L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-002

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/24/09 **COMPLETED** 4/24/09
GROUND ELEVATION 75.73 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 25.00 ft / Elev 50.73 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING --- no water observed after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 6"										
		(SC) Sand, Clayey, Dark Brown, Dry, Medium Dense	SPT 1	100 (100)	11-14-14 (28)			6				45
		(CH) Fat Clay, Slightly Sandy, Dark Brown, Dry to Moist, Stiff to Hard	SH 2	100 (100)		3.5		20	78	22	56	
			SH 3	100 (100)		4		23				88
10			SH 4	100 (100)		4		22	79	24	55	
			SH 5	100 (100)		4.5		21				76
20			SPT 6	100 (100)	6-9-11 (20)			13	75	18	57	
		(CL) Lean Clay, Slightly Sandy, Brown, Wet, Stiff	SPT 7	100 (100)	8-8-10 (18)			29	46	16	30	73
		(SM) Sand, Silty, Tan, Wet, Medium Dense to Very Dense										
30			SPT 8	100 (100)	8-8-11 (19)			21				22
			SPT 9	100 (100)	13-17-20 (37)			20				12
40			SPT 10	100 (100)	25-30-35 (65)			19				12
			SPT 1	100 (100)	21-29-33 (62)			20				14
50			SPT 12	100 (100)	23-24-27 (51)			20				19
			SPT 13	100 (100)	35-50-50 (100)			19				33
60			SPT 14	100 (100)	31-29-35 (64)			20				12

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-003

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/27/09 **COMPLETED** 4/27/09
GROUND ELEVATION 75.91 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 28.00 ft / Elev 47.91 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 20.00 ft / Elev 55.91 ft after 24 hours
NOTES Solid Stem Auger to 28' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0	Caliche Base Material with Gravel, Roadway, 6"										
	(CH) Fat Clay, Dark Brown to Tan, Moist, Firm to Hard	SPT 1	100 (100)	5-5-6 (11)			21				89
		SH 2	100 (100)		4.5		21	67	19	48	
		SPT 3	100 (100)	10-7-8 (15)			18				96
10		SPT 4	100 (100)	10-6-5 (11)			23	77	22	55	
		SPT 5	100 (100)	8-10-11 (21)			23				98
20		SPT 6	100 (100)	9-6-7 (13)			24	71	23	48	
		SPT 7	100 (100)	6-9-11 (20)			23				98
30		SPT 8	100 (100)	6-7-9 (16)			24	66	22	44	
		SPT 9	100 (100)	13-16-21 (37)			32				96
	(SM) Sand, Silty, Tan, Wet, Very Dense										
40		SPT 10	100 (100)	10-14-16 (30)			19				24
		SPT 11	100 (100)	12-15-17 (32)			19				14
50		SPT 12	100 (100)	32-50			22				31
	(CL) Lean Clay, Tan, Moist, Hard										
		SPT 13	100 (100)	35-41-50 (91)			16	39	17	22	
60		SPT 14	100 (100)	31-35-40 (75)			19				98

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-004

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/2/09 **COMPLETED** 5/2/09
GROUND ELEVATION 76.37 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 35.00 ft / Elev 41.37 ft during drilling
LOGGED BY E. Hernandez **CHECKED BY** R. Gil
AT END OF DRILLING 25.00 ft / Elev 51.37 ft after 24 hours
NOTES Solid Stem Auger to 35' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 3"										
		(CH) Fat Clay, Dark Brown, Moist, Soft	SH 1	100 (100)				17	72	28	44	99
			SPT 2	100 (100)	3-3-5 (8)			15	60	24	36	97
		(MH) Silt, Dark Brown, Dry, Firm	SH 3	100 (100)				8	51	32	19	99
10		(CH) Fat Clay, Dark Brown to Light Brown, Dry to Moist, Firm	SPT 4	100 (100)	4-5-7 (12)			4	79	22	57	99
			SH 5	100 (100)				5				99
20			SPT 6	100 (100)	3-3-5 (8)			6	74	20	54	99
			SH 7	100 (100)				17				69
30			SPT 8	100 (100)	6-9-12 (21)			22	69	21	48	99
			SH 9	100 (100)				16	50	20	30	57
		(SM) Sand, Silty, Brown, Moist, Loose to Medium Dense										
40			SPT 10	100 (100)	4-4-5 (9)			15				
			SPT 11	100 (100)	5-6-13 (19)			12				22
		(CL) Lean Clay, Sandy, Reddish-Brown, Moist to Dry, Firm to Hard										
50			SPT 12	100 (100)	9-16-19 (35)			20				50
			SPT 13	100 (100)	7-13-21 (34)			12	47	14	33	60
60			SPT	100	4-6-13			8				91

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BORING NUMBER BH-004

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Sandy, Reddish-Brown, Moist to Dry, Firm to Hard *(continued)*	14	(100)	(19)							
			SPT 15	100 (100)	4-5-10 (15)			18	43	18	25	96
		(CH) Fat Clay, Reddish-Brown to Tan, Moist, Stiff to Hard										
70			SPT 16	100 (100)	9-13-14 (27)			20				94
			SPT 17	100 (100)	5-7-13 (20)			18	66	24	42	99
80			SPT 18	100 (100)	10-12-19 (31)			15				80
			SPT 19	100 (100)	8-9-14 (23)			14	50	21	29	79
90			SPT 20	100 (100)	13-16-19 (35)			17				72
		(ML) Silt, Brown, Moist, Very Dense										
			SPT 21	100 (100)	21-25-27 (52)			18	36	25	11	98
		(CL) Lean Clay, Tan, Moist, Hard										
100			SPT 22	100 (100)	14-16-23 (39)			12				86
			SPT 23	100 (100)	40-34-40 (74)			14	45	17	28	84
110			SPT 24	100 (100)	24-28-31 (59)			18				81
			SPT 25	100 (100)	18-24-21 (45)			15	46	21	25	92
120			SPT 26	100 (100)	14-15-26 (41)			11	36	16	20	86

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-006

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 76.12 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.00 ft / Elev 49.12 ft during drilling
LOGGED BY Erasmo C. **CHECKED BY** R. GIL
AT END OF DRILLING 24.50 ft / Elev 51.62 ft after 24 hours
NOTES Solid Stem Auger to 27' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0	Caliche Base Material, Roadway, 4"										
	(CH) Fat Clay, Dark Brown, Dry to Moist, Firm to Hard	SPT 1	100	8-6-6 (12)			12	79	28	51	
		SPT 2	100	3-6-6 (12)			14	85	24	61	76
		SH 3	100		4.5		17	76	28	48	
10		SH 4	100		4.5		21				
		SH 5	100		4.5		18	96	28	68	
20		SH 6	100		3.0		18				
	(CL) Lean Clay, Slightly Sandy, Tan, Wet, Stiff to Soft	SPT 7	100	3-3-15 (18)			19	44	14	30	
30		SH 8	100		1.0		23	25	19	6	84
	(ML) Silt, Sandy, Tan, Wet to Moist, Medium Dense to Dense	SPT 9	100	5-5-7 (12)			29				100
40	(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Medium Dense	SPT 10	100	8-10-11 (21)			21				11
	(CL) Lean Clay, Silty, Tan, Moist, Stiff to Hard	SPT 11	100	11-16-21 (37)			18				91
50		SPT 12	100	7-8-10 (18)			18				73
		SH 13	100		2.5		14				80
60	(SC) Lean Clay, Silty, Tan, Moist, Dense	SPT 14	100	16-18-17 (35)			17				46

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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BORING NUMBER BH-008

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/3/09 **COMPLETED** 5/3/09
GROUND ELEVATION 76.17 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.00 ft / Elev 49.17 ft during drilling
LOGGED BY E. Hernandez **CHECKED BY** R. Gil
AT END OF DRILLING 26.00 ft / Elev 50.17 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(SC) Sand, Clayey, Dark Brown, Dry, Loose	SH 1	100 (100)				8	54	19	35	33
		(CH) Fat Clay, Dark Brown, Moist, Firm	SPT 2	100 (100)	4-5-5 (10)			15	52	16	36	77
			SH 3	100 (100)				19	69	22	47	89
10		(CL) Lean Clay, Dark Brown, Moist, Firm	SPT 4	100 (100)	4-4-6 (10)			20	41	16	25	69
		(CH) Fat Clay, Dark Brown, Moist, Firm	SH 5	100 (100)				20	66	22	44	88
20		(SM) Sand, Silty, Brown, Moist, Medium Dense	SPT 6	100 (100)	5-6-6 (12)			11	12	11	1	38
			SPT 7	100 (100)	8-9-16 (25)			11				36
30		(ML) Silt, Sandy, Tan, Wet, Medium Dense	SPT 8	100 (100)	6-6-10 (16)			22				96
		(SM) Sand, Silty, Light Brown, Wet to Moist, Dense	SPT 9	100 (100)	10-11-22 (33)			23				32
40			SPT 10	100 (100)	15-16-20 (36)			18				12
		(ML) Silt, Brown, Wet, Very Dense	SPT 11	100 (100)	21-27-30 (57)			23				90
50		(SM) Sand, Silty, Brown, Wet, Dense	SPT 12	100 (100)	17-20-26 (46)			23				14
		(CH) Fat Clay, Reddish-Brown, Moist, Hard	SPT 13	100 (100)	20-21-32 (53)			16	50	17	33	97
60			SPT	100	24-23-27			15				81

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L&G Engineering Laboratory
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BORING NUMBER BH-008

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Reddish-Brown, Moist, Hard *(continued)*	14	(100)	(50)							
			SPT 15	100 (100)	10-13-18 (31)			23	69	26	43	97
70			SPT 16	100 (100)	14-16-28 (44)			19				98
			SPT 17	100 (100)	7-13-26 (39)			16	80	23	57	98
		(CL) Lean Clay, Slightly Sandy, Reddish-Brown to Tan, Moist to Dry, Hard to Stiff to Hard										
80			SPT 18	100 (100)	9-22-29 (51)			13				65
			SPT 19	100 (100)	5-5-12 (17)			15	40	13	27	65
90			SPT 20	100 (100)	7-6-10 (16)			14				66
			SPT 21	100 (100)	4-5-11 (16)			21	42	16	26	84
100			SPT 22	100 (100)	5-6-4 (10)			17	29	17	12	93
			SPT 23	100 (100)	4-5-10 (15)			19				93
110			SPT 24	100 (100)	5-6-9 (15)			18	28	17	11	92
			SPT 25	100 (100)	19-20-23 (43)			9				100
120			SPT 26	100 (100)	18-24-31 (55)			8	48	20	28	99

Bottom of borehole at 120.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
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BORING NUMBER BH-010

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/28/09 **COMPLETED** 4/28/09
GROUND ELEVATION 76.26 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 30.00 ft / Elev 46.26 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 24.00 ft / Elev 52.26 ft after 24 hours
NOTES Solid Stem Auger to 45' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CH) Fat Clay, Dark Brown, Moist, Stiff to Firm	SPT 1	100 (100)	6-5-10 (15)			18	62	17	45	
			SPT 2	100 (100)		4		16				76
			SPT 3	100 (100)		4		23	73	22	51	
10			SPT 4	100 (100)		3		23				89
			SPT 5	100 (100)		3		21	61	19	42	
20			SPT 6	100 (100)		2.5		19				75
		(CL) Lean Clay, Tan, Moist, Soft										
			SPT 7	100 (100)	3-3-4 (7)			19	28	15	13	
		(SM) Sand, Silty, Brown, Wet, Medium Dense										
30			SPT 8	100 (100)	7-10-20 (30)			16				19
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Very Dense										
			SPT 9	100 (100)	13-21-31 (52)			22				5
40			SPT 10	100 (100)	15-24-38 (62)			20				6
		(CL) Lean Clay, Tan, Moist, Hard										
			SPT 11	100 (100)	25-28-34 (62)			16	35	13	22	
		(CH) Fat Clay, Reddish-Brown, Wet to Moist, Hard										
50			SPT 12	100 (100)	16-25-31 (56)			36				73
			SPT 13	100 (100)	46-45-50 (95)			18	64	16	48	
60			SPT 14	100 (100)	41-42-50 (92)			18				98

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
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Telephone: 956-565-0760

BORING NUMBER BH-012

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/2/09 **COMPLETED** 5/2/09
GROUND ELEVATION 75.23 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 25.00 ft / Elev 50.23 ft during drilling
LOGGED BY E. Castillo **CHECKED BY** R. Gil
AT END OF DRILLING 24.00 ft / Elev 51.23 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CL) Lean Clay, Sandy, Dark Brown, Dry, Firm	SPT 1	100 (100)	7-7-8 (15)			8				56
			SPT 2	100 (100)	5-5-5 (10)			8	33	11	22	53
		(SC) Sand, Clayey, Brown, Moist, Loose	SPT 3	100 (100)	3-3-5 (8)			10	30	11	19	47
10			SPT 4	100 (100)	3-3-4 (7)			8				49
		(CH) Fat Clay, Sandy, Dark Brown, Moist, Soft	SPT 5	100 (100)	2-3-4 (7)			19	56	14	42	69
		(CL) Lean Clay, Sandy, Tan, Moist, Firm to Stiff										
20			SPT 6	100 (100)	4-5-9 (14)			14	28	11	17	53
			SPT 7	100 (100)	7-9-13 (22)			15				51
		(SM) Sand, Silty, Brown, Wet, Loose to Dense										
30			SPT 8	100 (100)	4-4-6 (10)			28				30
			SPT 9	100 (100)	6-6-9 (15)			39				14
40			SPT 10	100 (100)	10-13-13 (26)			27				15
			SPT 11	100 (100)	14-18-20 (38)			29				18
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Dense										
50			SPT 12	100 (100)	14-16-17 (33)			27				9
			SPT 13	100 (100)	16-18-21 (39)			24				10
60		(CL) Lean Clay, Reddish-Brown, Moist, Firm to Stiff	SPT	100	5-7-6			18	48	14	34	90

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-012

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Reddish-Brown, Moist, Firm to Stiff *(continued)*	14	(100)	(13)							
			SPT 15	100 (100)	9-12-15 (27)			18	43	14	29	89
70			SPT 16	100 (100)	7-9-10 (19)			19	45	13	32	99
		(CL-ML) Lean Clay, Silty, Tan, Moist,Stiff	SPT 17	100 (100)	12-14-16 (30)			21	20	15	5	98
		(CL) Lean Clay, Tan, Moist, Firm to Stiff										
80			SPT 18	100 (100)	4-5-7 (12)			17	45	10	35	64
			SPT 19	100 (100)	8-10-11 (21)			15				59
		(CH) Fat Clay, Tan, Moist, Hard										
90			SPT 20	100 (100)	11-14-17 (31)			21	60	22	38	89
		(CL) Lean Clay, Tan to Reddish-Brown, Moist, Hard										
			SPT 21	100 (100)	14-21-25 (46)			21	47	16	31	96
100			SPT 22	100 (100)	18-20-24 (44)			23				71
			SPT 23	100 (100)	21-26-31 (57)			20	23	13	10	71
110			SPT 24	100 (100)	18-22-26 (48)			19	36	12	24	99
			SPT 25	100 (100)	21-27-28 (55)			18				99
120			SPT 26	100 (100)	25-29-31 (60)			18	22	10	12	99

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-015

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 73.64 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.50 ft / Elev 46.14 ft during drilling
LOGGED BY Erasmo C. **CHECKED BY** R. GIL
AT END OF DRILLING 23.00 ft / Elev 50.64 ft after 24 hours
NOTES Solid Stem Auger to 28' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(SC) Sand, Clayey, Dark Brown to Tan, Moist to Dry to Moist, Medium Dense to Loose	SH 1	100 (100)	4-5-6 (11)			10				45
			SPT 2	100 (100)	3-3-6 (9)			15				
			SH 3	100 (100)		3.0		17				41
10			SH 4	100 (100)		4.0		7	22	15	7	
			SPT 5	100 (100)	4-3-4 (7)			8	31	16	15	40
20			SH 6	100 (100)		1.5		12	45	15	30	
		(SM) Clay, Silty, Tan, Wet, Medium Dense to Very Dense										
			SPT 7	100 (100)	6-9-11 (20)			25				61
		(SP-SM) Sand, Silty, Poorly Graded, Wet, Stiff										
30			SPT 8	100 (100)	7-10-9 (19)			25				10
		(SM) Sand, Silty, Tan, Wet, Very Dense										
			SPT 9	100 (100)	20-30-32 (62)			22				16
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Very Dense to Medium Dense to Very Dense										
40			SPT 10	100 (100)	22-26-28 (54)			21				10
			SPT 11	100 (100)	10-11-15 (26)			27				
50			SPT 12	100 (100)	26-41-27 (68)			21				8
		(CH) Fat Clay, Reddish-Brown, Moist, Stiff	SH 13	100 (100)		4.5		22	59	21	38	94
60			SH 14	100 (100)		3.5		20				

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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2100 W. Expressway 83
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Telephone: 956-565-0760

BORING NUMBER BH-016

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/2/09 **COMPLETED** 5/2/09
GROUND ELEVATION 73.79 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.00 ft / Elev 46.79 ft during drilling
LOGGED BY Ram C. **CHECKED BY** R. Gil
AT END OF DRILLING 23.00 ft / Elev 50.79 ft after 24 hours
NOTES Solid Stem Auger to 35' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(SC) Sand, Clayey, Light Brown, Dry, Loose to Medium Dense	SPT 1	100 (100)	5-6-5 (11)			8				16
			SPT 2	100 (100)	3-4-5 (9)			12	29	12	17	27
			SPT 3	100 (100)	3-4-4 (8)			10				18
10		(CH) Fat Clay, Dark Brown, Moist, Soft	SPT 4	100 (100)	4-3-5 (8)			16	60	14	46	57
		(SC) Sand, Clayey, Dark Brown to Brown, Moist, Medium Dense	SPT 5	100 (100)	3-4-9 (13)			13	44	14	30	47
20		(CL) Lean Clay, Dark Brown to Brown, Moist, Firm to Stiff	SPT 6	100 (100)	5-7-8 (15)			13	35	14	21	57
			SPT 7	100 (100)	7-9-11 (20)			22				56
30			SPT 8	100 (100)	5-6-9 (15)			23				54
			SPT 9	100 (100)	8-11-13 (24)			23				83
40			SPT 10	100 (100)	8-12-18 (30)			21				80
		(CH) Fat Clay, Slightly Sandy, Light Brown, Moist to Dry, Stiff	SPT 11	100 (100)	10-13-16 (29)			20				77
50			SPT 12	100 (100)	9-12-15 (27)			14	59	12	47	56
			SPT 13	100 (100)	12-10-11 (21)			7				98
		(ML) Silt, Reddish-Brown, Moist, Medium Dense										
60			SPT	100	7-9-10			22	21	18	3	100

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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BORING NUMBER BH-016

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(ML) Silt, Reddish-Brown, Moist, Medium Dense *(continued)*	14	(100)	(19)							
		(CH) Fat Clay, Reddish-Brown, Moist, Stiff										
			SPT 15	100 (100)	6-8-8 (16)			21	63	22	41	99
70			SPT 16	100 (100)	4-8-9 (17)			23	51	15	36	100
			SPT 17	100 (100)	5-6-10 (16)			21				100
		(CL) Lean Clay, Sandy, Tan, Moist, Stiff										
80			SPT 18	100 (100)	4-4-5 (9)			17	38	12	26	66
		(SC) Sand, Clayey, Tan, Moist, Medium Dense										
			SPT 19	100 (100)	6-5-7 (12)			18				47
		(CL) Lean Clay, Reddish-Brown to Tan, Moist, Firm to Hard										
90			SPT 20	100 (100)	7-5-8 (13)			19	31	13	18	62
			SPT 21	100 (100)	9-14-15 (29)			19				91
100			SPT 22	100 (100)	8-11-12 (23)			25	34	15	19	97
			SPT 23	100 (100)	7-9-11 (20)			19	32	15	17	95
110			SPT 24	100 (100)	13-18-20 (38)			17	48	17	31	99
			SPT 25	100 (100)	12-14-17 (31)			19				99
120			SPT 26	100 (100)	13-10-10 (20)			17	38	15	23	99

Bottom of borehole at 120.0 feet.

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L&G Engineering Laboratory
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BORING NUMBER BH-018

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/22/09 **COMPLETED** 4/22/09
GROUND ELEVATION 73.28 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 28.00 ft / Elev 45.28 ft during drilling
LOGGED BY Chris T. **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 53.28 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		(CH) Fat Clay, Sandy to Slightly Sandy, Brown to Black, Dry to Moist, Firm to Soft	SPT 1	100 (100)	6-4-8 (12)			9	62	16	46	
			SPT 2	100 (100)	5-6-8 (14)			13				55
			SPT 3	100 (100)	4-3-8 (11)			16	65	23	42	
10			SPT 4	100 (100)	3-5-8 (13)			18				77
			SH 5	100 (100)		3		18	68	21	47	
20			SH 6	100 (100)		3		19	81	30	51	85
		(CL) Lean Clay, Sandy, Brown, Moist, Soft	SH 7	100 (100)		1.5		17				52
		(SC) Sand, Clayey, Tan, Wet, Loose										
30			SPT 8	100 (100)	3-3-5 (8)			23				44
		(SM) Sand, Silty, Tan, Wet, Medium Dense to Dense	SPT 9	100 (100)	4-4-9 (13)			27				26
40			SPT 10	100 (100)	17-23-30 (53)			25				13
		(ML) Silt, Sandy, Tan, Wet, Very Dense	SPT 11	100 (100)	39-39-20 (59)			21				55
		(CH) Fat Clay, Tan to Reddish Brown, Moist, Stiff to Hard										
50			SPT 12	100 (100)	9-12-14 (26)			20	53	22	31	
			SPT 13	100 (100)	9-12-17 (29)			20				92
60			SPT 14	100 (100)	11-15-17 (32)			20	60	21	39	

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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Telephone: 956-565-0760

BORING NUMBER BH-020

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/3/09 **COMPLETED** 5/3/09
GROUND ELEVATION 73.14 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 28.00 ft / Elev 45.14 ft during drilling
LOGGED BY Angel / Ramiro **CHECKED BY** R. Gil
AT END OF DRILLING 21.00 ft / Elev 52.14 ft after24 hours
NOTES Solid Stem Auger to 00' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0	Caliche Base Material, Roadway, 6"										
	(ML) Silty, Dark Brown, Dry, Firm	SPT 1	100 (100)	4-5-6 (11)			7	29	87	NP	80
	(CL) Lean Clay, Slightly Sandy, Dark Brown, Dry, Stif	SPT 2	100 (100)	5-7-9 (16)			9	39	17	22	70
	(CH) Fat Clay, Slightly Sandy, Dark Brown to Light Brown, Moist, Soft to Stiff	SH 3	100 (100)		4.5		11	64	28	36	75
10		SH 4	100 (100)		4.5		13				70
		SPT 5	100 (100)	3-4-5 (9)			13	72	15	57	69
20		SPT 6	100 (100)	5-5-10 (15)			26				77
		SPT 7	100 (100)	6-9-11 (20)			21				67
30	(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Medium Dense	SPT 8	100 (100)	9-14-16 (30)			23				11
	(SM) Sand, Silty, Brown, Wet, Dense	SPT 9	100 (100)	11-15-18 (33)			24				12
40	(CH) Fat Clay, Tan, Moist, Hard	SPT 10	100 (100)	14-17-19 (36)			14	50	17	33	80
	(ML) Silt, Tan, Moist, Hard	SPT 11	100 (100)	13-18-21 (39)			15	9	12	NP	88
50	(SC) Sand, Clayey, Dark Brown, Wet, Dense	SPT 12	100 (100)	12-15-18 (33)			19				49
	(CH) Fat Clay, Tan, Moist, Hard	SPT 13	100 (100)	14-17-17 (34)			21	52	18	34	70
60	(CL) Lean Clay, Dark Brown to Tan, Moist, Stiff to Hard	SPT	100	7-9-14			17	42	17	25	89

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-020

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Dark Brown to Tan, Moist, Stiff to Hard *(continued)*	14	(100)	(23)							
			SPT 15	100 (100)	11-13-14 (27)			17	44	17	27	90
70			SPT 16	100 (100)	7-7-13 (20)			21	26	16	10	59
			SPT 17	100 (100)	9-12-15 (27)			19				99
80			SPT 18	100 (100)	7-7-10 (17)			13	34	13	21	65
			SPT 19	100 (100)	8-7-14 (21)			12	32	17	15	69
90			SPT 20	100 (100)	8-13-15 (28)			21	45	15	30	79
			SPT 21	100 (100)	9-20-26 (46)			17				55
		(SC) Sand, Clayey,Tan, Moist, Very Dense										
100			SPT 22	100 (100)	20-40-47 (87)			20				21
			SPT 23	100 (100)	31-39-43 (82)			16	26	13	13	23
		(CL) Lean Clay, Tan, Moist, Hard										
110			SPT 24	100 (100)	21-17-20 (37)			16	46	20	26	73
			SPT 25	100 (100)	31-33-33 (66)			15				98
120			SPT 26	100 (100)	16-17-20 (37)			19	41	17	24	96

Bottom of borehole at 120.0 feet.

L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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BORING NUMBER BH-022

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/22/09 **COMPLETED** 4/22/09
GROUND ELEVATION 71.79 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 22.00 ft / Elev 49.79 ft during drilling
LOGGED BY Chris T. **CHECKED BY** R. GIL
AT END OF DRILLING 11.00 ft / Elev 60.79 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche base material with gravel, roadway, 4"										
		No samples obtained 0 to13 feet below top of levee.										
10												
		(CL) Lean Clay, Slightly Silty, Tan, Wet, Soft	SH 1	100 (100)		.5		25	31	17	14	
20			SPT 2	100 (100)	3-5-7 (12)			21				63
		(CH) Fat Clay, Olive, Moist, Medium dense	SPT 3	100 (100)	6-6-8 (14)			15	53	14	39	
30			SPT 4	100 (100)	5-7-8 (15)			15				63
		(CL) Lean Clay, Slightly Silty, Olive, Dry, Stiff	SPT 5	100 (100)	9-9-14 (23)			15	48	14	34	
		(CH) Fat Clay, Slightly Sandy, Tan, Moist, Stiff										
40			SPT 6	100 (100)	9-11-14 (25)			18				81
			SPT 7	100 (100)	9-12-16 (28)			18	83	29	54	
50			SPT 8	100 (100)	7-9-12 (21)			21				97
			SPT 9	100 (100)	4-4-7 (11)			23				
60			SPT 10	100 (100)	5-5-8 (13)			21				67

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
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BORING NUMBER BH-025

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 70.89 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 23.00 ft / Elev 47.89 ft during drilling
LOGGED BY A. Gomez **CHECKED BY** R. GIL
AT END OF DRILLING --- Borehole Observed Dry after 24 hrs.
NOTES Solid Stem Auger to 25' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13 feet below top of levee.										
10												
		(CH) Fat Clay, Dark Brown, Moist, Hard	SH 1	100 (100)		4.25		21	57	17	40	84
20		(CL) Lean Clay, Sandy, Tan, Moist to Wet, Soft	SH 2	100 (100)		1.0		21	41	14	27	68
		(CH) Fat Clay, Sandy, Tan, Moist to Wet, Soft	SPT 3	100 (100)	3-3-5 (8)			20	60	9	51	58
30		(SC) Sand, Clayey, Tan, Wet, Loose	SPT 4	100 (100)	2-3-5 (8)			22				38
		(CL) Lean Clay, Olive-Tan, Moist, Stiff	SPT 5	100 (100)	7-9-12 (21)			19	47	19	28	
40		(CH) Fat Clay, Reddish-Brown, Moist, Stiff	SPT 6	100 (100)	7-10-13 (23)			26				99
			SPT 7	100 (100)	7-12-15 (27)			21	58	23	35	
		Boring Terminated-Flowing Sand-Unable to Keep Borehole open										
50												
60												

Bottom of borehole at 60.0 feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 5/20/09 10:10 - \\S300\LABORATORY\GINT\PROJECTS\NFW2.GPJ

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Geotechnical Engineering

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BORING NUMBER BH-028

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/3/08 **COMPLETED** 5/3/08
GROUND ELEVATION 70.34 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 30.00 ft / Elev 40.34 ft during drilling
LOGGED BY A. Gomez **CHECKED BY** R. Gil
AT END OF DRILLING 20.00 ft / Elev 50.34 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Dark Brown, Moist, Firm	SPT 1	100 (100)	4-7-8 (15)			13	51	10	41	80
			SPT 2	100 (100)	4-5-8 (13)			16				84
		(CL) Lean Clay, Dark Brown to Light Brown, Moist, Firm to Stiff	SPT 3	100 (100)	4-7-8 (15)			17				80
10			SPT 4	100 (100)	5-8-9 (17)			13	44	12	32	83
			SH 5	100 (100)		4		17	46	16	30	84
20			SH 6	100 (100)		2.5		16	38	11	27	78
			SH 7	100 (100)		3		17	40	13	27	77
30			SH 8	100 (100)		4		18	47	16	31	86
		(CH) Fat Clay, Reddish-Brown, Moist, Firm to Soft	SPT 9	100 (100)	4-7-8 (15)			19				93
40			SPT 10	100 (100)	5-7-10 (17)			20	64	17	47	89
		(CL) Lean Clay, Reddish-Brown, Moist, Stiff	SPT 11	100 (100)	7-9-15 (24)			24				96
50			SPT 12	100 (100)	7-10-11 (21)			20				90
			SPT 13	100 (100)	5-10-13 (23)			20	44	14	30	90
60			SPT	100	6-7-9			23				99

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-028

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Reddish-Brown, Moist, Stiff *(continued)*	14	(100)	(16)							
			SPT 15	100 (100)	9-10-12 (22)			24	49	18	31	98
70			SPT 16	100 (100)	9-12-10 (22)			16				60
			SPT 17	100 (100)	8-10-10 (20)			17	35	12	23	67
80			SPT 18	100 (100)	10-9-9 (18)			18	33	10	23	83
		(SM) Sand, Silty, Tan, Wet, Dense	SPT 19	100 (100)	13-13-23 (36)			20				42
		(CL) Lean Clay, Sandy, Tan, Wet, Stiff										
90			SPT 20	100 (100)	11-13-12 (25)			24				50
		(SM) Sand, Silty, Brown, Wet, Very Dense	SPT 21	100 (100)	50-47-48 (95)			18				15
100			SPT 22	100 (100)	41-46-46 (92)			24				21
		(CL) Lean Clay, Light Brown, Moist, Hard	SPT 23	100 (100)	21-24-25 (49)			16	36	11	25	96
110			SPT 24	100 (100)	16-19-18 (37)			15				99
			SPT 25	100 (100)	21-17-29 (46)			18	49	18	31	98
120			SPT 26	100 (100)	26-28-30 (58)			21	46	12	34	99

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-030

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/28/09 **COMPLETED** 4/28/09
GROUND ELEVATION 70.13 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING --- None observed
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 19.00 ft / Elev 51.13 ft after 24 hours
NOTES Solid Stem Auger to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 5"										
		No samples obtained 0 to 13 feet below top of levee.										
10												
		(CH) Fat Clay, Brown to Reddish Brown, Moist, Stiff to Hard	SH 1	100 (100)		3		18	54	17	37	
20			SPT 2	100 (100)	6-8-12 (20)			17				78
			SPT 3	100 (100)	20-20-23 (43)			15	53	16	37	
30			SPT 4	100 (100)	20-24-40 (64)			14				81
			SPT 5	100 (100)	35-45-50 (95)			28	61	24	37	
40			SPT 6	100 (100)	38-35-31 (66)			22				100
			SPT 7	100 (100)	19-23-33 (56)			20	76	28	48	
50			SPT 8	100 (100)	19-22-29 (51)			18				89
			SPT 9	100 (100)	19-23-27 (50)			18	70	26	44	
		(CL) Lean Clay, Reddish Brown, Moist, Hard										
60			SPT 10	100 (100)	12-15-20 (35)			23	33	18	15	83

Bottom of borehole at 60.0 feet.

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Geotechnical Engineering

L&G Engineering Laboratory LLC
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BORING NUMBER BH-032

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/3/09 **COMPLETED** 5/3/09
GROUND ELEVATION 70.39 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 32.00 ft / Elev 38.39 ft during drilling
LOGGED BY Erasmo C. **CHECKED BY** R. Gil
AT END OF DRILLING 21.00 ft / Elev 49.39 ft after 24 hours
NOTES Solid Stem Auger to 00' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CL) Lean Clay, Sandy , Light Brown, Moist to Dry, Soft to Firm	SPT 1	100 (100)	5-6-7 (13)			17	45	17	28	
			SPT 2	100 (100)	3-4-3 (7)			9				68
			SPT 3	100 (100)	5-6-4 (10)			10	38	15	23	68
10			SPT 4	100 (100)	4-5-7 (12)			11				69
		(CH) Fat Clay, Slightly Sandy, Dark Brown, Moist, Soft										
			SPT 5	100 (100)	2-3-3 (6)			17	58	22	36	73
		(CL) Lean Clay, Slightly Sandy, Light Brown, Dry, Firm										
20			SPT 6	100 (100)	4-3-4 (7)			9	33	13	20	70
			SPT 7	100 (100)	6-6-8 (14)			6	34	18	16	62
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Medium Dense										
30			SPT 8	100 (100)	5-10-15 (25)			19				9
		(CL) Lean Clay, Sandy, Brown, Moist, Stiff										
			SPT 9	100 (100)	7-10-14 (24)			19				61
		(CH) Fat Clay, Reddish-Brown, Moist, Firm to Stiff										
40			SPT 10	100 (100)	7-7-6 (13)			23	71	26	45	75
			SPT 11	100 (100)	11-13-16 (29)			25	65	16	49	92
50			SPT 12	100 (100)	10-10-11 (21)			18	62	26	36	91
			SPT 13	100 (100)	9-11-12 (23)			15				85
		(CL) Lean Clay, Reddish-Brown, Dry, Stiff										
60			SPT	100	10-9-10			5	45	20	25	99

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Construction Material Testing
Geotechnical Engineering

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BORING NUMBER BH-032

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60			14	(100)	(19)							
		(CH) Fat Clay, Light Brown to Reddish-Brown, Dry, Stiff to Hard										
			SPT 15	100 (100)	13-15-19 (34)			10	56	20	36	98
70			SPT 16	100 (100)	6-10-13 (23)			7	91	26	65	99
		(CL) Lean Clay, Reddish-Brown, Moist, Firm to Stiff										
			SPT 17	100 (100)	8-9-2 (11)			22				86
80			SPT 18	100 (100)	7-8-10 (18)			16	32	14	18	82
		(SM) Sand, Silty, Brown, Wet, Dense										
			SPT 19	100 (100)	14-19-21 (40)			20				16
90			SPT 20	100 (100)	18-23-25 (48)			21				12
			SPT 21	100 (100)	19-21-26 (47)			16				15
100			SPT 22	100 (100)	20-24-26 (50)			16				17
		(SC) Sand, Clayey, Tan, Wet to Moist, Very Dense to Medium Dense	SPT 23	100 (100)	23-26-29 (55)			21				21
110			SPT 24	100 (100)	24-28-30 (58)			19				25
			SPT 25	100 (100)	21-26-29 (55)			18	74	19	55	24
120			SPT 26	100 (100)	14-15-13 (28)			11				

Bottom of borehole at 120.0 feet.

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Geotechnical Engineering

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BORING NUMBER BH-035

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 69.59 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 23.50 ft / Elev 46.09 ft during drilling
LOGGED BY A. Gomez **CHECKED BY** R. GIL
AT END OF DRILLING 19.00 ft / Elev 50.59 ft after 24 hours
NOTES Solid Stem Auger to 23.0' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13 feet below top of levee.										
10												
		(CL) Lean Clay, Dark Brown, Moist, Firm	SH 1	100 (100)		2.5		24	47	19	28	74
20			SH 2	100 (100)		0.5		20	28	14	14	
		(SC) Sand, Clayey, Light Brown, Moist, Very Loose	SPT 3	100 (100)	2-2-3 (5)			24				48
30		(SM) Sand, Silty, Tan, Wet, Medium Dense to Dense	SPT 4	100 (100)	9-11-13 (24)			27				20
			SPT 5	100 (100)	14-21-30 (51)			19				10
40		(ML) Silt, Tan, Wet, Dense	SPT 6	100 (100)	18-20-27 (47)			19				90
		(CH) Fat Clay, Reddish-Brown, Moist, Stiff	SPT 7	100 (100)	6-10-18 (28)			23	60	18	42	
50			SPT 8	100 (100)	6-10-14 (24)			20	57	17	40	
		Borehole Terminated-Flowing Sand-Unable to Keep Borehole Open										
60												

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
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BORING NUMBER BH-036

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/3/09 **COMPLETED** 5/3/09
GROUND ELEVATION 69.71 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 22.50 ft / Elev 47.21 ft during drilling
LOGGED BY Rene Gonzalez **CHECKED BY** R. Gil
AT END OF DRILLING 18.00 ft / Elev 51.71 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(SC) Sand, Clayey, Brown, Dry, Medium Dense	SPT 1	100 (100)	6-7-8 (15)			1				33
		(CH) Fat Clay, Brown to Dark Brown, Dry to Moist, Soft to Firm	SPT 2	100 (100)	3-3-5 (8)			10	52	14	38	77
			SPT 3	100 (100)	3-3-3 (6)			3				65
10			SPT 4	100 (100)	2-2-2 (4)			10				76
			SPT 5	100 (100)	3-5-7 (12)			16				79
20			SPT 6	100 (100)	4-6-8 (14)			15	61	22	39	77
		(CL) Lean Clay, Reddish Brown, Dry to Moist, Firm	SPT 7	100 (100)	4-5-6 (11)			8	44	18	26	82
30			SPT 8	100 (100)	5-7-8 (15)			10	44	16	28	81
		(SM) Sand, Silty, Tan, Wet, Medium Dense	SPT 9	100 (100)	9-12-14 (26)			19				17
		(ML) Silt, Brown, Wet, Medium Dense										
40			SPT 10	100 (100)	11-14-16 (30)			19				92
		(CH) Fat Clay, Reddish Brown, Dry to Moist, Medium Dense to Dense	SPT 11	100 (100)	10-16-20 (36)			5	75	21	54	97
50			SPT 12	100 (100)	7-10-16 (26)			4	52	16	36	84
			SPT 13	100 (100)	5-9-4 (13)			4				95
60			SPT	100	8-12-15			14	60	18	42	93

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-036

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Reddish Brown, Dry to Moist, Medium Dense to Dense *(continued)*	14	(100)	(27)							
			SPT 15	100 (100)	9-12-18 (30)			21	77	29	48	91
70			SPT 16	100 (100)	8-10-12 (22)			16	66	26	40	86
		(ML) Silt, Reddish Brown, Dry, Stiff	SPT 17	100 (100)	6-9-10 (19)			3	22	26	NP	96
80		(CH) Fat Clay, Reddish Brown, Moist, Stiff	SPT 18	100 (100)	6-7-11 (18)			13	54	19	35	90
		(SC) Sand, Clayey, Tan, Wet, Medium Dense	SPT 19	100 (100)	9-12-15 (27)			10	28	11	17	46
90		(CL) Lean Clay, Tan, Wet, Stiff	SPT 20	100 (100)	11-13-17 (30)			27				65
		(SC) Sand, Clayey, Tan, Moist, Dense	SPT 21	100 (100)	13-15-16 (31)			12	23	11	12	39
100		(CL) Lean CLay, Reddish Brown, Dry to Wet, Stiff	SPT 22	100 (100)	9-11-13 (24)			8				80
			SPT 23	100 (100)	10-13-14 (27)			25				68
110		(SM) Sand, Silty, Brown, Moist, Dense	SPT 24	100 (100)	12-16-18 (34)			13				24
			SPT 25	100 (100)	15-16-20 (36)			15				
120			SPT 26	100 (100)	17-19-24 (43)			12				

Bottom of borehole at 120.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
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BORING NUMBER BH-038

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/29/09 **COMPLETED** 4/29/05
GROUND ELEVATION 69.03 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 25.00 ft / Elev 44.03 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 21.00 ft / Elev 48.03 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 5"										
		No samples obtained 0 to 13.5 feet below top of levee.										
10												
		(CH) Fat Clay, Dark Brown, Moist, Stiff	SH 1	100 (100)		3		18	54	20	34	
		(SC) Sand, Clayey, Light Brown, Moist, Medium Dense										
20			SPT 2	100 (100)	4-6-8 (14)			15				45
			SPT 3	100 (100)	3-4-21 (25)			17	30	14	16	42
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Loose										
30			SPT 4	100 (100)	3-3-7 (10)			25				10
		(SM) Sand, Silty, Brown, Wet, Very Dense										
			SPT 5	100 (100)	23-27-33 (60)			17				16
40			SPT 6	100 (100)	50-50-50 (100)			22				
		(CH) Fat Clay, Tan, Moist, Hard	SPT 7	100 (100)	10-14-21 (35)			19	63	25	38	
50			SPT 8	100 (100)	24-23-26 (49)			20				88
			SPT 9	100 (100)	23-23-26 (49)			22	54	17	37	
60			SPT 10	100 (100)	20-15-21 (36)			20				97

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
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BORING NUMBER BH-040

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/2/09 **COMPLETED** 5/2/09
GROUND ELEVATION 69.37 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.50 ft / Elev 41.87 ft during drilling
LOGGED BY Rene Gonzalez **CHECKED BY** R. Gil
AT END OF DRILLING 18.00 ft / Elev 51.37 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CH) Fat Clay, Slightly Sandy, Dark Brown, Moist Soft	SPT 1	100 (100)	2-3-5 (8)			13				69
			SPT 2	100 (100)	3-3-4 (7)			13	51	16	35	72
		(CL) Lean Clay, Slightly Sandy, Dark Brown, Moist, Firm	SPT 3	100 (100)	4-5-7 (12)			12	37	22	15	82
10		(CH) Fat Clay, Dark Brown to Reddish-Brown, Dry to Moist, Soft to Firm	SPT 4	100 (100)	3-4-4 (8)			10	53	19	34	
			SPT 5	100 (100)	4-6-6 (12)			11				84
20			SPT 6	100 (100)	5-5-8 (13)			12	53	19	34	86
			SPT 7	100 (100)	5-7-8 (15)			15	55	16	39	86
30			SPT 8	100 (100)	4-6-8 (14)			20	59	17	42	99
		(SC) Sand, Clayey, Reddish-Brown, Moist, Medium Dense	SPT 9	100 (100)	7-9-10 (19)			17				44
		(CL) Lean Clay, Brown, Moist, Stiff										
40			SPT 10	100 (100)	9-12-14 (26)			16				98
		(SM) Sand, Silty, Brown, Wet, Very Dense	SPT 11	100 (100)	14-27-50 (77)			20				12
50			SPT 12	100 (100)	37-40-50 (90)			20				12
		(CL) Lean Clay, Tan, Dry, Stiff	SPT 13	100 (100)	7-12-16 (28)			6	47	14	33	85
60			SPT	100	8-14-15			6				85

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-040

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Tan, Dry, Stiff *(continued)*	14	(100)	(29)							
		(CH) Fat Clay, Reddish Brown, Dry, Stiff	SPT 15	100 (100)	8-12-14 (26)			5	62	24	38	87
		(SC) Sand, Clayey, Reddish-Brown, Dry, Dense										
70			SPT 16	100 (100)	7-14-17 (31)			7				47
		(CH) Fat Clay, Reddish-Brown, Moist, Hard										
			SPT 17	100 (100)	11-13-19 (32)			12	79	18	61	93
80			SPT 18	100 (100)	10-15-20 (35)			16	67	16	51	90
		(SM) Sand, Silty, Tan to Brown, Moist, Medium Dense to Very Dense										
			SPT 19	100 (100)	6-7-7 (14)			17	24	13	12	26
90			SPT 20	100 (100)	5-6-5 (11)			14				27
			SPT 21	100 (100)	28-41-50 (91)			13				
100			SPT 22	100 (100)	39-50-50 (100)			13				18
			SPT 23	100 (100)	37-40-50 (90)			10				22
		(CL) Lean Clay, Sandy, Brown, Dry, Hard										
110			SPT 24	100 (100)	38-50-50 (100)			8				52
		(SM) Sand, Silty, Brown, Wet, Very Dense										
			SPT 25	100 (100)	42-46-50 (96)			19				
120			SPT 26	100 (100)	50-50-50 (100)			19				

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-042

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/29/09 **COMPLETED** 4/29/09
GROUND ELEVATION 69.17 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 20.00 ft / Elev 49.17 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 19.00 ft / Elev 50.17 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		No samples obtained 0 to 13.5 feet below top of levee.										
10												
		(SC) Sand, Clayey, Dark Brown to Brown, Moist to Wet, Very Loose	SPT 1	100 (100)	2-2-2 (4)			11				36
20			SPT 2	100 (100)	2-1-1 (2)			21				41
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Moist to Wet, Medium Dense to Dense to Very Dense	SPT 3	100 (100)	4-5-9 (14)			20				11
30			SPT 4	100 (100)	14-20-24 (44)			20				9
			SPT 5	100 (100)	29-38-50 (88)			23				5
40			SPT 6	100 (100)	37-50-50 (100)			20				10
			SPT 7	100 (100)	38-50-50 (100)			20				7
		(CH) Fat Clay, Tan, Moist, Hard										
50			SPT 8	100 (100)	23-33-36 (69)			18	57	21	36	
			SPT 9	100 (100)	27-27-27 (54)			21				90
		(CL) Lean Clay, Tan, Moist, Hard										
60			SPT 10	100 (100)	23-24-33 (57)			24	40	17	23	

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-044

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/30/09 **COMPLETED** 4/30/09
GROUND ELEVATION 69.35 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 21.00 ft / Elev 48.35 ft during drilling
LOGGED BY Rene Gonzalez **CHECKED BY** R. Gil
AT END OF DRILLING 20.00 ft / Elev 49.35 ft after 24 hours
NOTES Solid Stem Auger to 24' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 8"										
		(CH) Fat Clay, Brown to dark Brown, Dry, Soft to Firm	SPT 1	100 (100)	6-4-9 (13)			6				53
			SPT 2	100 (100)	2-3-2 (5)			6				58
			SPT 3	100 (100)	2-1-2 (3)			6				61
10			SPT 4	100 (100)	3-2-2 (4)			9				51
			SPT 5	100 (100)	3-4-5 (9)			14				55
20			SPT 6	100 (100)	4-6-7 (13)			14				56
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Medium Dense	SPT 7	100 (100)	4-5-7 (12)			22				11
		(SM) Sand, Silty, Brown, Wet, Medium Dense										
30			SPT 8	100 (100)	8-11-18 (29)			20				13
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Very Dense to Dense	SPT 9	100 (100)	17-28-50 (78)			21				7
40			SPT 10	100 (100)	14-16-24 (40)			22				7
		(CH) Fat Clay, Tan, Moist, Stiff to Hard	SPT 11	100 (100)	6-11-14 (25)			17	55	20	35	84
50			SPT 12	100 (100)	9-14-18 (32)			11	56	18	38	87
			SPT 13	100 (100)	8-14-17 (31)			16				81
		(SC) Sand, Clayey, Tan, Wet to Moist, Medium Dense to Dense										
60			SPT	100	11-17-18			23				25

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BORING NUMBER BH-044

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(SC) Sand, Clayey, Tan, Wet to Moist, Medium Dense to Dense *(continued)*	14	(100)	(35)							
			SPT 15	100 (100)	12-14-16 (30)			21				23
70			SPT 16	100 (100)	6-7-9 (16)			19				20
			SPT 17	100 (100)	7-12-15 (27)			16	26	17	9	36
		(CL) Lean CLay, Tan, Moist, Stiff										
80			SPT 18	100 (100)	9-11-17 (28)			14	24	17	7	77
			SPT 19	100 (100)	6-9-12 (21)			17	38	18	20	83
		(SM) Sand, Silty, Brown, Wet, Very Dense										
90			SPT 20	100 (100)	19-36-50 (86)			18				19
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Very Dense										
			SPT 21	100 (100)	38-46-50 (96)			19				10
		(SM) Sand, Silty, Light Brown, Wet, Very Dense										
100			SPT 22	100 (100)	43-50-50 (100)			20				13
		(CL) Lean Clay, Tan, Moist, Hard										
			SPT 23	100 (100)	41-46-50 (96)			15	33	18	15	88
110			SPT 24	100 (100)	36-40-50 (90)			17	38	16	22	89
			SPT 25	100 (100)	28-36-50 (86)			17	42	16	26	89
120		(CH) Fat Clay, Tan, Moist, Hard	SPT 26	100 (100)	21-34-50 (84)			14	50	17	33	85

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-045

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 69.44 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 22.00 ft / Elev 47.44 ft during drilling
LOGGED BY B. Wylie **CHECKED BY** R. GIL
AT END OF DRILLING 19.00 ft / Elev 50.44 ft after 24 hours
NOTES Solid Stem Auger to 22' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0	Caliche Base Material, Roadway, 8.5"										
	(CL) Lean Clay, Sandy, Tan to Dark Brown, Dry to Moist, Stiff to Soft	SPT 1	100	17-10-9 (19)			9	29	15	14	
		SPT 2	100	7-5-3 (8)			13	38	14	24	
		SPT 3	100	2-1-3 (4)			17				56
10		SPT 4	100	2-2-2 (4)			8	28	13	15	
		SPT 5	100	3-3-3 (6)			8				53
	(CL) Lean Clay, Silty, Tan, Moist, Soft										
20		SPT 6	100	2-3-3 (6)			13	32	17	15	
	(SP-SM) Sand, Silty, Poorly Graded, Tan, Moist to Wet, Medium Dense to Dense	SPT 7	100	8-7-9 (16)			19				25
30		SPT 8	100	12-19-16 (35)			26				12
	(SP-SM) Poorly Graded Sand w/ Silt, Moist, Very Dense	SPT 9	100	17-37-28 (65)			24				6
40		SPT 10	100	26-31-40 (71)			19				8
		SPT 11	100	32-40-44 (84)			17				6
	(CH) Fat Clay, Reddish-Brown, Moist, Stiff to Hard										
50		SPT 12	100	10-12-18 (30)			21	54	24	30	
		SPT 13	100	15-16-28 (44)			23				82
60		SPT 14	100	23-26-19 (45)			21	66	22	44	

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-048

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/29/09 **COMPLETED** 4/29/09
GROUND ELEVATION 69.65 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 19.50 ft / Elev 50.15 ft during drilling
LOGGED BY Rene Gonzalez **CHECKED BY** R. Gil
AT END OF DRILLING 22.00 ft / Elev 47.65 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CL) Lean Clay, Slightly Sandy, Light Brown, Dry, Stiff	SPT 1	100 (100)	9-13-9 (22)			4	31	15	16	50
			SPT 2	100 (100)	7-9-12 (21)			3				68
		(SC) Sand, Clayey, Dark Brown, Dry, Loose	SPT 3	100 (100)	3-2-3 (5)			4	28	18	10	43
10			SPT 4	100 (100)	2-3-3 (6)			6				40
		(CL) Lean Clay, Sandy, Brown, Moist, Soft	SPT 5	100 (100)	3-3-3 (6)			13	44	17	27	57
		(SM) Sand, Silty, Light Brown, Moist, Loose										
20			SPT 6	100 (100)	3-3-3 (6)			9				28
			SPT 7	100 (100)	2-3-4 (7)			4				19
		(SP-SM) Sand, Silty, Poorly Graded, Light Brown, Moist, Loose to Medium Dense										
30			SPT 8	100 (100)	3-5-6 (11)			7				11
			SPT 9	100 (100)	10-13-15 (28)			14				11
		(SM) Sand, Silty, Light Brown, Wet, Dense										
40			SPT 10	100 (100)	18-19-18 (37)			20				20
		(CL) Lean Clay, Sandy, Light Brown to Reddish-Brown, Dry to Moist, Stiff	SPT 11	100 (100)	9-11-15 (26)			2	26	19	7	98
50			SPT 12	100 (100)	8-10-14 (24)			7				83
			SPT 13	100 (100)	7-11-16 (27)			6	49	18	31	81
60			SPT	100	6-9-12			9				71

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BORING NUMBER BH-048

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Sandy, Light Brown to Reddish-Brown, Dry to Moist, Stiff *(continued)*	14	(100)	(21)							
			SPT 15	100 (100)	8-11-13 (24)			13	26	18	8	65
70			SPT 16	100 (100)	8-10-14 (24)			9				51
			SPT 17	100 (100)	10-11-16 (27)			7	40	14	26	90
80		(SC) Sand, Clayey, Tan, Moist, Medium Dense	SPT 18	100 (100)	5-6-9 (15)			12				49
		(CL) Lean Clay, Sandy, Light Brown, Dry, Stiff	SPT 19	100 (100)	5-9-17 (26)			8	44	13	31	50
90		(CH) Fat Clay, Tan, Moist, Stiff	SPT 20	100 (100)	7-11-19 (30)			26				98
			SPT 21	100 (100)	8-12-18 (30)			12	51	20	31	88
100		(SC) Sand, Clayey, Tan, Moist, Dense to Very Dense	SPT 22	100 (100)	13-18-29 (47)			14				25
			SPT 23	100 (100)	11-26-50 (76)			20	72	23	49	14
110			SPT 24	100 (100)	31-40-50 (90)			11				
			SPT 25	100 (100)	41-50-50 (100)			15	30	18	12	
120			SPT 26	100 (100)	46-50-50 (100)			12				

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-050

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/30/09 **COMPLETED** 4/30/09
GROUND ELEVATION 69.54 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 20.00 ft / Elev 49.54 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 21.00 ft / Elev 48.54 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CL) Lean Clay, Slightly Sandy, Dark Brown, Dry, Firm to Hard	SPT 1	100 (100)	6-6-7 (13)			9	32	14	18	
			SPT 2	100 (100)	6-7-8 (15)			9				57
			SPT 3	100 (100)	4-4-4 (8)			11	34	14	20	
10			SPT 4	100 (100)	4-4-6 (10)			9				58
			SPT 5	100 (100)	2-3-3 (6)			11	27	16	11	
		(CH) Fat Clay, Slightyly Sandy, Dark Brown, Moist, Soft										
20			SPT 6	100 (100)	4-2-4 (6)			21	58	17	41	57
			SPT 7	100 (100)	1-1-1 (2)			24				50
		(SC) Sand, Clayey, Brown, Wet, Dense to Very Dense										
30			SPT 8	100 (100)	11-13-20 (33)			25				25
			SPT 9	100 (100)	18-22-31 (53)			25				23
40			SPT 10	100 (100)	36-45-50 (95)			20				12
		(CL) Lean Clay, Tan to Reddish Brown, Moist, Hard										
			SPT 11	100 (100)	24-30-33 (63)			16	48	20	28	
50			SPT 12	100 (100)	13-21-23 (44)			17				77
		(CH) Fat Clay, Reddish-Brown, Moist, Hard										
			SPT 13	100 (100)	14-16-25 (41)			16	55	17	38	
60			SPT 14	100 (100)	25-23-30 (53)			15				100

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-052

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/28/09 **COMPLETED** 4/28/09
GROUND ELEVATION 69.05 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 28.00 ft / Elev 41.05 ft during drilling
LOGGED BY Rene Gonzalez **CHECKED BY** R. Gil
AT END OF DRILLING 21.00 ft / Elev 48.05 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Dark Brown, Moist, Firm	SPT 1	100 (100)	4-4-7 (11)			15	57	15	42	60
			SPT 2	100 (100)	4-6-6 (12)			14				60
		(CL) Lean Clay, Light Brown, Moist to Dry, Firm to Stiff	SPT 3	100 (100)	3-4-5 (9)			17	42	17	25	72
10			SPT 4	100 (100)	5-7-9 (16)			13				78
			SPT 5	100 (100)	3-4-5 (9)			18	36	15	21	72
20			SPT 6	100 (100)	6-7-11 (18)			17				80
			SPT 7	100 (100)	5-7-9 (16)			20	42	13	29	80
30			SPT 8	100 (100)	9-10-13 (23)			18				93
		(CH) Fat Clay, Light Brown, Dry, Stiff	SPT 9	100 (100)	8-12-17 (29)			14	54	17	37	88
		(SM) Sand, Silty, Brown, Wet, Very Dense										
40			SPT 10	100 (100)	18-30-50 (80)			20				18
			SPT 11	100 (100)	14-26-50 (76)			22				20
		(CL) Lean Clay, Tan, Moist, Stiff										
50			SPT 12	100 (100)	5-7-13 (20)			19	41	14	27	66
			SPT 13	100 (100)	7-9-15 (24)			17				86
		(CH) Fat Clay, Reddish Brown, Moist, Hard										
60			SPT	100	11-14-24			18	52	17	35	99

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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2100 W. Expressway 83
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Telephone: 956-565-0760

BORING NUMBER BH-052

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Reddish Brown, Moist, Hard *(continued)*	14	(100)	(38)							
			SPT 15	100 (100)	18-24-26 (50)			20				90
		(CL) Lean Clay, Light Brown, Dry to Moist, Firm to Hard										
70			SPT 16	100 (100)	4-5-7 (12)			16	31	17	**14**	55
			SPT 17	100 (100)	6-7-9 (16)			18				52
80			SPT 18	100 (100)	9-11-11 (22)			20	38	14	**24**	77
			SPT 19	100 (100)	11-14-16 (30)			16				73
		(CH) Fat Clay, Tan, Moist, Hard										
90			SPT 20	100 (100)	15-22-50 (72)			17	53	22	**31**	92
			SPT 21	100 (100)	18-26-50 (76)			15				92
		(CL) Lean Clay, Tan, Moist, Hard										
100			SPT 22	100 (100)	44-50-50 (100)			17	33	16	**17**	89
			SPT 23	100 (100)	29-30-50 (80)			22				98
110			SPT 24	100 (100)	46-50-50 (100)			15	40	16	**24**	94
			SPT 25	100 (100)	39-44-50 (94)			16				98
120			SPT 26	100 (100)	48-50-50 (100)			15	32	18	**14**	91

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-055

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 68.4 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 30.00 ft / Elev 38.40 ft during drilling
LOGGED BY B. Wylie **CHECKED BY** R. GIL
AT END OF DRILLING 23.00 ft / Elev 45.40 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CH) Fat Clay, Slightly Sandy, Dark Brown to Tan, Moist to Dry, Firm to Stiff	SPT 1	100	5-6-5 (11)			23	69	21	48	
			SH 2	100				16	64	23	41	76
			SH 3	100				12	51	19	32	
10			SH 4	100				13	53	18	35	
			SPT 5	100	6-6-10 (16)			19				75
20			SH 6	100				16	67	21	46	
		(CL) Lean Clay, Tan Moist, Firm										
			SPT 7	100	4-5-6 (11)			17	47	17	30	
30			SPT 8	100	6-5-8 (13)			20				89
		(SC) Sand, Clayey, Tan, Moist, Loose										
			SH 9	100				19	28	19	9	
40			SH 10	100				20				27
		(CL) Lean Clay, Sandy, Reddish-Brown, Moist, Firm to Hard										
			SPT 11	100	7-9-6 (15)			20	37	15	22	
50			SH 12	100				16				67
			SH 13	100				20	41	20	21	
60			SH 14	100				17				89

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-056

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/27/09 **COMPLETED** 4/27/09
GROUND ELEVATION 68.33 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 28.00 ft / Elev 40.33 ft during drilling
LOGGED BY Rene Gonzalez **CHECKED BY** R. Gil
AT END OF DRILLING 18.00 ft / Elev 50.33 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Slightly Sandy, Light Brown to Dark Brown to Reddish Brown, Dry to Moist, Soft to Stiff	SPT 1	100 (100)	4-3-4 (7)			6				53
			SPT 2	100 (100)	2-3-3 (6)			11				67
			SPT 3	100 (100)	4-3-4 (7)			5				72
10			SPT 4	100 (100)	3-4-5 (9)			20				77
			SPT 5	100 (100)	5-7-8 (15)			14	50	16	34	76
20			SPT 6	100 (100)	4-6-8 (14)			20				80
			SPT 7	100 (100)	5-7-9 (16)			17	56	14	42	79
30			SPT 8	100 (100)	6-8-9 (17)			19	61	16	45	77
			SPT 9	100 (100)	6-9-10 (19)			23	67	26	41	99
40			SPT 10	100 (100)	8-10-11 (21)			18	71	21	50	90
			SPT 11	100 (100)	7-10-14 (24)			21				82
50			SPT 12	100 (100)	9-11-16 (27)			23	67	23	44	88
		(CL) Lean Clay, Light Brown, Moist, Hard										
			SPT 13	100 (100)	9-12-18 (30)			19	39	17	22	91
60			SPT	100	11-14-22			17				88

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Geotechnical Engineering

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BORING NUMBER BH-056

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Light Brown, Moist, Hard *(continued)*	14	(100)	(36)							
		(CH) Fat Clay, Light Brown, Moist, Stiff to Hard										
			SPT 15	100 (100)	9-12-16 (28)			24	77	25	52	99
70			SPT 16	100 (100)	10-16-19 (35)			26	72	23	49	98
		(CL) Lean Clay, Slightly Sandy, Light Brown, Moist, Hard										
			SPT 17	100 (100)	20-26-50 (76)			20	45	18	27	76
80			SPT 18	100 (100)	19-23-26 (49)			20				67
			SPT 19	100 (100)	24-24-50 (74)			16	38	16	22	68
90			SPT 20	100 (100)	30-28-50 (78)			23				71
			SPT 21	100 (100)	31-40-10 (50)			20	42	16	26	71
100			SPT 22	100 (100)	38-43-50 (93)			18				83
		(CH) Fat Clay, Brown, Wet, Hard										
			SPT 23	100 (100)	26-30-50 (80)			14				79
110			SPT 24	100 (100)	33-45-50 (95)			19				80
		(SM) Sandy, Silty, Brown, Wet, Very Dense										
			SPT 25	100 (100)	38-42-50 (92)			25				36
120			SPT 26	100 (100)	42-50-50 (100)			28				29

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-058

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/30/09 **COMPLETED** 4/30/09
GROUND ELEVATION 68.31 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 35.00 ft / Elev 33.31 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 18.00 ft / Elev 50.31 ft after 24 hours
NOTES Solid Stem Auger to 35' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CH) Fat Clay, Slightly Sandy, Dark Brown, Dry to Moist, Firm to Soft	SPT 1	100 (100)	5-6-9 (15)			18	52	17	35	
			SPT 2	100 (100)	8-9-16 (25)			12				60
		(CL) Lean Clay, Slightly Sandy, Dark Brown to Brown, Dry, Firm to Soft	SPT 3	100 (100)	5-5-9 (14)			8	47	14	33	
10			SPT 4	100 (100)	5-7-11 (18)			11				62
			SPT 5	100 (100)	7-10-16 (26)			11	46	20	26	
20			SPT 6	100 (100)	12-12-17 (29)			12				72
		(CH) Fat Clay, Reddish-Brown, Moist, Firm	SPT 7	100 (100)	9-11-14 (25)			14	54	15	39	
30		(SC) Sand, Clayey, Reddish-Brown, Moist, Very Dense	SPT 8	100 (100)	20-26-37 (63)			15	41	18	23	35
		(ML) Silt, Sandy, Light Brown, Wet, Medium Dense	SPT 9	100 (100)	10-14-16 (30)			20				95
40		(SM) Sand, Silty, Light Brown, Wet, Very Dense	SPT 10	100 (100)	45-50-50 (100)			24				20
		(CL) Lean Clay, Slightly Sandy, Light Brown to Reddish Brown, Dry to Moist, Hard	SPT 11	100 (100)	12-16-48 (64)			14	22	14	8	
50			SPT 12	100 (100)	15-21-29 (50)			19				84
			SPT 13	100 (100)	20-20-35 (55)			17	37	17	20	
60			SPT 14	100 (100)	15-19-21 (40)			21	31	20	11	67

Bottom of borehole at 60.0 feet.

L&G Engineering Laboratory
Construction Material Testing
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BORING NUMBER BH-060

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/24/09 **COMPLETED** 4/24/09
GROUND ELEVATION 67.75 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 20.50 ft / Elev 47.25 ft during drilling
LOGGED BY Rene Gonzalez **CHECKED BY** R. Gil
AT END OF DRILLING 19.00 ft / Elev 48.75 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Slightly Sandy, Dark Brown, Moist to Dry, Soft	SPT 1	100 (100)	2-4-3 (7)			15	50	17	33	61
			SPT 2	100 (100)	4-3-3 (6)			8				52
		(CL) Lean Clay, Dark Brown, Dry, Firm	SPT 3	100 (100)	2-1-2 (3)			14	42	12	30	50
10		(SC) Sand, Clayey, Tan, Moist to Wet, Very Loose to Loose	SPT 4	100 (100)	1-1-1 (2)			12				43
			SPT 5	100 (100)	3-2-3 (5)			13	32	14	18	49
20		(CL) Lean Clay, Tan, Wet. Firm	SPT 6	100 (100)	3-4-5 (9)			14	28	16	12	52
		(SC) Sand, Clayey, Tan, Moist to Wet, Medium Dense	SPT 7	100 (100)	4-6-7 (13)			24				38
30		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Dense	SPT 8	100 (100)	12-15-20 (35)			23				10
		(SM) Sand, Silty, Tan, Wet, Dense	SPT 9	100 (100)	14-18-21 (39)			23				15
40		(CH) Fat Clay, Tan, Wet, Hard	SPT 10	100 (100)	14-17-14 (31)			22	71	31	40	75
		(SC) Sand, Clayey, Tan, Moist, Dense	SPT 11	100 (100)	12-14-17 (31)			18	19	14	5	30
50		(CH) Fat Clay, Brown, Moist, Stiff	SPT 12	100 (100)	7-11-16 (27)			14	53	15	38	70
			SPT 13	100 (100)	9-13-17 (30)			15				70
60		(CL) Lean Clay, Brown, Moist, Stiff to Hard	SPT	100	9-11-18			23	34	19	15	92

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BORING NUMBER BH-060

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Brown, Moist, Stiff to Hard *(continued)*	14	(100)	(29)							
			SPT 15	100 (100)	11-16-22 (38)			22				99
		(SC) Sand, Clayey, Tan, Moist, Loose to Medium Dense										
70			SPT 16	100 (100)	2-3-4 (7)			17	26	15	11	40
			SPT 17	100 (100)	6-7-9 (16)			17				41
		(CL) Lean Clay, Tan, Moist to Wet, Hard										
80			SPT 18	100 (100)	14-26-50 (76)			15	42	16	26	96
			SPT 19	100 (100)	11-23-50 (73)			17	37	15	22	78
90			SPT 20	100 (100)	13-20-25 (45)			16	49	20	29	92
			SPT 21	100 (100)	11-18-28 (46)			17				92
100			SPT 22	100 (100)	40-40-50 (90)			18	35	17	18	95
			SPT 23	100 (100)	18-21-25 (46)			20				91
110			SPT 24	100 (100)	14-18-28 (46)			20				88
		(SM) Sand, Silty, Wet, Very Dense										
			SPT 25	100 (100)	16-22-50 (72)			22				48
120			SPT 26	100 (100)	38-44-50 (94)			26				36

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-062

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 5/1/09 **COMPLETED** 5/1/09
GROUND ELEVATION 68.06 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 18.00 ft / Elev 50.06 ft during drilling
LOGGED BY J. Holmes **CHECKED BY** R. Gil
AT END OF DRILLING 21.00 ft / Elev 47.06 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CH) Fat Clay, Dark Brown, Moist, Stiff	SPT 1	100 (100)	7-7-11 (18)			16	69	17	52	
			SH 2	100 (100)		1.5		18				68
		(CL) Lean Clay, Slightly Sandy, Dark Brown to Tan, Moist to Wet, Firm to Soft	SH 3	100 (100)		2.5		13	32	15	17	
10			SPT 4	100 (100)	4-5-5 (10)			14				68
			SH 5	100 (100)		3.5		16	33	17	16	
20			SPT 6	100 (100)	2-2-3 (5)			22	26	15	11	65
		(SM) Sand, Silty, Light Brown, Wet, Medium Dense	SPT 7	100 (100)	12-19-21 (40)			25				31
30			SPT 8	100 (100)	18-18-21 (39)			24				14
			SPT 9	100 (100)	29-34-47 (81)			21				22
40			SPT 10	100 (100)	22-31-44 (75)			18				18
		(CH) Fat Clay, Tan to Reddish-Brown, Moist, Hard	SPT 11	100 (100)	17-19-28 (47)			21	53	18	35	
50			SH 12	100 (100)		4.5		18				93
			SPT 13	100 (100)		4.5		21	58	23	35	
60			SPT 14	100 (100)		3		21				87

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-064

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/23/09 **COMPLETED** 4/23/09
GROUND ELEVATION 67.26 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 31.00 ft / Elev 36.26 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 47.26 ft after 24 hours
NOTES Solid Stem Auger to 34' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Slightly Sandy, Dark Brown, Dry, Firm	SPT 1	100 (100)	3-5-6 (11)			11	60	16	44	63
		(CL) Lean Clay, Light Brown, Dry to Moist, Soft to Firm	SPT 2	100 (100)	3-3-5 (8)			12				73
			SPT 3	100 (100)	4-5-7 (12)			13				76
10			SPT 4	100 (100)	2-2-3 (5)			16	46	19	27	77
			SPT 5	100 (100)	3-4-6 (10)			19				77
		(CH) Fat Clay, Slightly Sandy, Reddish-Brown, Moist, Firm to Stiff										
20			SPT 6	100 (100)	4-6-8 (14)			17				81
			SPT 7	100 (100)	8-10-13 (23)			17	52	15	37	79
30			SPT 8	100 (100)	7-12-14 (26)			17				83
			SPT 9	100 (100)	5-7-8 (15)			22	52	19	33	93
40			SPT 10	100 (100)	7-9-13 (22)			21				98
		(CL) Lean Clay, Light Brown to Reddish-Brown, Moist, Stiff										
			SPT 11	100 (100)	7-10-12 (22)			15	45	20	25	83
50			SPT 12	100 (100)	9-13-14 (27)			14				87
			SPT 13	100 (100)	6-8-12 (20)			22	30	14	16	89
60			SPT	100	5-9-10			20				92

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GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 5/20/09 10:11 - \\S300\LABORATORY\GINT\PROJECTS\NFW2.GPJ

L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-064

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Light Brown to Reddish-Brown, Moist, Stiff *(continued)*	14	(100)	(19)							
		(SC) Sand, Clayey, Reddish-Brown, Moist, Medium Dense	SPT 15	100 (100)	7-12-15 (27)			15	27	13	14	49
		(CL) Lean Clay, Sandy, Reddish-Brown to Tan, Dry to Moist, Hard to Stiff										
70			SPT 16	100 (100)	8-14-18 (32)			12				57
			SPT 17	100 (100)	6-8-10 (18)			16	35	16	19	53
80			SPT 18	100 (100)	9-11-13 (24)			16				61
		(CH) Fat Clay, Light Brown, Moist, Hard										
			SPT 19	100 (100)	12-15-18 (33)			19	57	22	35	96
90			SPT 20	100 (100)	11-13-17 (30)			21				94
			SPT 21	100 (100)	11-15-21 (36)			15	50	18	32	83
		(CL) Lean Clay, Light Brown, Moist, Hard										
100			SPT 22	100 (100)	9-14-23 (37)			18	46	18	28	83
		(SM) Sand, Silty, Brown, Wet, Dense to Very Dense	SPT 23	100 (100)	16-21-26 (47)			22				24
110			SPT 24	100 (100)	26-32-50 (82)			23				26
			SPT 25	100 (100)	44-38-50 (88)			24				30
120			SPT 26	100 (100)	41-50			21				27

Bottom of borehole at 120.0 feet.

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Geotechnical Engineering

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BORING NUMBER BH-065

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 67.37 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 31.00 ft / Elev 36.37 ft during drilling
LOGGED BY Ram C. **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 47.37 ft after 24 hours
NOTES Solid Stem Auger to 35' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 5"										
		(CH) Fat Clay, Sandy, Dark Brown to Tan , Dry, Firm	SPT 1	100	3-4-4 (8)			9				54
			SPT 2	100	4-4-6 (10)			11	55	17	38	
			SPT 3	100	2-2-3 (5)			10				75
10		(CL) Lean Clay, Dark Brown, Dry, Soft	SPT 4	100	3-2-4 (6)			14	46	18	28	
		(CH) Fat Clay, Reddish-Brown, Dry to Moist, Hard to Stiff	SH 5	100		4.0		14				
20	▼		SH 6	100		4.0		15	56	18	38	
			SH 7	100		3.0		17				
30	▽		SPT 8	100	5-8-10 (18)			20	60	23	37	96
			SPT 9	100	7-10-13 (23)			19	59	20	39	
40		(SM) Sand, Tan, Silty, Wet, Medium Dense	SPT 10	100	8-9-12 (21)			18				15
			SPT 11	100	10-11-14 (25)			18				16
		(CL) Lean Clay, Silty, Tan, Moist to Wet, Hard										
50			SPT 12	100	7-11-15 (26)			17	45	18	27	94
			SPT 13	100	13-13-17 (30)			22	30	16	14	
60			SPT 14	100	11-16-18 (34)			16				91

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
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BORING NUMBER BH-070

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/14/09 **COMPLETED** 4/14/09
GROUND ELEVATION 66.93 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 23.00 ft / Elev 43.93 ft during drilling
LOGGED BY A. Gomez **CHECKED BY** R. GIL
AT END OF DRILLING 18.00 ft / Elev 48.93 ft after 24 hours
NOTES Solid Stem Auger to 28' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13.5' below top of levee.										
10												
		(CL) Lean Clay, Slightly Sandy, Tan, Moist, Soft to Firm	SPT 1	100	2-2-3 (5)			18	45	16	29	
20			SPT 2	100	7-9-9 (18)			17				75
		(CH) Fat Clay, Reddish-Brown, Moist, Stiff	SPT 3	100	6-10-12 (22)			16	61	20	41	86
30			SPT 4	100	5-9-11 (20)			20	68	22	46	
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Medium Dense	SPT 5	100	6-9-11 (20)			22				11
40		(SM) Sand, Silty, Tan, Wet, Medium Dense	SPT 6	100	7-11-15 (26)			19				12
		(CL) Lean Clay, Slightly Sandy, Tan, Moist, Stiff to Hard	SPT 7	100	7-13-16 (29)			20	40	17	23	
50			SPT 8	100	10-16-21 (37)			19				87
		(CH) Fat Clay, Reddish-Brown, Moist, Hard	SPT 9	100	15-16-22 (38)			21	53	22	31	
60		(CL) Lean Clay, Tan, Moist, Hard	SPT 10	100	18-22-24 (46)			22	40	21	19	99

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
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BORING NUMBER BH-072

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 67.04 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.00 ft / Elev 40.04 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 47.04 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CL) Lean Clay, Sandy, Dark Brown to Brown, Dry to Moist, Firm to Stiff	SPT 1	100 (100)	3-4-5 (9)			10	39	15	24	57
			SPT 2	100 (100)	6-6-8 (14)			10				56
			SPT 3	100 (100)	5-7-9 (16)			13	38	14	24	57
10		(SC) Clayey Sand, Dark Brown, Moist, Medium Dense	SPT 4	100 (100)	5-5-7 (12)			10				42
		(CL) Lean Clay, Sandy, Brown, Moist, Stiff	SPT 5	100 (100)	6-8-16 (24)			15	37	14	23	76
20			SPT 6	100 (100)	7-9-9 (18)			16				66
			SPT 7	100 (100)	4-7-11 (18)			16	44	15	29	73
		(SC) Sand, Clayey, Brown, Moist, Medium Dense										
30			SPT 8	100 (100)	7-9-16 (25)			15				46
		(CL) Lean Clay, Silty, Tan, Moist, Stiff	SPT 9	100 (100)	7-11-11 (22)			16	30	14	16	78
40			SPT 10	100 (100)	6-8-10 (18)			18				78
			SPT 11	100 (100)	4-7-11 (18)			16	33	15	18	96
50			SPT 12	100 (100)	6-9-11 (20)			21				98
			SPT 13	100 (100)	8-11-15 (26)			19	44	19	25	78
60			SPT	100	10-13-14			19				99

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L&G Engineering Laboratory
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Geotechnical Engineering

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Telephone: 956-565-0760

BORING NUMBER BH-072

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Silty, Tan, Moist, Stiff *(continued)*	14	(100)	(27)							
		(SC) Sand, Clayey, Tan, Moist, Very Dense to Medium Dense	SPT 15	100 (100)	22-33-31 (64)			21				41
70			SPT 16	100 (100)	6-10-13 (23)			18	32	14	18	50
		(CH) Fat Clay, Brown, Moist, Stiff	SPT 17	100 (100)	9-13-15 (28)			27				98
80		(CL) Lean Clay, Slightly Sandy, Moist, Hard	SPT 18	100 (100)	12-15-17 (32)			16	41	15	26	72
			SPT 19	100 (100)	14-17-21 (38)			13				85
90		(CL) Lean Clay, Brown, Dry to Moist, Hard	SPT 20	100 (100)	12-19-22 (41)			15	44	16	28	87
			SPT 21	100 (100)	15-22-24 (46)			13				63
100			SPT 22	100 (100)	12-15-25 (40)			14	36	15	21	93
			SPT 23	100 (100)	15-19-23 (42)			18				93
110		(SM) Sand, Silty, Tan, Wet, Very Dense	SPT 24	100 (100)	22-27-33 (60)			20	32	22	10	33
		(CL) Lean Clay, Brown, Moist, Hard	SPT 25	100 (100)	19-28-31 (59)			20				82
120			SPT 26	100 (100)	20-27-35 (62)			13	29	18	11	92

Bottom of borehole at 120.0 feet.

L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
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BORING NUMBER BH-074

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/11/09 **COMPLETED** 4/11/09
GROUND ELEVATION 65.49 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 28.00 ft / Elev 37.49 ft during drilling
LOGGED BY Ram C. **CHECKED BY** R. GIL
AT END OF DRILLING 19.00 ft / Elev 46.49 ft after 24 hours
NOTES Solid Stem Auger to 35' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CL) Lean Clay, Sandy, Dark Brown, Dry, Firm	SPT 1	100	6-5-5 (10)			16	41	15	26	61
		(CH) Fat Clay, Sandy, Dark Brown, Dry, Firm	SPT 2	100	5-4-7 (11)			12	54	19	35	
			SPT 3	100	4-5-8 (13)			16				57
10		(CL) Lean Clay, Light Brown, Dry, Firm	SPT 4	100	6-6-9 (15)			14	37	17	20	100
		(SC) Sand, Clayey, Dark Brown to Tan, Wet to Dry, Medium Dense	SH 5	100		2.0		33	47	16	31	
20			SH 6	100		2.0		15				
			SH 7	100		4.5		13				
30			SPT 8	100	7-9-11 (20)			14	36	15	21	45
		(CL) Lean Clay, Slightly Sandy, Dark Brown to Tan, Firm to Hard	SPT 9	100	5-6-6 (12)			12				76
40			SPT 10	100	6-5-8 (13)			20	42	16	26	
			SPT 11	100	3-4-5 (9)			19				92
50			SPT 12	100	4-6-6 (12)			22	30	15	15	
			SPT 13	100	10-13-16 (29)			22				99
60			SPT 14	100	12-15-20 (35)			23				

Bottom of borehole at 60.0 feet.

L&G Engineering Laboratory
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BORING NUMBER BH-076

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/22/09 **COMPLETED** 4/22/09
GROUND ELEVATION 66.99 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 32.00 ft / Elev 34.99 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 21.00 ft / Elev 45.99 ft after 24 hours
NOTES Solid Stem Auger to 34' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CL) Lean Clay, Dark Brown to Reddish Brown, Dry, Firm to Hard	SPT 1	100 (100)	6-7-7 (14)			5	37	14	23	54
			SPT 2	100 (100)	4-6-4 (10)			4				55
			SPT 3	100 (100)	4-4-6 (10)			6	49	16	33	51
10			SPT 4	100 (100)	3-4-7 (11)			6				53
			SPT 5	100 (100)	6-8-10 (18)			6	40	15	25	58
20			SPT 6	100 (100)	4-5-8 (13)			8				55
			SPT 7	100 (100)	6-7-8 (15)			8	37	14	23	64
30			SPT 8	100 (100)	9-11-19 (30)			10	40	16	24	68
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Moist, Medium Dense										
			SPT 9	100 (100)	5-10-14 (24)			18				11
		(SM) Sand, Silty, Tan, Moist, Dense										
40			SPT 10	100 (100)	8-13-17 (30)			15				23
		(CL) Lean Clay, Tan Moist to Dry, Stiff										
			SPT 11	100 (100)	6-8-10 (18)			13	35	16	19	78
50			SPT 12	100 (100)	7-9-11 (20)			10				96
			SPT 13	100 (100)	5-10-14 (24)			15	33	20	13	100
60			SPT	100	7-9-18			6	46	21	25	99

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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BORING NUMBER BH-076

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Tan Moist to Dry, Stiff *(continued)*	14	(100)	(27)							
			SPT 15	100 (100)	6-9-23 (32)			6				60
		(SM) Sand, Silty, Tan, Moist to Dry, Very Dense										
70			SPT 16	100 (100)	21-38-50 (88)			17				43
		(CL) Lean Clay, Sandy, Tan, Moist to Dry, Firm to Soft										
			SPT 17	100 (100)	4-5-7 (12)			13	36	15	21	58
80			SPT 18	100 (100)	7-9-12 (21)			8				60
		(CH) Fat Clay, Tan to Light Brown, Moist to Dry, Hard										
			SPT 19	100 (100)	12-18-31 (49)			13	53	15	38	97
90			SPT 20	100 (100)	10-30-50 (80)			10	62	23	39	97
			SPT 21	100 (100)	10-17-21 (38)			8	60	19	41	99
100			SPT 22	100 (100)	13-19-26 (45)			11	62	24	38	99
			SPT 23	100 (100)	10-15-23 (38)			11				99
110			SPT 24	100 (100)	12-18-24 (42)			13	66	25	41	94
			SPT 25	100 (100)	14-21-28 (49)			21				97
120			SPT 26	100 (100)	11-13-19 (32)			10				98

Bottom of borehole at 120.0 feet.

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-079

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 66.25 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 21.00 ft / Elev 45.25 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 18.50 ft / Elev 47.75 ft after 24 hours
NOTES Solid Stem Auger to 23.5' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 12"										
		(CL) Lean Clay, Sandy, Dark Brown, Moist, Firm	SPT 1	100	6-5-6 (11)			18	41	14	27	
			SPT 2	100	4-8-7 (15)			8				63
		(SC) Sand, Clayey, Dark Brown, Dry, Loose	SPT 3	100	5-3-3 (6)			8	31	14	17	
10			SPT 4	100	4-3-3 (6)			10				42
		(CL) Lean Clay, Sandy, Tan, Moist, Stiff										
			SPT 5	100	5-7-9 (16)			13	33	14	19	
20			SPT 6	100	6-9-10 (19)			15				56
		(SC) Sand, Clayey, Tan, Moist, Medium Dense										
			SPT 7	100	7-9-12 (21)			20	44	17	27	
30			SPT 8	100	17-28-22 (50)			19				46
		(SM) Sand, Silty, Tan, Moist, Medium Dense										
			SPT 9	100	20-26-24 (50)			18				12
		(CL) Lean Clay, Tan, Moist to Wet, Hard										
40			SPT 10	100	12-17-21 (38)			16	40	17	23	88
			SPT 11	100	19-23-27 (50)			16				98
50			SPT 12	100	13-16-25 (41)			18	35	21	14	
			SPT 13	100	14-21-26 (47)			29				88
		(CH) Fat Clay, Reddish-Brown, Moist, Hard										
60			SPT 14	100	17-24-26 (50)			19	66	23	43	

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-081

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/14/09 **COMPLETED** 4/14/09
GROUND ELEVATION 66.06 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 20.00 ft / Elev 46.06 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 22.00 ft / Elev 44.06 ft after 24 hours
NOTES Solid Stem Auger to 23.5' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Materal, Roadway, 6"										
		(CL) Lean Clay, Sandy, Dark Brown, Moist, Stiff to Firm	SPT 1	100	8-8-8 (16)			15	44	14	30	64
			SPT 2	100	5-6-7 (13)			14				
			SPT 3	100	4-5-5 (10)			8	42	15	27	
10			SPT 4	100	4-4-5 (9)			16				58
			SPT 5	100	5-7-9 (16)			19	41	18	23	
20			SPT 6	100	5-6-6 (12)			21				51
		(SC) Sand, Clayey, Silty, Moist, Medium Dense	SPT 7	100	8-9-11 (20)			22	30	18	12	
30			SPT 8	100	13-13-15 (28)			19				26
			SPT 9	100	11-14-16 (30)			19				30
		(CL) Lean Clay, Silty, Tan, Moist, Very Dense to Dense										
40			SPT 10	100	14-23-27 (50)			16	30	15	15	
			SPT 11	100	19-24-26 (50)			17				91
50			SPT 12	100	12-18-22 (40)			21	27	19	8	
			SPT 13	100	16-18-26 (44)			23				91
60			SPT 14	100	14-20-24 (44)			20	33	15	18	

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-082

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/14/09 **COMPLETED** 4/14/09
GROUND ELEVATION 68.86 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 32.00 ft / Elev 36.86 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 23.00 ft / Elev 45.86 ft after 24 hours
NOTES Solid Stem Auger to 32' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 6"										
		(CL) Lean Clay, Dark Brown, Dry, Firm	SPT 1	100	4-6-9 (15)			12	44	16	28	
			SPT 2	100	3-4-5 (9)			16				54
		(CH) Fat Clay, Dark Brown, Dry , Firm	SPT 3	100	4-5-6 (11)			7	50	19	31	
10			SPT 4	100	5-7-7 (14)			11				54
		(SC) Sand, Clayey, Silty, Dry to Moist, Medium Dense to Dense										
			SPT 5	100	5-6-9 (15)			17	38	13	25	
20			SPT 6	100	8-11-13 (24)			15				43
			SPT 7	100	9-12-16 (28)			19	25	20	5	
30			SPT 8	100	8-16-23 (39)			37				37
			SPT 9	100	11-18-25 (43)			18	22	11	11	
		(CL) Lean Clay, Sandy, Tan-Olive, Moist to Dry, Hard										
40			SPT 10	100	12-19-24 (43)			22				51
			SPT 11	100	18-24-26 (50)			14	40	17	23	
		(CL) Lean Clay, Sandy, Tan, Wet, Hard										
50			SPT 12	100	14-19-25 (44)			22				65
			SPT 13	100	18-24-26 (50)			17	30	17	13	
		(CH) Fat Clay, Tan, Dry, Hard										
60			ST 14	100		4.5+		15				100

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
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Telephone: 956-565-0760

BORING NUMBER BH-083

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/15/09 **COMPLETED** 4/15/09
GROUND ELEVATION 66.19 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 25.00 ft / Elev 41.19 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 21.00 ft / Elev 45.19 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CL) Lean Clay, Sandy, Dark Brown, Dry, Stiff	SPT 1	100	7-7-9 (16)			12	46	15	31	
			SPT 2	100	6-9-12 (21)			12				57
		(SC) Sand, Clayey, Tan to Dark Brown, Moist, Loose to Medium Dense to Dense	SPT 3	100	8-7-5 (12)			8	27	14	13	
10			SPT 4	100	3-2-3 (5)			12	29	12	17	38
			SPT 5	100	5-7-13 (20)			13	36	16	20	
20			SPT 6	100	7-9-11 (20)			19				48
			SPT 7	100	13-15-15 (30)			21				39
30			SPT 8	100	16-18-24 (42)			22				
		(SP-SM) Sand, Silty, Poorly Graded, Wet, Very Dense	SPT 9	100	23-30-20 (50)			19				7
		(SM) Sand, Silty, Tan, Wet, Very Dense										
40			SPT 10	100	19-34-16 (50)			17				17
		(CH) Fat Clay, Reddish-Brown, Moist, Hard	SPT 11	100	11-19-18 (37)			18	56	15	41	95
50			SPT 12	100	9-16-21 (37)			18				
		(CL) Lean Clay, Reddish-Brown, Moist, Stiff to Hard	SPT 13	100	12-12-15 (27)			20	42	24	18	
60			SPT 14	100	14-17-19 (36)			25				99

Bottom of borehole at 60.0 feet.

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Geotechnical Engineering

L&G Engineering Laboratory LLC
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BORING NUMBER BH-084

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/15/09 **COMPLETED** 4/15/09
GROUND ELEVATION 65.69 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 19.00 ft / Elev 46.69 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 45.69 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CL) Lean Clay, Sandy, Dark Brown, Dry to Moist, Soft to Firm	SPT 1	100 (100)	4-4-4 (8)			4				59
			SPT 2	100 (100)	2-2-4 (6)			11	45	12	33	59
			SPT 3	100 (100)	5-5-7 (12)			17	32	15	17	52
10			SPT 4	100 (100)	2-2-5 (7)			11				59
		(SC) Sand, Clayey, Reddish-Brown, Dry to Moist, Medium Dense to Loose										
			SPT 5	100 (100)	5-7-11 (18)			10	25	13	12	37
20			SPT 6	100 (100)	2-4-5 (9)			19				46
		(CL) Lean Clay, Sandy, Tan, Wet, Stiff										
			SPT 7	100 (100)	7-11-13 (24)			23				50
		(SM) Sand, Silty, Tan, Wet, Medium Dense to Dense										
30			SPT 8	100 (100)	5-5-10 (15)			21				23
			SPT 9	100 (100)	15-20-27 (47)			18				13
		(CH) Fat Clay, Tan to Reddish-Brown, Moist to Wet, Hard										
40			SPT 10	100 (100)	21-25-31 (56)			17	47	13	34	89
			SPT 11	100 (100)	5-15-21 (36)			21	74	20	54	96
50			SPT 12	100 (100)	11-16-20 (36)			22				86
		(SC) Sand, Clayey, Reddish-Brown, Wet, Medium Dense										
			SPT 13	100 (100)	6-6-11 (17)			23	32	18	14	40
		(MH) Silty, Sandy, Reddish-Brown, Moist, Dense										
60			SPT	100	8-10-13			21				87

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Geotechnical Engineering

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Telephone: 956-565-0760

BORING NUMBER BH-084

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(MH) Silty, Sandy, Reddish-Brown, Moist, Dense *(continued)*	14	(100)	(23)							
			SPT 15	100 (100)	13-21-23 (44)			23				100
70			SPT 16	100 (100)	9-12-17 (29)			23	28	37	NP	65
		(CL) Lean Clay, Slightly Sandy, Tan, Moist, Stiff to Hard										
			SPT 17	100 (100)	7-8-13 (21)			16				76
80			SPT 18	100 (100)	9-11-19 (30)			18	32	12	20	64
		(CH) Fat Clay, Tan, Moist to Wet, Hard										
			SPT 19	100 (100)	17-20-22 (42)			18				98
90			SPT 20	100 (100)	17-22-26 (48)			19	62	22	40	98
			SPT 21	100 (100)	17-22-29 (51)			21				96
100			SPT 22	100 (100)	19-26-28 (54)			24	58	18	40	51
		(SM) Sand, Silty, Light Brown, Wet, Dense to Very Dense										
			SPT 23	100 (100)	14-20-25 (45)			25				21
110			SPT 24	100 (100)	16-22-27 (49)			21	21	20	1	19
			SPT 25	100 (100)	19-22-27 (49)			21				29
120			SPT 26	100 (100)	20-23-30 (53)			26	22	21	1	26

Bottom of borehole at 120.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-085

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/12/09 **COMPLETED** 4/12/09
GROUND ELEVATION 65.65 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 22.00 ft / Elev 43.65 ft
LOGGED BY Ram C. **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 45.65 ft after 24 hours
NOTES Solid Stem Auger to 23.5' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4.5"										
		(CL) Lean Clay, Sandy, Brown, Dry to Moist, Firm	SPT 1	100 (100)	3-4-4 (8)			14	45	13	32	
			SPT 2	100 (100)	3-4-6 (10)			15	49	14	35	60
			SH 3	100 (100)		2.5		15				
10			SH 4	100 (100)		2.5		19	45	17	28	
			SH 5	100 (100)		2.0		15				
		(CL) Lean Clay, Silty, Sandy, Reddish-Brown, Moist, Soft to Stiff										
20			SPT 6	100 (100)	3-2-3 (5)			19	32	12	20	61
			SPT 7	100 (100)	6-10-11 (21)			17	33	15	18	59
30			SPT 8	100 (100)	8-11-14 (25)			17	31	18	13	
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Very Dense	SPT 9	100 (100)	12-24-30 (54)			20				11
		(CL) Lean Clay, Reddish-Brown, Moist, Hard										
40			SPT 10	100 (100)	13-19-24 (43)			15	43	18	25	
			SPT 11	100 (100)	9-13-21 (34)			17				98
		(ML) Silt, Clayey, Tan, Wet, Medium Dense										
50			SPT 12	100 (100)	10-11-11 (22)			25	35	18	17	
			SPT 13	100 (100)	8-8-11 (19)			23				91
60			SPT 14	100 (100)	5-6-10 (16)			42	32	20	12	

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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BORING NUMBER BH-086

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 65.34 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 22.50 ft / Elev 42.84 ft during drilling
LOGGED BY Erasmo C. **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 45.34 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 10"										
		(CH) Fat Clay, Sandy, Dark Brown, Dry, Stiff	SPT 1	100	7-11-12 (23)			11	54	16	38	
			SPT 2	100	6-8-11 (19)			11				50
		(CL) Lean Clay, Sandy, Tan, Dry to Moist, Firm to Stiff	SPT 3	100	5-7-7 (14)			11	41	15	26	
10			SPT 4	100	5-6-7 (13)			12				62
			SPT 5	100	4-3-3 (6)			11	25	14	11	
20			SPT 6	100	5-7-7 (14)			17				55
			SPT 7	100	5-7-13 (20)			22	28	17	11	
		(ML) Silt, Sandy, Tan, Wet, Medium Dense										
30			SPT 8	100	9-12-15 (27)			22	28	23	5	
		(SM) Sand, Silty, Tan, Wet, Dense	SPT 9	100	16-20-23 (43)			19				16
		(CH) Fat Clay, Reddish-Brown, Moist, Hard										
40			SPT 10	100	24-32-18 (50)			15	52	18	34	
			SPT 11	100	9-14-18 (32)			17				93
		(CL) Lean Clay, Tan, Moist, Hard										
50			SPT 12	100	14-21-26 (47)			19	47	17	30	
			SPT 13	100	18-32-18 (50)			41	46	19	27	
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
60			SPT 14	100	7-12-16 (28)			25				19

Bottom of borehole at 60.0 feet.

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L & G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

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BORING NUMBER BH-087

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/14/09 **COMPLETED** 4/14/09
GROUND ELEVATION 64.73 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 20.00 ft / Elev 44.73 ft during drilling
LOGGED BY A. Gomez **CHECKED BY** R. GIL
AT END OF DRILLING 18.50 ft / Elev 46.23 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 5"										
		(CH) Fat Clay, Dark Brown, Dry, Hard	SH 1	100		4.5+		16	52	16	36	
		(CL) Lean Clay, Sandy, Tan, Dry, Firm	SH 2	100		4.5+		17				52
			SPT 3	100	5-7-7 (14)			12				51
10			SPT 4	100	3-3-3 (6)			13	32	16	16	
		(CL) Lean Clay, Slightly Sandy, Tan, Dry to Moist, Firm to Stiff										
			SPT 5	100	3-3-6 (9)			12				75
20			SPT 6	100	5-6-8 (14)			16	44	16	28	62
			SPT 7	100	4-6-11 (17)			19				59
30			SPT 8	100	4-6-8 (14)			20	31	15	16	
			SPT 9	100	6-10-14 (24)			20				52
		(CH) Fat Clay, Tan, Moist, Stiff to Hard										
40			SPT 10	100	8-8-12 (20)			19	54	15	39	94
			SPT 11	100	7-11-20 (31)			19	62	24	38	
50		(CL-ML) Silty Clay, Slightly Sandy, Tan, Wet, Stiff	SPT 12	100	10-14-15 (29)			26	28	22	6	78
		(CH) Fat Clay, Reddish-Brown, Moist, Stiff	SPT 13	100	10-12-11 (23)			25				99
60		(ML) Silt, Slightly Sandy, Tan Wet, Medium Dense	SPT 14	100	10-10-13 (23)			26				

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-088

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/16/09 **COMPLETED** 4/16/09
GROUND ELEVATION 67.74 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 24.00 ft / Elev 43.74 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 21.00 ft / Elev 46.74 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Slightly Sandy, Dark Brown to Tan, Dry to Moist, Firm to Stiff	SPT 1	100 (100)	7-6-8 (14)			10				50
			SPT 2	100 (100)	6-6-8 (14)			12				50
			SPT 3	100 (100)	5-5-6 (11)			13	53	16	37	71
10			SPT 4	100 (100)	4-5-5 (10)			7				63
			SPT 5	100 (100)	5-6-8 (14)			14				58
20			SPT 6	100 (100)	6-8-10 (18)			17	50	16	34	70
		(CL) Lean Clay, Slightly Sandy, Reddish-Brown to Tan, Moist to Dry, Firm to Stiff	SPT 7	100 (100)	2-4-6 (10)			17	46	17	29	100
30			SPT 8	100 (100)	7-7-5 (12)			18	36	14	22	69
			SPT 9	100 (100)	6-8-11 (19)			13	42	16	26	74
40			SPT 10	100 (100)	7-11-12 (23)			14	49	18	31	93
		(CH) Fat Clay, Tan, Dry, Stiff	SPT 11	100 (100)	10-11-15 (26)			14	61	18	43	97
		(CL) Lean Clay, Slightly Sandy, Light Brown, Moist, Stiff to Hard										
50			SPT 12	100 (100)	10-10-12 (22)			21				63
			SPT 13	100 (100)	13-15-17 (32)			21	27	22	5	87
60			SPT	100	5-8-15			15				97

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-088

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CL) Lean Clay, Slightly Sandy, Light Brown, Moist, Stiff to Hard *(continued)*	14	(100)	(23)							
		(CH) Fat Clay, Slightly Sandy, Reddish-Brown, Moist, Stiff to Hard	SPT 15	100 (100)	8-11-17 (28)			19	71	27	**44**	100
70			SPT 16	100 (100)	10-14-21 (35)			19				64
		(CL) Lean Clay, Sandy, Tan, Firm to Stiff	SPT 17	100 (100)	4-5-5 (10)			18	37	14	**23**	57
80			SPT 18	100 (100)	7-10-12 (22)			19	38	12	**26**	62
		(CH) Fat Clay, Tan, Moist, Hard	SPT 19	100 (100)	16-12-20 (32)			21				98
90			SPT 20	100 (100)	10-11-23 (34)			20	58	20	**38**	95
			SPT 21	100 (100)	13-18-24 (42)			20				98
		(CL-ML) Silty Clay, Slightly Sandy, Tan, Moist, Hard										
100			SPT 22	100 (100)	12-15-21 (36)			17	47	20	**27**	97
			SPT 23	100 (100)	13-18-25 (43)			18				94
110			SPT 24	100 (100)	18-22-25 (47)			21				89
			SPT 25	100 (100)	18-22-27 (49)			22				78
120			SPT 26	100 (100)	16-21-25 (46)			22				75

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-090

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/14/09 **COMPLETED** 4/14/09
GROUND ELEVATION 64.49 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 35.00 ft / Elev 29.49 ft during drilling
LOGGED BY A. Gomez **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 44.49 ft after 24 hours
NOTES Solid Stem Auger to 45' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0	Caliche Base Material, Roadway, 6"										
	(CH) Fat Clay, Slightly Sandy, Dark Brown, Dry, Hard	SH 1	100		4.5		15	55	17	38	
		SH 2	100		4.5		12				57
		SH 3	100		4.5		14				
10	(CL) Lean Clay, Sandy, Brown, Moist, Stiff	SH 4	100		4.5		17	46	15	31	55
		SH 5	100		2.0		18	46	18	28	67
20		SH 6	100		3.5		17	48	17	31	
		SH 7	100		2.5		18				67
	(CL) Lean Clay, Silty, Tan, Moist, Stiff										
30		SH 8	100		1.5		18	38	14	24	
		SPT 9	100	7-11-12 (23)			20				86
40		SPT 10	100	9-10-13 (23)			20	45	19	26	
	(SM) Sand, Silty, Tan, Wet, Dense to Very Dense	SPT 11	100	11-18-23 (41)			25				21
50		SPT 12	100	22-34-35 (69)			24				
		SPT 13	100	21-31-36 (67)			24				18
60		SPT 14	100	9-31-34 (65)			21				

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-091

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/14/09 **COMPLETED** 4/14/09
GROUND ELEVATION 63.9 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 20.00 ft / Elev 43.90 ft during drilling
LOGGED BY A. Gomez **CHECKED BY** R. GIL
AT END OF DRILLING 19.00 ft / Elev 44.90 ft after 24 hours
NOTES Solid Stem Auger to 20' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Dark Brown, Wet to Dry, Firm to Stiff	SPT 1	100	4-5-6 (11)			36	60	15	45	71
			SPT 2	100	5-6-11 (17)			13				
			SPT 3	100	3-5-6 (11)			14	62	11	51	
10		(CL) Lean Clay, Slightly Sandy, Dry, Hard	SH 4	100		4.5		15	36	14	22	64
			SH 5	100		4.5+		13	42	16	26	72
		(CH) Fat Clay, Tan, Dry, Stiff										
20			SH 6	100		3.5		15	55	19	36	
		(CL) Lean Clay, Slightly Sandy, Reddish-Brown, Dry to Moist, Stiff to Hard	SPT 7	100	4-6-10 (16)			13				74
30			SH 8	100		1.0		24				
			SPT 9	100	6-11-15 (26)			20	45	16	29	
40			SPT 10	100	8-12-14 (26)			27	41	18	23	77
		(SM) Sand, Silty, Tan, Wet, Dense to Very Dense	SPT 11	100	11-18-20 (38)			25				31
50			SPT 12	100	15-24-35 (59)			24				
			SPT 13	100	16-23-31 (54)			34				12
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Very Dense										
60			SPT 14	100	15-21-30 (51)			22				8

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-092

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 64.04 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 18.00 ft / Elev 46.04 ft during drilling
LOGGED BY Ram C. **CHECKED BY** R. GIL
AT END OF DRILLING 19.00 ft / Elev 45.04 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 3"										
		(CH) Fat Clay, Slightly Sandy, Brown, Dry to Moist, Hard	SPT 1	100 (100)	3-4-8 (12)			13	53	16	37	76
			SH 2	100 (100)		4.5		14				73
			SH 3	100 (100)		4.5		13	57	14	43	72
10			SH 4	100 (100)		4		15				68
		(CL) Lean Clay, Slightly Sandy, Brown to Tan, Moist, Firm to Stiff										
			SPT 5	100 (100)	2-4-5 (9)			14	47	14	33	67
20			SPT 6	100 (100)	5-7-10 (17)			16				71
		(CH) Fat Clay, Reddish Brown to Brown, Moist, Stiff										
			SPT 7	100 (100)	6-6-12 (18)			17	64	16	48	79
30			SPT 8	100 (100)	5-7-9 (16)			21				88
			SPT 9	100 (100)	7-9-10 (19)			23	66	16	50	93
		(SC) Sand, Clayey, Reddish Brown, Moist, Medium Dense										
40			SPT 10	100 (100)	7-11-12 (23)			15				48
			SPT 11	100 (100)	9-10-14 (24)			19	25	14	11	39
		(SM) Sand, Silty, Brown, Wet, Dense										
50			SPT 12	100 (100)	14-19-20 (39)			24				14
		(SP-SM) Sand, Silty, Poorly Graded, Brown, Wet, Dense										
			SPT 13	100 (100)	17-22-24 (46)			23				11
		(CH) Fat Clay, Reddish Brown, Moist, Hard to Stiff										
60			SPT	100	16-18-16			25	60	22	38	85

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-092

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Reddish Brown, Moist, Hard to Stiff *(continued)*	14	(100)	(34)							
			SPT 15	100 (100)	15-20-17 (37)			21				95
70			SPT 16	100 (100)	18-17-19 (36)			18	64	26	38	99
			SPT 17	100 (100)	13-11-15 (26)			31				73
80			SPT 18	100 (100)	19-17-21 (38)			31	59	20	39	90
		(CL) Lean Clay, Slightly Sandy, Tan, Moist, Stiff to Hard										
			SPT 19	100 (100)	10-13-13 (26)			20				62
90			SPT 20	100 (100)	15-17-18 (35)			20	28	12	16	66
			SPT 21	100 (100)	14-19-20 (39)			16				68
100			SPT 22	100 (100)	18-22-25 (47)			16	27	12	15	70
			SPT 23	100 (100)	16-21-24 (45)			19				70
110			SPT 24	100 (100)	15-18-16 (34)			23	32	15	17	69
			SPT 25	100 (100)	19-23-26 (49)			17	37	17	20	99
120			SPT 26	100 (100)	21-25-28 (53)							

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-093

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/16/09 **COMPLETED** 4/16/09
GROUND ELEVATION 63.98 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 31.50 ft / Elev 32.48 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 18.00 ft / Elev 45.98 ft after 24 hours
NOTES Solid Stem Auger to 32' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche/Gravel Base Material, Roadway, 12"										
		(CH) Fat Clay, Dark Brown to Reddish-Brown, Moist, Soft to Hard	SPT 1	100	3-3-5 (8)			15	60	17	43	
			SPT 2	100	4-5-6 (11)			15				78
			SPT 3	100	7-9-12 (21)			15	57	16	41	
10			SPT 4	100	11-16-19 (35)			17				76
			SPT 5	100	11-14-16 (30)			14	53	15	38	
20			SPT 6	100	6-8-9 (17)			18				73
			SPT 7	100	9-12-16 (28)			17	68	20	48	
30			SPT 8	100	11-15-20 (35)			14	54	18	36	
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
			SPT 9	100	6-9-12 (21)			19				13
40			SPT 10	100	11-14-20 (34)			19				38
		(CL) Lean Clay, Sandy, Tan, Wet, Hard										
			SPT 11	100	12-20-19 (39)			21				54
50			SPT 12	100	10-16-23 (39)			18	32	17	15	
			SPT 13	100	13-17-20 (37)			17	36	19	17	57
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
60			SPT 14	100	11-12-19 (31)			18				40

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-094

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/17/09 **COMPLETED** 4/17/09
GROUND ELEVATION 63.69 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 31.00 ft / Elev 32.69 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 43.69 ft after 24 hours
NOTES Solid Stem Auger to 32' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 9"										
		(CH) Fat Clay, Slightly Sandy, Dark Brown to Reddish Brown, Dry to Moist, Stiff to Hard	SPT 1	100	7-10-12 (22)			16	57	15	42	
			SPT 2	100	8-10-16 (26)			18				68
			SPT 3	100	7-10-15 (25)			14	66	16	50	
10			SPT 4	100	9-11-18 (29)			17				67
			SPT 5	100	9-14-21 (35)			15	50	15	35	
20			SPT 6	100	8-16-18 (34)			17				63
			SPT 7	100	9-14-17 (31)			18	70	25	45	
30			SPT 8	100	10-16-22 (38)			19				66
		(SM) Sand, Silty, Tan, Moist, Medium Dense	SPT 9	100	9-14-12 (26)			15	12	12	NP	33
		(CL) Lean Clay, Slightly Sandy, Tan, Dry, Hard										
40			SPT 10	100	16-20-30 (50)			15				76
			SPT 11	100	18-24-26 (50)			14	41	14	27	
50		(SP-SM) Sand, Silty, Poorly Graded, Tan, Moist, Very Dense	SPT 12	100	32-50-50 (100)			26				11
		(SM) Sand, Silty, Tan, Moist, Very Dense	SPT 13	100	39-50-50 (100)			10				26
60			SPT 14	100	50-50-50 (100)			24				15

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
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BORING NUMBER BH-095

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/18/09 **COMPLETED** 4/18/09
GROUND ELEVATION 64.09 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 24.00 ft / Elev 40.09 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 18.00 ft / Elev 46.09 ft after 24 hours
NOTES Solid Stem Auger to 24' /Hollow Stem to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 6"										
		(CH) Fat Clay, Brown to Reddish Brown, Dry , Stiff	SPT 1	100	11-12-11 (23)			13	66	17	49	
			SPT 2	100	7-9-9 (18)			16				73
			SPT 3	100	6-9-11 (20)			15	71	18	53	
10		(SM) Sand, Silty, Dark Brown, Moist, Very Loose	SPT 4	100	3-2-2 (4)			13				42
		(CL) Lean Clay, Tan, Moist, Hard to Stiff	SPT 5	100	5-19-13 (32)			20	37	14	23	
20			SPT 6	100	6-11-12 (23)			19				62
		(CH) Fat Clay, Tan to Reddish Brown, Moist, Stiff to Hard	SPT 7	100	5-10-11 (21)			19	52	18	34	
30			SPT 8	100	7-11-16 (27)			21				80
			SPT 9	100	16-20-28 (48)			26	91	27	64	
40			SPT 10	100	14-16-23 (39)			25				94
			SPT 11	100	12-19-28 (47)			21	75	23	52	
50			SPT 12	100	14-18-22 (40)			20				63
		(SM) Sand, Silty, Tan, Wet, Very Dense	SPT 13	100	32-43-50 (93)			24				16
60			SPT 14	100	38-50-50 (100)			25				20

Bottom of borehole at 60.0 feet.

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2100 W. Expressway 83
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Telephone: 956-565-0760

BORING NUMBER BH-096

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/17/09 **COMPLETED** 4/17/09
GROUND ELEVATION 63.89 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 19.00 ft / Elev 44.89 ft during drilling
LOGGED BY Erasmo C. **CHECKED BY** R. GIL
AT END OF DRILLING 15.00 ft / Elev 48.89 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0	Caliche Base Material with Gravel, Roadway, 4"										
	(CH) Fat Clay, Dark Brown, Wet to Moist, Firm to Soft	SPT 1	100 (100)	3-5-5 (10)			44				72
		SPT 2	100 (100)	5-5-7 (12)			16	56	15	41	74
		SPT 3	100 (100)	2-2-5 (7)			14				71
10	(ML) Silt, Sandy, Dark Brown, Moist, Loose	SPT 4	100 (100)	2-2-3 (5)			15				61
	(CL) Lean Clay, Light Brown to Tan, Moist, Firm to Stiff	SPT 5	100 (100)	2-4-8 (12)			21				86
20		SPT 6	100 (100)	3-4-6 (10)			28	42	14	28	73
		SPT 7	100 (100)	5-7-11 (18)			15				79
	(CH) Fat Clay, Reddish Brown, Moist, Stiff										
30		SPT 8	100 (100)	7-10-13 (23)			19	53	17	36	75
		SPT 9	100 (100)	6-8-8 (16)			27				86
	(SC) Sand, Clayey, Light Brown, Moist, Medium Dense										
40		SPT 10	100 (100)	7-10-12 (22)			19				41
	(CL) Lean Clay, Light Brown, Moist, Stiff	SPT 11	100 (100)	6-12-14 (26)			23				76
	(SM) Sand, Silty, Brown, Wet, Medium Dense to Dense										
50		SPT 12	100 (100)	6-10-10 (20)			24				48
		SPT 13	100 (100)	12-17-20 (37)			24				47
60		SPT	100	10-17-22			25				26

(Continued Next Page)

L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
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Telephone: 956-565-0760

BORING NUMBER BH-096

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60			14	(100)	(39)							
		(CH) Fat Clay, Light Brown, Wet to Moist, Hard										
			SPT 15	100 (100)	12-16-19 (35)			24	64	24	40	99
70			SPT 16	100 (100)	10-18-20 (38)			21				95
			SPT 17	100 (100)	12-19-21 (40)			24				99
		(CL) Lean Clay, Tan, Moist, Hard										
80			SPT 18	100 (100)	11-13-19 (32)			21	37	14	23	75
			SPT 19	100 (100)	10-15-21 (36)			20				87
		(CH) Fat Clay, Tan, Wet to Moist, Hard										
90			SPT 20	100 (100)	8-14-16 (30)			25	54	20	34	94
			SPT 21	100 (100)	8-13-16 (29)			22				98
100			SPT 22	100 (100)	10-15-21 (36)			21	76	26	50	98
			SPT 23	100 (100)	50-45-39 (84)			19				55
		(SM) Sand, Silty, Light Brown, Moist to Wet, Hard										
110			SPT 24	100 (100)	40-37-38 (75)			19				26
		(CL) Lean Clay, Light Brown, Moist to Wet, Hard										
			SPT 25	100 (100)	30-36-40 (76)			23				68
120			SPT 26	100 (100)	25-30-34 (64)			26	46	19	27	95

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-097

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/18/09 **COMPLETED** 4/18/09
GROUND ELEVATION 63.42 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 29.00 ft / Elev 34.42 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 18.00 ft / Elev 45.42 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		No samples obtained 0 to13.5 feet below top of levee.										
10												
		(CL) Lean Clay, Slightly Sandy, Moist, Soft	SPT 1	100	2-3-4 (7)			18	41	16	25	
		(CH) Fat Clay, Slightly Sandy, Light Tan to Olive, Moist Stiff										
20			SPT 2	100	7-10-16 (26)			18				70
			SPT 3	100	11-13-19 (32)			17	51	17	34	
		(SC) Sand, Clayey, Tan to Reddish Brown, Wet, Medium Dense										
30			SPT 4	100	6-7-8 (15)			18	19	13	6	30
		(CL) Lean Clay, Slightly Sandy, Tan, Moist, Hard										
			SPT 5	100	7-11-15 (26)			21				55
40			SPT 6	100	12-18-23 (41)			23	32	16	16	
			SPT 7	100	10-16-26 (42)			23	35	15	20	83
		(SM) Sand, Silty, Tan, Wet, Very Dense										
50			SPT 8	100	16-22-21 (43)			26				41
			SPT 9	100	46-50-50 (100)			25				40
60			SPT 10	100	46-50-50 (100)			25				46

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-098

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/12/09 **COMPLETED** 4/12/09
GROUND ELEVATION 62.92 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 18.00 ft / Elev 44.92 ft during drilling
LOGGED BY Ram C. **CHECKED BY** R. GIL
AT END OF DRILLING 18.50 ft / Elev 44.42 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 3"										
		No samples obtained 0 to 13 feet below top of levee.										
10												
		(CL) Lean Clay, Dark Brown, Dry, Firm	SH 1	100 (100)		1.5		15	41	14	27	
		(ML) Silt, Sandy, Tan, Wet, Loose										
20			SPT 2	100 (100)	3-2-4 (6)			25				56
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
			SPT 3	100 (100)	4-4-6 (10)			21				45
30			SPT 4	100 (100)	4-7-8 (15)			24				29
			SPT 5	100 (100)	6-6-10 (16)			28				17
		(CL) Lean Clay, Tan, Moist, Stiff										
40			SPT 6	100 (100)	7-10-11 (21)			19	42	17	25	90
			SPT 7	100 (100)	9-13-14 (27)			19	35	16	19	
		(SM) Sand, Silty, Tan, Wet, Very Dense										
50			SPT 8	100 (100)	17-23-26 (49)			23				35
			SPT 9	100 (100)	20-27-32 (59)			24				
		(CH) Fat Clay, Tan, Dry, Hard										
60			SPT 10	100 (100)	11-14-19 (33)			16	65	24	41	

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-099

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/19/09 **COMPLETED** 4/19/09
GROUND ELEVATION 62.99 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 24.00 ft / Elev 38.99 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 19.00 ft / Elev 43.99 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee.										
10												
		(CL) Lean Clay, Sandy, Tan, Moist to Wet, Firm	SPT	100 (100)	3-5-6 (11)			20	33	14	19	
20			SPT 2	100 (100)	3-6-9 (15)			24				51
			SPT 3	100 (100)	5-5-7 (12)			27				60
30		(SM) Sand, Silty, Tan, Wet, Medium Dense	SPT 4	100 (100)	5-6-9 (15)			26				36
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Dense	SPT 5	100 (100)	12-15-18 (33)			22				9
		(CL) Lean Clay, Tan, Moist to Wet, Hard										
40			SPT 6	100 (100)	15-19-20 (39)			17	40	17	23	
			SPT 7	100 (100)	15-20-22 (42)			22				99
50			SPT 8	100 (100)	12-17-20 (37)			25	39	19	20	
			SPT 9	100 (100)	13-19-22 (41)			27				99
60			SPT 10	100 (100)	15-21-23 (44)			27	37	19	18	

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-100

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/18/09 **COMPLETED** 4/18/09
GROUND ELEVATION 62.57 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 20.00 ft / Elev 42.57 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 42.57 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		(CL) Lean Clay, Sandy to Slightly Sandy, Light Brown, Moist, Firm to Stiff	SPT 1	100 (100)	6-7-8 (15)			14				54
			SPT 2	100 (100)	7-7-9 (16)			14				76
			SPT 3	100 (100)	7-9-9 (18)			21	46	20	26	77
10		(SC) Sand , Clayey, Dark Brown, Moist, Medium Dense	SPT 4	100 (100)	3-4-4 (8)			11				31
		(CL) Lean Clay, Sandy, Tan, Moist, Soft	SPT 5	100 (100)	2-2-4 (6)			18	32	14	18	56
		(SM) Sand, Silty, Tan, Wet, Loose to Medium Dense										
20			SPT 6	100 (100)	2-2-6 (8)			22				29
			SPT 7	100 (100)	3-4-7 (11)			25				33
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Medium Dense										
30			SPT 8	100 (100)	10-10-12 (22)			22				3
			SPT 9	100 (100)	11-13-15 (28)			23				9
		(CL) Lean Clay, Slightly Sandy, Tan, Wet, Stiff										
40			SPT 10	100 (100)	10-11-14 (25)			41	37	18	19	84
		(CH) Fat Clay, Tan to Reddish Brown, Wet to Moist, Stiff to Hard										
			SPT 11	100 (100)	10-13-17 (30)				52	16	36	91
50			SPT 12	100 (100)	14-17-20 (37)			23	42	18	24	94
			SPT 13	100 (100)	9-10-15 (25)			24				95
60			SPT	100	12-13-16			27	62	19	43	94

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Geotechnical Engineering

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BORING NUMBER BH-100

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Tan to Reddish Brown, Wet to Moist, Stiff to Hard *(continued)*	14	(100)	(29)							
		(CL) Lean Clay, Tan, Moist, Hard	SPT 15	100 (100)	13-15-19 (34)			22	38	19	19	86
		(CH) Fat Clay, Tan, Moist, Stiff										
70			SPT 16	100 (100)	7-10-20 (30)			25	60	19	41	93
		(CL) Lean Clay, Slightly Sandy, Reddish Brown to Tan, Moist, Hard										
			SPT 17	100 (100)	9-12-22 (34)			21				93
80			SPT 18	100 (100)	11-15-19 (34)			20	46	15	31	93
			SPT 19	100 (100)	13-17-21 (38)			20				72
90			SPT 20	100 (100)	15-20-23 (43)			17	36	14	22	75
		(CH) Fat Clay, Sandy, Tan, Moist, Hard	SPT 21	100 (100)	16-20-23 (43)			19	55	14	41	66
		(CL) Lean Clay, Slightly Sandy, Tan, Moist, Hard										
100			SPT 22	100 (100)	21-22-25 (47)			18	46	15	31	72
		(SC) Sand, Clayey, Tan, Wet, Very Dense										
			SPT 23	100 (100)	40-47-50 (97)			24				28
110			SPT 24	100 (100)	45-49-50 (99)			22				27
			SPT 25	100 (100)	49-47-50 (97)			26				32
120			SPT 26	100 (100)	35-40-46 (86)			24				22

Bottom of borehole at 120.0 feet.

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L&G Engineering Laboratory
Construction Material Testing
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BORING NUMBER BH-101

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/20/09 **COMPLETED** 4/20/09
GROUND ELEVATION 62.55 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 22.00 ft / Elev 40.55 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 26.00 ft / Elev 36.55 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee										
10												
		(CL) Lean Clay, Dark Brown to Brown, Moist, Firm to Stiff	SPT 1	100	3-5-7 (12)			14	45	16	29	
20			SPT 2	100	7-8-10 (18)			13				72
		(SC) Sand, Clayey, Tan, Moist, Medium Dense to Dense	SPT 3	100	5-7-9 (16)			19	25	15	10	43
30			SPT 4	100	12-20-21 (41)			18				12
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Moist, Dense	SPT 5	100	15-19-21 (40)			17				10
		(CL) Lean Clay, Brown, Moist, Hard										
40			SPT 6	100	20-23-30 (53)			18	34	15	19	
			SPT 7	100	21-23-23 (46)			20				90
		(CH) Fat Clay, Red Brown, Moist, Hard										
50			SPT 8	100	17-20-22 (42)			19	54	19	35	
			SPT 9	100	19-22-23 (45)			20				100
60			SPT 10	100	21-24-25 (49)			18	51	16	35	

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-102

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/14/09 **COMPLETED** 4/14/09
GROUND ELEVATION 62.39 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 0.00 ft / Elev 62.39 ft no water observed
LOGGED BY Erasmo C. **CHECKED BY** R. GIL
AT END OF DRILLING 16.00 ft / Elev 46.39 ft after 24 hours
NOTES Solid Stem Auger to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13 feet below top of levee.										
10												
		(CH) Fat Clay, Slightly Sandy, Dark Brown to Reddish Brown, Dry to Moist, Firm to Soft	SH 1	100		2.5		12				65
20			SH 2	100		1.0		20	53	22	31	78
		(CL) Lean Clay, Reddish-Brown, Moist, Firm to Stiff										
			SPT 3	100	4-4-6 (10)			16	45	21	24	65
30			SPT 4	100	5-8-8 (16)			17				80
			SH 5	100		1.0		24	36	14	22	
40			SPT 6	100	8-12-12 (24)			19	42	19	23	94
			SPT 7	100	13-11-18 (29)			22	30	13	17	
		(CL-ML) Sandy Silty Clay, Tan, Moist, Medium Dense										
50			SPT 8	100	14-11-15 (26)			12				96
			SH 9	100		2.5		43	28	23	5	99
		(CL) Lean Clay, Silty, Tan, Moist, Medium Dense										
60			SPT 10	100	12-11-13 (24)			24				98
		Bottom of borehole at 60.0 feet.										

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BORING NUMBER BH-104

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/21/09 **COMPLETED** 4/21/09
GROUND ELEVATION 62.2 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.00 ft / Elev 35.20 ft during drilling
LOGGED BY Rene Gonzales **CHECKED BY** R. GIL
AT END OF DRILLING 23.00 ft / Elev 39.20 ft after 24 hours
NOTES Solid Stem Auger to 29' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Slightly Sandy, Light Brown to Dark Brown, Moist, Firm to Stiff	SPT 1	100 (100)	7-6-7 (13)			2	66	15	51	70
			SPT 2	100 (100)	4-6-8 (14)			6				77
			SPT 3	100 (100)	6-9-8 (17)			7	60	15	45	51
10			SPT 4	100 (100)	4-5-6 (11)			3				78
			SPT 5	100 (100)	4-6-7 (13)			8	59	18	41	79
20			SPT 6	100 (100)	6-8-10 (18)			7				80
			SPT 7	100 (100)	4-6-7 (13)			6	52	24	28	74
30			SPT 8	100 (100)	5-7-9 (16)			5	61	20	41	79
		(CL) Lean Clay, Sandy, Tan, Dry, Soft to Stiff	SPT 9	100 (100)	3-2-5 (7)			4	29	10	19	52
40			SPT 10	100 (100)	6-9-10 (19)			6				60
		(CH) Fat Clay, Light Brown to Reddish-Brown to Tan, Stiff to Hard, Moist to Dry	SPT 11	100 (100)	7-10-11 (21)			10	50	21	29	100
50			SPT 12	100 (100)	7-9-13 (22)			18				99
			SPT 13	100 (100)	9-11-15 (26)			13	66	22	44	98
60			SPT	100	7-10-14			11	60	21	39	99

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-104

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Light Brown to Reddish-Brown to Tan, Stiff to Hard, Moist to Dry *(continued)*	14	(100)	(24)							
			SPT 15	100 (100)	6-10-14 (24)			11	76	27	49	99
70			SPT 16	100 (100)	13-16-22 (38)			10				100
			SPT 17	100 (100)	8-14-17 (31)			9	57	22	35	84
80			SPT 18	100 (100)	11-15-18 (33)			10				91
			SPT 19	100 (100)	9-17-14 (31)			11	60	19	41	81
90			SPT 20	100 (100)	8-16-15 (31)			8				79
			SPT 21	100 (100)	11-16-19 (35)			11	69	21	48	95
100			SPT 22	100 (100)	13-18-26 (44)			6				83
		(SM) Sand, Silty, Light Brown, Moist, Very Dense	SPT 23	100 (100)	11-20-50 (70)			12				39
110			SPT 24	100 (100)	39-40-50 (90)			11				29
			SPT 25	100 (100)	30-44-50 (94)			14				17
120			SPT 26	100 (100)	42-50-50 (100)			11				23

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-105

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/20/09 **COMPLETED** 4/20/09
GROUND ELEVATION 62.45 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 22.00 ft / Elev 40.45 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 23.00 ft / Elev 39.45 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee										
10												
		(CH) Fat Clay, Sandy, Dark Brown to Tan, Dry, Soft to Hard	SPT 1	100 (100)	5-7-1 (8)			17	50	22	28	
20			SPT 2	100 (100)	7-10-12 (22)			16				54
			SPT 3	100 (100)	9-11-13 (24)			13	54	16	38	
30			SPT 4	100 (100)	7-9-10 (19)			17				77
			SPT 5	100 (100)	9-11-11 (22)			14	52	15	37	
40			SPT 6	100 (100)	11-15-22 (37)			15				86
		(CL) Lean Clay, Tan, Dry, Stiff	SPT 7	100 (100)	9-10-13 (23)			15	37	13	24	
50			SPT 8	100 (100)	11-13-15 (28)			14				89
			SPT 9	100 (100)	12-14-15 (29)			16	36	15	21	
60			SPT 10	100 (100)	13-15-7 (22)			17				94

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-106

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 62.19 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR Jordan Drilling, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 32.00 ft / Elev 30.19 ft
LOGGED BY B. Wylie **CHECKED BY** R. GIL
AT END OF DRILLING 23.00 ft / Elev 39.19 ft after 24 hours
NOTES Solid Stem Auger to 32' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee.										
10												
		(CL) Lean Clay, Dark Brown, Moist, Stiff	SPT 1	100	13-8-10 (18)			18	40	16	24	
		(CH) Fat Clay, Slightly Sandy, Tan, Moist, Firm										
20			SPT 2	100	7-7-7 (14)			17				73
			SPT 3	133				22	56	22	34	
30			SPT 4	100	5-7-7 (14)			18				66
		(CL) Lean Clay, Silty, Tan, Moist, Soft	SPT 5	100	3-4-3 (7)			15	23	11	12	
		(CH) Fat Clay, Tan, Dry to Wet, Stiff to Hard										
40			SPT 6	100	9-8-11 (19)			13				93
		(SC) Sand, Clayey, Tan, Moist, Dense	SPT 7	100	11-10-21 (31)			21	53	24	29	49
		(ML) Silt, Sandy, Tan, Wet, Very Dense										
50			SPT 8	100	37-38-49 (87)			20				54
		(SM) Sand, Silty, Tan, Wet, Dense to Very Dense	SPT 9	100	21-18-19 (37)			18				18
60			SPT 10	100	32-41-50 (91)			20				22

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-107

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/21/09 **COMPLETED** 4/21/09
GROUND ELEVATION 61.91 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 25.00 ft / Elev 36.91 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 25.00 ft / Elev 36.91 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee										
10												
		(CH) Fat Clay, Dark Brown to Tan, Dry, Stiff to Hard	SPT 1	100 (100)	6-12-14 (26)			14				55
20			SPT 2	100 (100)	9-15-22 (37)			16	50	16	34	
		(CL) Lean Clay, Sandy, Tan, Dry to Moist, Stiff										
			SPT 3	100 (100)	11-12-15 (27)			16				66
30			SPT 4	100 (100)	13-15-17 (32)			17	43	14	29	
			SPT 5	100 (100)	14-17-19 (36)			17				67
40			SPT 6	100 (100)	13-16-17 (33)			17	35	13	22	
			SPT 7	100 (100)	5-5-8 (13)			15				65
50			SPT 8	100 (100)	7-9-11 (20)			19	31	13	18	
			SPT 9	100 (100)	9-11-14 (25)			19				73
60			SPT 10	100 (100)	11-15-15 (30)			19	35	16	19	

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-109

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/12/09 **COMPLETED** 4/12/09
GROUND ELEVATION 62.35 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.00 ft / Elev 35.35 ft during drilling
LOGGED BY Ram C. **CHECKED BY** R. GIL
AT END OF DRILLING 25.50 ft / Elev 36.85 ft after 24 hours
NOTES Solid Stem Auger to 35' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee.										
10												
		(CL) Lean Clay, Sandy, Brown, Dry, Firm	SPT 1	100 (100)	4-6-9 (15)			15	40	16	24	73
20			SH 2	100 (100)		2.5		15				
			SH 3	100 (100)		3.5		15	40	15	25	
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
30			SPT 4	100 (100)	6-8-7 (15)			24				13
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Medium Dense	SPT 5	100 (100)	9-11-14 (25)			26				10
		(CL) Lean Clay, Tan, Moist, Stiff										
40			SPT 6	100 (100)	9-10-13 (23)			17	47	19	28	
			SPT 7	100 (100)	10-12-15 (27)			19	47	17	30	90
50			SPT 8	100 (100)	11-17-21 (38)			20	46	16	30	
		(SM) Sand, Silty, Tan, Wet, Dense										
			SPT 9	100 (100)	13-19-24 (43)			27				38
60			SPT 10	100 (100)	17-16-18 (34)			29				93

Bottom of borehole at 60.0 feet.

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-112

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 62.18 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 27.00 ft / Elev 35.18 ft during drilling
LOGGED BY Erasmo C. **CHECKED BY** R. GIL
AT END OF DRILLING --- no water observed after 24 hours
NOTES Solid Stem Auger to 27' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material with Gravel, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee.										
10												
		(CL) Lean Clay, Sandy to Slightly Sandy, Dark Brown to Tan, Moist, Stiff	SH 1	100		4		16	39	14	25	68
20			SH 2	100		4		13	37	15	22	75
			SPT 3	100	3-11-11 (22)			21	27	14	13	55
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
30			SPT 4	100	9-10-11 (21)			21				14
		(SP-SM) Sand, Silty, poorly Graded, Tan, Wet, Medium Dense										
			SPT 5	100	12-12-13 (25)			25				9
40			SPT 6	100	13-15-11 (26)			21				7
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
			SPT 7	100	10-12-14 (26)			25				22
		(CL) Lean Clay, Brown, Moist, Firm										
50			SH 8	100		2		20	33	15	18	88
		(SC) Sand, Clayey, Brown, Moist, Medium Dense										
			SPT 9	100	13-16-11 (27)			21				49
		(CH) Fat Clay, Tan to Reddish Brown, Moist, Stiff										
60			SPT	100	12-12-13			22				85

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BORING NUMBER BH-112

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Tan to Reddish Brown, Moist, Stiff *(continued)*	10		(25)							
			SH 11	100		4.5		22	81	27	54	100
70			SH 12	100		2.5		18				92
		(ML) Silt, Slightly Sandy, Tan, Moist, Medium Dense										
			SPT 13	100	6-12-14 (26)			25				72
80			SPT 14	100	7-11-14 (25)			17	12	15	NP	72
			SH 15	100		3.5		15				79
		(CH) Fat Clay, Reddish Brown, Moist, Hard										
90			SH 16	100		4.5		18	57	18	39	97
			SH 17	100		4.5		18				94
		(CL) Lean Clay, Tan, Moist, Hard										
100			SH 18	100		4.5		17	47	16	31	88
			SH 19	100		4.5		17	44	20	24	87
		(CH) Fat Clay, Tan, Moist, Hard										
110			SH 20	100		4.5		17	54	18	36	93
			SH 21	100		4.5		18				98
120			SH 22	100		4.5		21	54	22	32	99

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-113

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 61.99 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 21.00 ft / Elev 40.99 ft during drilling
LOGGED BY B. Wylie **CHECKED BY** R. GIL
AT END OF DRILLING 22.00 ft / Elev 39.99 ft after 24 hours
NOTES Solid Stem Auger to 22' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 5"										
		No samples obtained 0 to 13.5 feet below top of levee.										
10												
		(CL) Lean Clay, Brown, Moist to Dry, Stiff to Hard	SPT 1	100	8-9-7 (16)			17	31	17	14	63
20			SPT 2	100	9-14-21 (35)			14	45	17	28	
		(ML) Silt, Sandy, Tan, Wet, Medium Dense	SPT 3	100	9-12-11 (23)			22				64
30		(SM) Sand, Silty, Tan, Wet, Medium Dense to Very Dense	SPT 4	100	7-12-15 (27)			21				31
			SPT 5	100	5-14-9 (23)			21				20
40			SPT 6	100	6-5-14 (19)			20				
			SPT 7	100	7-9-15 (24)			23				31
50			SPT 8	100	8-7-11 (18)			23				16
			SPT 9	100	21-18-19 (37)			22				18
60			SPT 10	100	33-28-29 (57)			21				31

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-117

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/13/09 **COMPLETED** 4/13/09
GROUND ELEVATION 61.4 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR L&G Engineering Laboratory
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 21.50 ft / Elev 39.90 ft during drilling
LOGGED BY Erasmo C. **CHECKED BY** R. GIL
AT END OF DRILLING 20.00 ft / Elev 41.40 ft after 24 hours
NOTES Solid Stem Auger to 22' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13 feet below top of levee.										
10												
		(CL) Lean Clay, Sandy, Dark Brown, Moist, Firm	SH 1	100		1.5		18	43	16	27	60
20		(CH) Fat Clay, Sandy, Brown, Moist, Soft	SPT 2	100	2-3-4 (7)			18	55	20	35	
		(SC) Sand, Clayey, Tan, Moist, Very Loose	SPT 3	100	1-1-1 (2)			22				48
30		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Medium Dense	SPT 4	100	7-8-10 (18)			18				8
			SPT 5	100	11-10-11 (21)			18				7
40			SPT 6	100	8-14-22 (36)			25				11
		(SM) Sand, Silty, Tan, Wet, Very Dense	SPT 7	100	19-25-36 (61)			20				33
		(CL) Lean Clay, Slightly Sandy, Light Brown, Dry, Very Soft	SH 8	100		0		14				72
50		(CH) Fat Clay, Reddish-Brown, Moist, Hard	SH 9	100		4.5		15	53	19	34	
60			SH 10	100		4.5		17				96

Bottom of borehole at 60.0 feet.

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BORING NUMBER BH-120

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/15/09 **COMPLETED** 4/15/09
GROUND ELEVATION 61.42 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 23.00 ft / Elev 38.42 ft during drilling
LOGGED BY Roland **CHECKED BY** R. Gil
AT END OF DRILLING 20.00 ft / Elev 41.42 ft after 24 hours
NOTES Solid Stem Auger to 25' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		(CH) Fat Clay, Sandy, Brown, Dry, Stiff to Firm	SPT 1	100 (100)	7-8-12 (20)			11	52	13	39	53
			SPT 2	100 (100)	5-7-6 (13)			12				61
		(CL) Lean Clay, Sandy, Brown to Dark Brown, Moist, Soft to Firm	SPT 3	100 (100)	2-3-4 (7)			12				58
10			SPT 4	100 (100)	3-4-4 (8)			14	29	14	15	61
			SPT 5	100 (100)	3-5-7 (12)			17	37	14	23	50
20			SPT 6	100 (100)	4-6-8 (14)			18				59
			SPT 7	100 (100)	2-3-5 (8)			19				51
		(SC) Sand, Clayey, Tan, Moist, Medium Dense										
30			SPT 8	100 (100)	3-5-7 (12)			19				44
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Dense	SPT 9	100 (100)	1-17-24 (41)			22				7
		(SM) Sand, Silty, Tan, Wet, Medium Dense										
40			SPT 10	100 (100)	6-9-20 (29)			38				29
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Wet, Medium Dense	SPT 11	100 (100)	9-17-28 (45)			26				5
		(SM) Sand, Silty, Tan, Wet, Very Dense										
50			SPT 12	100 (100)	12-26-32 (58)			46				29
		(CH) Fat Clay, Reddish Brown, Moist, Very Dense to Firm	SH 13	100 (100)		4.25		30	61	22	39	94
60			SH 14	100 (100)		4.5		22				97

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L&G Engineering Laboratory
Construction Material Testing
Geotechnical Engineering

L&G Engineering Laboratory LLC
2100 W. Expressway 83
Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-120

CLIENT S&B Infrastructure **PROJECT NAME** North Floodway Inp. Project - East & West Segments

PROJECT NUMBER NFW2 **PROJECT LOCATION** Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Reddish Brown, Moist, Very Dense to Firm *(continued)*										
			SH 15	100 (100)		2		34	56	20	36	93
70			SH 16	100 (100)		4.5		22	55	24	31	96
		(SM) Sand, Silty, Tan, Moist, Very Dense	SPT 17	100 (100)	13-26-40 (66)			21				40
		(CL) Lean Clay, Brown, Moist, Soft to Hard										
80			SH 18	100 (100)		1.5		28	35	18	17	89
			SPT 19	100 (100)	7-10-17 (27)			18	35	15	20	85
90			SPT 20	100 (100)	11-14-21 (35)			17	43	15	28	88
		(SC) Sand, Clayey, Tan, Dry, Dense	SPT 21	100 (100)	13-19-20 (39)			10	43	18	25	22
100		(CL) Lean Clay, Sandy, Reddish Brown to Brown, Moist, Stiff to Hard	SPT 22	100 (100)		4.5		16				90
			SPT 23	100 (100)		3		18	31	16	15	88
110			SPT 24	100 (100)		4.5		17	31	16	15	86
			SPT 25	100 (100)	9-16-26 (42)			19				67
120			SPT 26	100 (100)	11-21-29 (50)			19				56

Bottom of borehole at 120.0 feet.

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L&G Engineering Laboratory
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Geotechnical Engineering

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BORING NUMBER BH-124

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/15/09 **COMPLETED** 4/15/09
GROUND ELEVATION 61.16 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 28.00 ft / Elev 33.16 ft during drilling
LOGGED BY Roland **CHECKED BY** R. GIL
AT END OF DRILLING 21.00 ft / Elev 40.16 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 120'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Materials, Roadway, 4"										
		No samples obtained 0 to 13.5' feet below top of levee elevation.										
10												
		(SC) Sand, Clayey, Dark Brown, Dry, Medium Dense	SPT 1	100 (100)	3-6-7 (13)			11	37	14	23	46
		(CL) Lean Clay, Slightly Sandy, Dark Brown to Reddish-Brown, Dry, Stiff										
20			SPT 2	100 (100)	6-8-10 (18)			11				57
			SPT 3	100 (100)	9-6-11 (17)			8	45	15	30	73
		(SM) Sand, Silty, Tan, Wet to Moist, Medium Dense to Dense										
30			SPT 4	100 (100)	10-17-20 (37)			20				15
			SPT 5	100 (100)	10-13-16 (29)			14				19
40			SPT 6	100 (100)	12-17-20 (37)			18				30
			SPT 7	100 (100)	16-21-26 (47)			19				18
		(CL) Lean Clay, Slightly Sandy, Dry, Firm										
50			SPT 8	100 (100)	19-26-29 (55)			9	42	16	26	69
		(SM) Sand, Silty, Light Brown, Moist, Very Dense										
			SPT 9	100 (100)	17-24-29 (53)			14				25
		(CH) Fat Clay, Tan to Reddish-Brown, Dry, Hard										
60			SPT	100	11-27-44			10	74	18	56	99

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Mercedes TX 78570
Telephone: 956-565-0760

BORING NUMBER BH-124

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
60		(CH) Fat Clay, Tan to Reddish-Brown, Dry, Hard *(continued)*	10	(100)	(71)							
			SPT 11	100 (100)	9-17-24 (41)			10	57	22	35	97
70			SH 12	100 (100)		4.5		11				90
			SH 13	100 (100)		4.5		6	58	22	36	99
		(ML) Silt, Sandy, Tan, Moist, Medium Dense										
80			SH 14	100 (100)		3		11	12	12	NP	87
			SH 15	100 (100)		3.25		9	12	12	NP	99
		(CH) Fat Clay, Slightly Sandy, Light Brown, Dry, Hard										
90			SH 16	100 (100)		4.5		8	52	19	33	77
			SH 17	100 (100)		4.5		12	51	21	30	81
		(SP-SM) Sand, Silty, Poorly Graded, Tan, Moist, Medium Dense										
100			SPT 18	100 (100)	9-22-39 (61)			19				10
		(SM) Sand, Silty, Light Brown, Moist, Very Dense										
			SPT 19	100 (100)	13-27-44 (71)			19				27
110			SPT 20	100 (100)	19-50-50 (100)			19				27
			SPT 21	100 (100)	13-34-50 (84)			17				17
		(CL) Lean Clay, Sandy, Tan, Moist, Hard										
120			SPT 22	100 (100)	17-38-48 (86)			12				54

Bottom of borehole at 120.0 feet.

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BORING NUMBER BH-127

CLIENT S&B Infrastructure
PROJECT NAME North Floodway Inp. Project - East & West Segments
PROJECT NUMBER NFW2
PROJECT LOCATION Hidalgo County Texas
DATE STARTED 4/22/09 **COMPLETED** 4/22/09
GROUND ELEVATION 60.34 ft **HOLE SIZE** 4 inches
DRILLING CONTRACTOR JEDI, Inc.
GROUND WATER LEVELS:
DRILLING METHOD Solid Stem Auger / Mud Rotary
AT TIME OF DRILLING 25.00 ft / Elev 35.34 ft during drilling
LOGGED BY E. Leal **CHECKED BY** R. GIL
AT END OF DRILLING 27.00 ft / Elev 33.34 ft after 24 hours
NOTES Solid Stem Auger to 30' / Mud Rotary to 60'
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS: LIQUID LIMIT	ATTERBERG LIMITS: PLASTIC LIMIT	ATTERBERG LIMITS: PLASTICITY INDEX	FINES CONTENT (%)
0		Caliche Base Material, Roadway, 4"										
		No samples obtained 0 to 13.5 feet below top of levee										
10												
		(CL) Lean Clay, Dark Brown to Tan, Moist, Firm to Soft	SPT 1	100 (100)	5-6-6 (12)			18	45	14	31	
20			SPT 2	100 (100)	7-7-10 (17)			16				60
			SPT 3	100 (100)	4-5-7 (12)			19	29	15	14	
		(SC) Sand, Clayey, Tan, Wet, Medium Dense										
30			SPT 4	100 (100)	5-5-8 (13)			21				45
		(SM) Sand, Silty, Light Brown, Wet, Medium Dense to Dense										
			SPT 5	100 (100)	12-14-16 (30)			22				20
40			SPT 6	100 (100)	12-15-15 (30)			23				14
			SPT 7	100 (100)	19-21-25 (46)			28				13
		(SP-SM) Sand, Silty, Poorly Graded, Wet, Medium Dense										
50			SPT 8	100 (100)	15-19-21 (40)			24				10
		(CH) Fat Clay, Reddish-Brown, Moist, Hard										
			SPT 9	100 (100)	17-20-22 (42)			19	58	19	39	
60			SPT 10	100 (100)	19-23-24 (47)			19				89

Bottom of borehole at 60.0 feet.

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