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Project File: P:\2014\GEOTECHNICAL\APS1406-G040 HWY 318 AND HWY 90\APS 1406 G040 HWY 318 AND HWY 90 14 OCTOBER.GPJ

Report Form: LADOTD - ENGLISH

BORING NO. BR-4

DRILL RIG AND EQUIPMENT: DRILL RIG MODEL: SIMCO 2800; DRILLING METHOD: WET METHOD; HOLE DIAMETER: 31/8"; SPT HAMMER / ETR: AUTO

ELEVATION: 11.5

Depth (Feet)	Soil Type and Color	Wet Density	Moisture Content	Liquid Limit	Plasticity Index	% Passing #200	SPT or UU	Failure Mode/ SPT Termination	Sample Type Number	Elevation
0	Stiff, gray, FAT CLAY, (CH)	124	21	53	33		1.98@0.80	S/S	C1	
		119	34	76	53		1.44@1.60	S/S	C2	
			34		--				C3	
	Soft, gray, LEAN CLAY, (CL)	119	34	43	20		0.49@3.20	M.S.	C4	
10	-medium stiff	122	31	42	20		0.61@4.00	S/S	C5	1.5
		127	32	37	12		0.77@4.80	M.S.	C6	
	Soft, gray, SILT, (ML) with clay,	125	33	37	11		0.45@5.60	M.S.	C7	
	-very soft	115	35	34	9		0.12@6.40	M.S.	C8	
		120	35	33	9				C9	
20			37		--				C10	-8.5
	Medium stiff, gray, LEAN CLAY, (CL)	124	28	42	21		0.73@10.00	M.S.	C11	
30			27	42	23				C12	-18.5
	Very stiff, gray, FAT CLAY, (CH)	136	18	50	35		3.25@14.00	S/S	C13	
40			23	61	43				C14	-28.5
	-stiff	118	31	70	42		1.22@18.00	S/S	C15	
50			28		--				C16	-38.5
	-stiff	112	42	83	51		1.54@22.00	S/S	C17	
60			31		--				C18	-48.5
	-stiff	122	37	70	44		1.81@26.00	S/S	C19	
70			24		--				C20	-58.5
	-very stiff	125	23	64	43		2.99@30.00	M.S.	C21	
80			28		--				C22	-68.5
	Stiff, gray, LEAN CLAY, (CL)	123	26	46	26		1.74@34.00	M.S.	C23	
90			31		--	98.0			C24	-78.5
	Very stiff, gray, FAT CLAY, (CH)	114	35	89	61		2.26@38.00	S/S	C25	
100	Gray, LEAN CLAY, (CL)		33	48	28				C26	-88.5
	Stiff, gray, SILT, (ML) with clay	119	31	32	7		1.17@42.00	M.S.	C27	
110	Stiff, gray, LEAN CLAY, (CL)		26		--	84.5			C28	-98.5
	-with sand		28		--	70.3			C29	
120	Medium dense, gray, CLAYEY SAND, (SC)		21		--	50.4	10-11-11 (22)	4	D30	-108.5

Bottom of hole at 120 feet
Backfilled with grout upon completion.

BORING NO. BR-4 | STA.: | WATER LEVEL: N/A DUE TO WET DRILLING METHOD
LATITUDE: 29.86585 | OFFSET: | BACKFILL METHOD: GROUT
LONGITUDE: -91.63220 | DATE TAKEN: 7/2/2014 | SQD. LDR.: VG
LRS ID: | STR. NO.:

BORING NO. BR-5

DRILL RIG AND EQUIPMENT: DRILL RIG MODEL: SIMCO 2800; DRILLING METHOD: WET METHOD; HOLE DIAMETER: 31/8"; SPT HAMMER / ETR: AUTO

ELEVATION: 11.1

Depth (Feet)	Soil Type and Color	Wet Density	Moisture Content	Liquid Limit	Plasticity Index	% Passing #200	SPT or UU	Failure Mode/ SPT Termination	Sample Type Number	Elevation
0	Stiff, gray, FAT CLAY, (CH)	121	20	50	28		1.03@0.80	M.S.	C1	
			20		--				C2	
	-medium stiff	116	31	62	39		0.63@2.40	M.S.	C3	
	Medium stiff, gray, LEAN CLAY, (CL)	121	30	39	17		0.72@3.20	M.S.	C4	
10	Soft, gray, SILT, (ML) with clay,		32	37	12				C5	1.1
	-very soft	135	31	33	9		0.20@4.80	M.S.	C6	
	-soft	126	34	35	10		0.32@5.60	M.S.	C7	
		121	35	35	10		0.31@6.40	M.S.	C8	
		124	33	33	5		0.26@7.20	M.S.	C9	
20			33		--				C10	-8.9
	Medium stiff, gray, LEAN CLAY, (CL)	124	28	38	18		0.50@10.00	M.S.	C11	
30			22	43	26				C12	-18.9
	Very stiff, gray, FAT CLAY, (CH)	130	19	50	31		3.25@14.00	M.S.	C13	
40			21		--				C14	-28.9
	-stiff	117	29	76	45		1.28@18.00	S/S	C15	
50			29		--				C16	-38.9
		114	34	81	50		1.65@22.00	S/S	C17	
60			27		--				C18	-48.9
		114	33	73	39		1.37@26.00	S/S	C19	
70			23		--				C20	-58.9
	-medium stiff	130	27	54	36		0.93@30.00	S/S	C21	
80			26		--				C22	-68.9
		119	28	58	39		0.68@34.00	M.S.	C23	
90			28		--				C24	-78.9
	Medium stiff, gray, LEAN CLAY, (CL)	123	27	35	15	85.2	0.85@38.00	M.S.	C25	
100	Soft, gray, SILT, (ML) with clay		28	28	3				C26	-88.9
			27		--				C27	
110	Stiff, gray, LEAN CLAY, (CL)	99	31		--	86.4	1.38@44.00	M.S.	C28	-98.9
	Very loose, gray, CLAYEY SAND, (SC)	112	24		--	45.3	0.25@46.00	M.S.	C29	
120			26		--				C30	-108.9

Bottom of hole at 120 feet
Backfilled with grout upon completion.

BORING NO. BR-5 | STA.: | WATER LEVEL: N/A DUE TO WET DRILLING METHOD
LATITUDE: 29.86613 | OFFSET: | BACKFILL METHOD: GROUT
LONGITUDE: -91.63276 | DATE TAKEN: 7/1/2014 | SQD. LDR.: VG
LRS ID: | STR. NO.:

BORING NO. BR-6

DRILL RIG AND EQUIPMENT: DRILL RIG MODEL: SIMCO 2800; DRILLING METHOD: WET METHOD; HOLE DIAMETER: 31/8"; SPT HAMMER / ETR: AUTO

ELEVATION: 11.7

Depth (Feet)	Soil Type and Color	Wet Density	Moisture Content	Liquid Limit	Plasticity Index	% Passing #200	SPT or UU	Failure Mode/ SPT Termination	Sample Type Number	Elevation
0	Stiff, gray, LEAN CLAY, (CL)		18		--				C1	
		121	29	46	24		1.64@1.60	M.S.	C2	
			28		--				C3	
	-soft	114	30	49	29		0.38@3.20	M.S.	C4	
10		119	30	48	24		0.38@4.00	M.S.	C5	1.7
	Medium stiff, gray, SILT, (ML) with clay,	119	31	34	8		0.58@4.80	M.S.	C6	
	-very soft	118	34	39	13		0.22@5.60	M.S.	C7	
	-soft	113	42	35	10		0.30@6.40	M.S.	C8	
	-medium stiff	114	37	33	8		0.55@7.20	M.S.	C9	
20	-soft	113	37	44	13		0.49@8.00	M.S.	C10	-8.3
	Medium stiff, gray, LEAN CLAY, (CL)		26	42	26				C11	
30	-very stiff	128	22	43	22		2.23@12.00	M.S.	C12	-18.3
	Very stiff, gray, FAT CLAY, (CH)		24	55	29				C13	
40	-stiff	124	26	62	37		2.78@16.00	S/S	C14	-28.3
		114	36		--		1.11@18.00	S/S	C15	
50	-medium stiff	116	33	94	67		0.66@20.00	S/S	C16	-38.3
			29		--				C17	
60	-very stiff	122	26	55	38		2.63@24.00	S/S	C18	-48.3
			37		--				C19	
70	-stiff	118	37	84	60		1.83@28.00	S/S	C20	-58.3
	Hard, gray, LEAN CLAY, (CL)	128	24	48	29		4.14@30.00	M.S.	C21	
80	-very stiff	123	25	43	26		2.30@32.00	M.S.	C22	-68.3
		123	26	39	20		2.64@34.00	M.S.	C23	
90	-stiff	123	28	39	19		1.99@36.00	M.S.	C24	-78.3
	Stiff, gray, FAT CLAY, (CH)		33	56	35				C25	
100	-very stiff	117	33	72	49		3.16@40.00	M.S.	C26	-88.3
	Very stiff, gray, SANDY LEAN CLAY, (CL)	144	27		--	65.5	2.70@42.00	M.S.	C27	
110	-with sand	127	28	34	15	81.2	2.08@44.00	M.S.	C28	-98.3
	Stiff, gray, FAT CLAY, (CH)		34	61	35	99.9			C29	
120	Stiff, gray, LEAN CLAY, (CL)	118	26	36	18		1.13@48.00	M.S.	C30	-108.3

Bottom of hole at 120 feet
Backfilled with grout upon completion.

BORING NO. BR-6 | STA.: | WATER LEVEL: N/A DUE TO WET DRILLING METHOD
LATITUDE: 29.86640 | OFFSET: | BACKFILL METHOD: GROUT
LONGITUDE: -91.63332 | DATE TAKEN: 6/29/2014 | SQD. LDR.: VG
LRS ID: | STR. NO.:

STANDARD ABBREVIATIONS & DEFINITIONS

CH, CL, ML, SC

N.P. = Non-Plastic
ORG. = Organic

FAILURE MODE:
M.S. = Multiple Shear SL. = Slump
S/S = Slickensides YLD. = Yield
V.S. = Vertical Shear 60 S. = Shear Angle

SPT TERMINATION, AASHTO T 206
1 = 7.2.1 – 50 Blows Within A 6" Interval
2 = 7.2.2 – 100 Blows Total
3 = 7.2.3 – No Advancement for 10 Blows
4 = 7.2.4 – Sampler Driven the Entire 18"
5 = Non-standard

SOIL PROPERTIES

⊗ = SOIL TYPE nomenclature is based on ASTM D 2487
WET DENSITY = Wet density of in-place soil, (pounds per cu. ft.) determined by AASHTO T 208.
MOISTURE CONTENT = Moisture Content of in-place soil, expressed as a percentage of the dry weight of the soil, (%), determined by DOTD TR 403, Method B.
LIQUID LIMIT & PLASTICITY INDEX = Atterberg limits and indices, DOTD TR 428
SPT = Standard Penetration Test, AASHTO T 206, number of blows per each 6 inch increment, unless amount of penetration is shown
UU = Unconsolidated Undrained triaxial test, AASHTO T 296, compressive strength (tons per sq. ft.), of one specimen confined at noted pressure (pounds per sq. in.)
C = Soil cohesion (tons per sq. ft.)
◦ = Soil angle of internal friction (degrees)
△ = Unconsolidated Undrained triaxial test, AASHTO T 296, three specimens, (c – ◦).
+ = Consolidated drained direct shear test, AASHTO T 236, (c – ◦).
* = Hydrometer test performed

MISCELLANEOUS:

c-3 = Location and Identification of thin-walled tube sample, AASHTO T 207
t-3 = Location and Identification of thin-walled tube sample, AASHTO T 207, with a portion of the sample saved for consolidation testing
s-3 = Location and Identification of SPT sample, AASHTO T 206
NO RECV. = No Recovery, unable to recover sample for testing or classification.
DIST. = Disturbed sample recovered with thin-walled tube sampler.
▽ 24 HRS = Water Table depth below ground surface recorded at noted time after completion of bore hole.
ETR = = Energy Transfer Ratio determined according to ASTM D4633

CORRELATION OF PENETRATION RESISTANCE AND SOIL PROPERTIES

SOIL		DESIGNATION	"N" (blows per ft.)
SAND AND SILT	RELATIVE DENSITY	VERY LOOSE	LESS THAN 4
		LOOSE	4 – 10
		MEDIUM DENSE	10 – 30
		DENSE	30 – 50
		VERY DENSE	OVER 50
CLAY	CONSISTENCY	VERY SOFT	LESS THAN 2
		SOFT	2 – 4
		MEDIUM STIFF	4 – 8
		STIFF	8 – 15
		VERY STIFF	15 – 30
		HARD	OVER 30

STATE OF LOUISIANA
SERGIO AVILES
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STATE OF LOUISIANA
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License No. 35129
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10/14/14

THIS SIGNATURE AND SEAL IS AFFIXED TO THIS DRAWING AS CERTIFICATION THAT THE LABORATORY TESTING AND ANALYSIS WAS PERFORMED ACCORDING TO THE LISTED PROCEDURES. NO DESIGN COMPUTATIONS WERE PERFORMED OR REVIEWED BY ME.

SHEET NUMBER 2

PARISH: ST. MARY
FEDERAL PROJECT:
STATE PROJECT: H004932.5
US 90/LA 318 INTERCHANGE

DESIGNED:
CHECKED:
DETAILED: SP
CHECKED: SZ/SA
DATE: 10/14/2014
SHEET: 2 OF 5

REVISION DESCRIPTION | DATE | NO. | BY

US 90/LA 318 Alternative E

LOGS OF SOIL BORINGS

Field Book No.

DOTD

APS DESIGN & TESTING