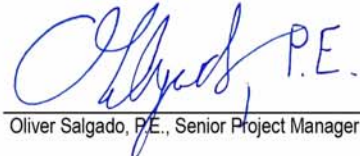
This report applies only to the standards or procedures indicated and to the sample(s) tested and/or observed and are not necessarily indicative of the qualities of apparently identical or similar products or procedures, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and are not to be reproduced without written permission.

Test Results															
Test #	Retest Of	Test Date	Test Location	Material	Mix Design	Thickness (in)	Max Density (pcf)	Max Density Source	In Place Density (pcf)	Probe Depth (in)	Percent Comp.	Min/Max Comp. (%)	Remark	Gauge SN	Technician
15		10/03/22	Roadway: Madden Rd. Sta. 103+00 SBLN 1st Lift	Type D		2	152.7	Supplied Value	142.1	Asphalt	93.1	91 / 97	DP	255	Robert Ramirez
16		10/03/22	Roadway: Madden Rd. Sta. 105+00 SBLN 1st Lift	Type D		2	152.7	Supplied Value	144.9	Asphalt	94.9	91 / 97	DP	255	Robert Ramirez
17		10/03/22	Roadway: Madden Rd. Sta. 108+00 SBLN 1st Lift	Type D		2	152.7	Supplied Value	142.3	Asphalt	93.2	91 / 97	DP	255	Robert Ramirez
18		10/03/22	Roadway: Madden Rd. Sta. 112+00 SBLN 1st Lift	Type D		2	152.7	Supplied Value	141.2	Asphalt	92.5	91 / 97	DP	255	Robert Ramirez
19		10/03/22	Roadway: Madden Rd. Sta. 115+00 SBLN 1st Lift	Type D		2	152.7	Supplied Value	141.5	Asphalt	92.7	91 / 97	DP	255	Robert Ramirez
20		10/03/22	Roadway: Madden Rd. Sta. 120+00 SBLN 1st Lift	Type D		2	152.7	Supplied Value	144.3	Asphalt	94.5	91 / 97	DP	255	Robert Ramirez
21		10/03/22	Roadway: Madden Rd. Sta. 103+00 NBLN 1st Lift	Type D		1	152.7	Supplied Value	142.4	Asphalt	93.3	91 / 97	DP	255	Robert Ramirez
22		10/03/22	Roadway: Madden Rd. Sta. 105+00 NBLN 1st Lift	Type D		1	152.7	Supplied Value	145.8	Asphalt	95.5	91 / 97	DP	255	Robert Ramirez
23		10/03/22	Roadway: Madden Rd. Sta. 108+00 NBLN 1st Lift	Type D		1	152.7	Supplied Value	145.3	Asphalt	95.2	91 / 97	DP	255	Robert Ramirez
24		10/03/22	Roadway: Madden Rd. Sta. 112+00 NBLN 1st Lift	Type D		1	152.7	Supplied Value	142.2	Asphalt	93.1	91 / 97	DP	255	Robert Ramirez
25		10/03/22	Roadway: Madden Rd. Sta. 115+00 NBLN 1st Lift	Type D		1	152.7	Supplied Value	142.6	Asphalt	93.4	91 / 97	DP	255	Robert Ramirez
26		10/03/22	Roadway: Madden Rd. Sta. 120+00 NBLN 1st Lift	Type D		1	152.7	Supplied Value	144.4	Asphalt	94.6	91 / 97	DP	255	Robert Ramirez

Remarks				Comments			
DP: Lab Density Pass				Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter" 15: Fort Bend County Inspector, Brett Buskey			
Gauge Information							
Gauge SN	Make	Model	Density Count	Moisture Count	Standard Count Date	Last Calibration Date	Last Calibrated By
255	Instrotek	NoNuke	2266	NA	10/03/22	04/08/22	InstroTek, Inc.

Reviewed by: 

Respectfully Submitted by B2Z Engineering

 P.E.
 Oliver Salgado, P.E., Senior Project Manager


Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
87		10/20/22	CSS #1		CL/CH	11.1	102.0	9.0	100.4	109.4	4	98.4	95	DP
88		10/20/22	CSS #1		CL/CH	11.1	102.0	10.0	100.7	110.8	4	98.7	95	DP
89		10/20/22	CSS #1		CL/CH	11.1	102.0	11.4	103.9	115.8	4	101.9	95	DP
90		10/20/22	CSS #1		CL/CH	11.1	102.0	12.6	105.6	118.9	4	103.5	95	DP

Test Information					
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
87	Utility Trench Backfill: Storm Sewer: Madden Rd Sta. 178+50, 24" RCP Pipe, EBLN 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
88	Utility Trench Backfill: Storm Sewer: Madden Rd Sta. 178+00, 24" RCP Pipe, EBLN 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
89	Utility Trench Backfill: Storm Sewer: Madden Rd Sta. 178+49, 24" RCP Pipe, EBLN 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
90	Utility Trench Backfill: Storm Sewer: Madden Rd Sta. 178+25, 24" RCP Pipe, EBLN 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez

Remarks	Comments
DP: Density Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 87: Fort Bend County Inspector Ryan Holritz

Reviewed by: 

Respectfully Submitted by B2Z Engineering


 Oliver Salgado, P.E., Senior Project Manager

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
82		10/19/22	CSS #1		CL/CH	11.1	102.0	11.8	106.9	119.5	4	104.8	95	DP
83		10/19/22	CSS #1		CL/CH	11.1	102.0	10.7	108.2	119.8	4	106.1	95	DP
84		10/19/22	CSS #1		CL/CH	11.1	102.0	10.0	106.5	117.2	4	104.4	95	DP
85		10/19/22	CSS #1		CL/CH	11.1	102.0	13.3	105.5	119.5	4	103.4	95	DP
86		10/19/22	CSS #1		CL/CH	11.1	102.0	11.7	106.7	119.2	4	104.6	95	DP

Test Information					
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
82	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 157+00, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
83	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 157+50, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
84	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 157+75, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
85	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 157+25, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
86	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 157+25, Intersection, 24" RCP Pipe, EBLN 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez

Remarks	Comments
DP: Density Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 82: Fort Bend County Inspector, Brett Buskey

Reviewed by: 

Respectfully Submitted by B2Z Engineering



 Oliver Salgado, P.E., Senior Project Manager

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
76		10/18/22	CSS #1		CL/CH	11.1	102.0	9.8	96.4	105.9	4	94.5	95	DP
77		10/18/22	CSS #1		CL/CH	11.1	102.0	10.0	96.8	106.5	4	94.9	95	DP
78		10/18/22	CSS #1		CL/CH	11.1	102.0	9.5	96.5	105.7	4	94.6	95	DP
79		10/18/22	CSS #1		CL/CH	11.1	102.0	9.9	98.9	108.7	4	97.0	95	DP
80		10/18/22	CSS #1		CL/CH	11.1	102.0	9.7	99.4	109.0	4	97.5	95	DP
81		10/18/22	CSS #1		CL/CH	11.1	102.0	10.1	97.8	107.7	4	95.9	95	DP

Test Information					
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician
76	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 156+00, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
77	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 156+25, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
78	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 155+80, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
79	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 156+50, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
80	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 157+50, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez
81	Utility Trench Backfill: Storm Sewer: Madden Rd & FM1464 Sta. 157+00, Intersection, 24" RCP Pipe 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez

Remarks	Comments
DP: Density Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 76: Fort Bend County Inspector, Brett Buskey

Reviewed by 

Respectfully Submitted by B2Z Engineering

 Oliver Salgado, P.E., Senior Project Manager

Client:
Fort Bend County
Attn: County Judge
401 Jackson Street, 1st Floor
Richmond,, TX 77469

Project:
8031 (17416)
Fort Bend County ~ Madden Rd CMT
Various
Houston, TX

General Information

Sample Date:	10/12/2022	Sample Number:	2374
Sample From:	Stockpile	Material Description:	Sand
Sampled By:	Jason Ybarra	Location Details:	Cemex Plant

Sieve Analysis Results - % Passing

Sieve Size	% Passing	Spec. Requirements	Pass/Fail
3/8"	99.7	100.0	Pass
No. 4	99.3	95.0-100.0	Pass
No. 8	86.7	80.0-100.0	Pass
No. 16	69.2	50.0-85.0	Pass
No. 30	49.4	25.0-65.0	Pass
No. 50	24.7	6.0-35.0	Pass
No. 100	3.8	0.0-10.0	Pass
No. 200	0.5	0.0-3.0	Pass

Fineness Modules: 2.7

Test Completed Date: 10/14/2022 **Test Completed By:** Jason Ybarra

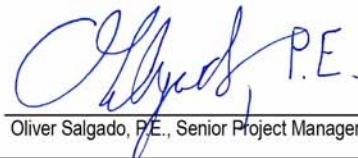
Test Results: The above test result meets the technical specifications.

Test Method (As Applicable):
Tex 110-E / ASTM C136; ASTM D6913; ASTM C117 Method A;
Tex 104-E, Tex 105-E, Tex 106-E / ASTM D4318 ;
Tex 116-E; Tex 103-E / ASTM D2216; Tex 200-F; Tex 217-F

Reviewed by:




Respectfully Submitted by B2Z Engineering



Oliver Salgado, P.E., Senior Project Manager

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
67		10/17/22	CSS #1		CL/CH	11.1	102.0	13.8	103.3	117.5	4	101.3	95	DP
68		10/17/22	CSS #1		CL/CH	11.1	102.0	14.9	103.5	118.9	4	101.5	95	DP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician									
67	Roadway: Madden Rd & FM 1464 Sta. 156+00 , EBLN 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez									
68	Roadway: Madden Rd & FM 1464 Sta. 156+25 , EBLN 1st Lift			Instrotek / 3500 Xplorer / 4601 / 02/22/2022	Robert Ramirez									
Remarks		Comments												
DP: Density Pass		Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 67: Fort Bend County Inspector, Brett Buskey												

Reviewed by: 

Respectfully Submitted by B2Z Engineering

 Oliver Salgado, P.E., Senior Project Manager

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
64		09/30/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.5	121.6	135.6	8	99.2	95	DP/MP
65		09/30/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	10.9	120.4	133.5	8	98.2	95	DP/MP
66		09/30/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.8	121.2	135.5	8	98.9	95	DP/MP
Test Information														
Test #	Test Location					Elevation	Reference	Gauge Make / Model / SN / Calibrated			Field Technician			
64	Roadway: Madden Rd Sta. 121+65 , SBLN, Flex-base with Cement 1st Lift							Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022			Robert Ramirez			
65	Roadway: Madden Rd Sta. 122+50 , SBLN, Flex-base with Cement 1st Lift							Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022			Robert Ramirez			
66	Roadway: Madden Rd Sta. 123+50 , SBLN, Flex-base with Cement 1st Lift							Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022			Robert Ramirez			
Remarks					Comments									
DP/MP: Density Pass / Moisture Pass					Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 64: Fort Bend County Inspector, Brett Buskey									

Reviewed by 

Respectfully Submitted by B2Z Engineering



 Oliver Salgado, P.E., Senior Project Manager

Test Results														
Test #	Retest Of	Test Date	Proctor ID	Method	Soil Classification	Optimum Moisture (%)	Maximum Dry Density (pcf)	In Place Moisture (%)	In Place Dry Density (pcf)	In Place Wet Density (pcf)	Probe Depth (in)	Percent Compaction	Min Comp. (%)	Remark
52		09/29/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	10.7	117.3	129.8	8	95.7	95	DP/MP
53		09/29/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.8	117.9	131.8	8	96.2	95	DP/MP
54		09/29/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	10.4	118.6	130.9	8	96.7	95	DP/MP
55		09/29/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	10.3	122.8	135.4	8	100.2	95	DP/MP
56		09/29/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.6	116.5	130.0	8	95.0	95	DP/MP
57		09/29/22	Proctor #2 Cement Base		CL/CH	11.4	122.6	11.2	116.5	129.5	8	95.0	95	DP/MP
Test Information														
Test #	Test Location	Elevation	Reference	Gauge Make / Model / SN / Calibrated	Field Technician									
52	Roadway: Madden Rd Sta. 115+50 SBLN 1st Lift			Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022	Robert Ramirez									
53	Roadway: Madden Rd Sta. 116+50 SBLN 1st Lift			Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022	Robert Ramirez									
54	Roadway: Madden Rd Sta. 117+50 SBLN 1st Lift			Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022	Robert Ramirez									
55	Roadway: Madden Rd Sta. 118+50 SBLN 1st Lift			Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022	Robert Ramirez									
56	Roadway: Madden Rd Sta. 119+50 SBLN 1st Lift			Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022	Robert Ramirez									
57	Roadway: Madden Rd Sta. 120+50 SBLN 1st Lift			Instrotek / 3500 Xplorer / 4016 Instrotek / 04/13/2022	Robert Ramirez									

Remarks	Comments
DP/MP: Density Pass / Moisture Pass	Tests are "Direct Transmission" (Method A) unless probe depth is noted as "Backscatter". Gauge calibration data on file with the testing agency. 52: Fort Bend County Inspector, Brett Buskey, present

Reviewed by 

Respectfully Submitted by B2Z Engineering

 P.E.
 Oliver Salgado, P.E., Senior Project Manager

