

APPENDIX B: BORING LOGS

As part of the field investigation 39 borings were performed at the sites of interest, as listed in Table B.1. The borings were performed by Soil Testing Engineers Inc. between 1/30/06 and 2/22/06, and 4/7/06 and 4/13/06. All fieldwork activities were conducted by members of ILIT under the direct supervision of senior members of the team.

Two drilling rigs were used for the geotechnical exploration: an F-350 truck-mounted rig with a 15ft tower (CME-75) and an “ARDACO” bogey rig for sites where access was difficult. Both rigs used 4” mud-rotary wash with a side discharge bit. Shallow borings were initially advanced using a 4-inch diameter auger. A small geoprobe was used to auger down to target depths for Field Vane Shear Testing in sites that were inaccessible by the other two rigs.

Three different types of borings were performed: (a) borings for continuous sampling for geologic characterization, (b) conventional geotechnical borings selectively sampled for laboratory tests of engineering properties and (c) borings for providing access for Field Vane Shear Testing.

Within the boreholes three types of sampling methods were used: (a) continuous sampling with 3” thin-walled Shelby Tubes (ASTM D1587-00) and extruded on site for geologic characterization, (b) “undisturbed” sampling at selected depths with 3” thin-walled, fixed-piston Shelby Tubes (ASTM D1587-00), where the tube mouth was modified to eliminate over-cutting and thus reduce sample disturbance due to rebound (Lunne and Lacasse 1994), and (c) disturbed sampling by performing the Standard Penetration Test (ASTM D1586-99), where cohesionless material was present.

The progression of the fieldwork program was based on an iterative process between the initial program and the new data as it was being collected from the field. The sampling process initiated with the continuous borings and continuous sampling to obtain a detailed description of the stratigraphy by extruding all samples on-site.

Upon completion of each day of fieldwork all boreholes were grouted using cement grout and bentonite pellets.

The pages that follow show plan views of the sites at which our investigation team performed borings, showing the locations of each boring. These are followed by the logs of these borings. Each boring log also has local GPS coordinates (x, y, and z) to help to further locate these borings.

17th STREET CANAL

BORING NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
17-CON-1	30.01739	90.12071	-6.5
17-CON-2	30.01718	90.12112	-2
17-CON-3	30.0172	90.12118	-2
17-CON-4	30.01709	90.12109	-1.8
17-CON-4 A	30.01708	90.12107	-1.8
17-CON-5	30.01731	90.12199	4.31
17-CON-6	30.01827	90.12056	-7
17-CON-7	30.01799	90.12126	3.8
17-CON-8	30.01826	90.1206	-7
17-CON-9	30.01705	90.12076	-6
17-CON-10	30.0172	90.12117	-2
17-CON-11	30.01654	90.12002	-6
17-BOR-1	30.0174	90.12069	-6.5
17-BOR-2	30.01619	90.12143	4
17-BOR-3	30.01636	90.12075	-6.6
17-BOR-4	30.01728	90.12197	4.3
17-BOR-5	30.01639	90.12212	4.3
17-BOR-6	30.01829	90.12059	-7
17-BOR-6 A	30.01828	90.12059	-7

LONDON AVENUE CANAL NORTH, EAST BANK

BORING NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
LAC-CON-1	30.02097	90.0703	-7.7
LAC-BOR-1	30.02095	90.07031	-7.7
LAC-BOR-1 A	30.02094	90.06992	-8
LAC-BOR-2	30.02064	90.07024	-8
LAC-BOR-3	30.02135	90.07025	-8.2
LAC-BOR-4	30.01998	90.07014	-8.5

Note: Geographic coordinates are based on WGS84 datum.

LONDON AVENUE CANAL NORTH, WEST BANK

BORING NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
LACW-CON-1	30.02044	90.07138	-5.6
LACW-BOR-1	30.02049	90.07135	-5.6
LACW-BOR-2	30.02049	90.07106	2.8
LACW-BOR-3	30.02129	90.07094	3.1
LACW-BOR-4	30.01951	90.07813	2.6

LONDON AVENUE CANAL SOUTH, EAST BANK

BORING NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
LACS-CON-1	30.00915	90.06941	-0.15
LACS-CON-3	30.00851	90.06908	-2.3
LACS-BOR-1	30.00912	90.0694	-0.15
LACS-BOR-2	30.07985	90.06931	4.6
LACS-BOR-3	30.00849	90.06908	-2.3

INNER HARBOR NAVIGATION CANAL, EAST BANK

BORING NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
IHNC-N-CON-1	29.97865	90.02022	-3.4
IHNC-N-BOR-1	29.9786	90.0202	-3.4
IHNC-S-CON-1	29.97038	90.02313	0.93
IHNC-S-CON-2	29.97118	90.0227	-2.7
IHNC-S-CON-3	29.97246	90.0225	-2.3
IHNC-S-BOR-1	29.97039	90.02315	0.93
IHNC-S-BOR-2	29.97116	90.0227	-2.7
IHNC-S-BOR-3	29.97244	90.02251	-2.3

LONDON AVENUE CANAL NORTH, EAST BANK

CPT NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
LAC-CPT-1	30.02097	90.07027	-7.7
LAC-CPT-2	30.02062	90.07026	-8
LAC-CPT-3	30.02135	90.07053	-8.2
LAC-CPT-4	30.01998	90.07032	-8.5

Note: Geographic coordinates are based on WGS84 datum.

LONDON AVENUE CANAL NORTH, WEST BANK

CPT NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
LACW-CPT-1	30.02044	90.07136	-5.6
LACW-CPT-2	30.02048	90.07104	2.8
LACW-CPT-3	30.02131	90.07094	3.1
LACW-CPT-4	30.01953	90.07082	2.6

LONDON AVENUE CANAL SOUTH, EAST BANK

CPT NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
LACS-CPT-1	30.00908	90.0694	-0.15
LACS-CPT-2	30.00797	90.06931	4.6
LACS-CPT-3	30.0085	90.06907	-2.3

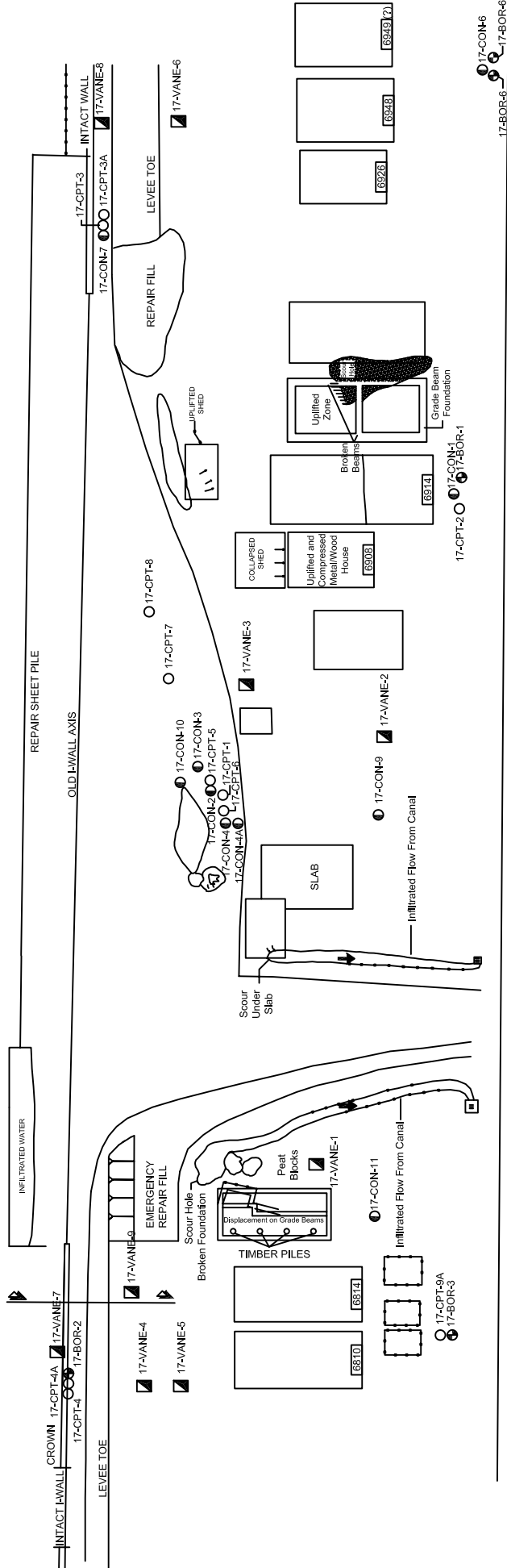
INNER HARBOR NAVIGATION CANAL, EAST BANK

CPT NUMBER	Latitude (N)	Longitude (W)	Elevation (MSL)
IHNC-N-CPT-1	29.9787	90.02049	-3.38
IHNC-S-CPT-1	29.97035	90.02314	0.93
IHNC-S-CPT-2	29.97126	90.02292	-2.7
IHNC-S-CPT-3	29.97248	90.02257	-2.3

Note: Geographic coordinates are based on WGS84 datum.

17-CPT-11 ○ 17-BOR-5

17-CPT-10A ○ 17-BOR-4



BELLAIRE DRIVE

LEGEND

- 17-CPT-# Cone Penetration Test
- 17-CON-# Continuous Boring
- 17-BOR-# Geotechnical Boring
- 17-VANE Field Vane Test
- Fence

17th Street Canal	
APPROXIMATE ILIT BORING, CPT, VANE LOCATIONS	
New Orleans, Louisiana	
DATE	DWG NO.
05/06/2006	17th Boring & CPT Plan
SCALE	SHEET
Not Drawn To Scale	



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BORING NUMBER 17-BOR-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 1/31/06 **COMPLETED** 1/31/06 **GROUND ELEVATION** -6.5 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** ---
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES 6' East of driveway of 6914 Bellaire Drive **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0														
10														
18		CH: Very soft, gray clay. CH: Very soft, gray clay with peat. CH: Very soft, gray clay.	ST 1	92 (100)		0.06 0.08								
20			ST 2	76 (100)										
22		SC: Very soft, fine sand with clay streaks.	ST 3	92 (100)		0.12								
24			ST 4	92 (100)		1.31								
28.5		Bottom of hole at 28.5 feet.												

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BORING NUMBER 17-BOR-2

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (East)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/3/06 COMPLETED 2/3/06 GROUND ELEVATION 4.0 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary AT TIME OF DRILLING ---
 LOGGED BY D. Cobos-Roa CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
0											
		FILL: Stiff, brown slightly silty clay with stone and gravel.	ST 1	43 (100)		1.46					
		FILL: Stiff, dark gray, organic clay to gray and tan clay with 1/2"-1" silt layer.	ST 2	63 (100)		1.31					
		CH: Medium, gray clay with silt seams and layers 1/2"-1".				0.62					
		CH: Soft, dark gray clay with silt seams and organics.	ST 3	93 (100)		0.27					
10						0.88					
		No Recovery. Re-drive with smaller tube to get disturbed sample. Sample # 17-BOR-2-4*	ST 4*	90 (100)							
		OH: Very fibrous marsh, roots, wood.	ST 5	93 (100)							
		OH: Medium, dark gray organic clay with peat.	ST 6	50 (100)		0.75					
20						0.21					
		CL-ML: Soft, gray, slightly silty clay.	ST 7	93 (100)							
		CH: Soft, gray clay with alternate layers of fine sand and silt.	ST 8	90 (100)		0.21					
30						0.18					
		CH: Soft gray clay with silt seams.	ST 9	93 (100)							
		Bottom of hole at 32.0 feet.									

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BORING NUMBER 17-BOR-3

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CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (East)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/6/06 COMPLETED 2/6/06 GROUND ELEVATION -6.45 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary AT TIME OF DRILLING ---
 LOGGED BY A. Athanasopoulos CHECKED BY D. Cobos-Roa AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								□ FINES CONTENT (%) □			
								20	40	60	80
0		SC: Brown clayey sand, roots (6"), black/brown clayey fine sand, roots, organic matter (4"), gray/black sand with many roots transitions to light brown sand (3"), firm gray clay, signs of shells (1").	ST A	40 (100)							
		Top- SM: Brown silty sand.	ST 1	50 (100)							
		Bottom- OL: Black organic matter.									
		OL: Marsh, mixing zone, gray CH and OH, transitions to CH.	ST 2	65 (100)							
		Bottom- CH: Gray clay.									
10		Top- CL-ML: Silty, gray clay.	ST 3	73 (100)		0.11					
		CH: Very soft, dark gray clay with wood and shell fragments.				0.11					
		CH: Very soft, gray clay with silty clay layers.	ST 4	90 (100)		0.12					
		CH: Very soft, gray clay.	ST 5	92 (100)		0.11					
20		CLS: Very soft, gray, very sandy clay with shell.	ST 6	92 (100)		0.14					
		Bottom of hole at 28.0 feet.									

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BORING NUMBER 17-BOR-4

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CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (West)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/7/06 COMPLETED 2/7/06 GROUND ELEVATION 4.31 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary AT TIME OF DRILLING ---
 LOGGED BY A. Athanasopoulos CHECKED BY D. Cobos-Roa AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲											
								20	40	60	80								
0																			
		FILL: Stiff, tan and brown clay with silt.	ST 1	38 (100)		0.65													
10		CL-ML: Medium, gray clay with silt and fine sand, alternating layers and traces of organic matter. CH: Medium, gray clay with silt seams and wood.	ST 2	80 (100)		0.33													
		CH: Soft, gray and brown clay with peat and organics.	ST 3	87 (100)		0.25													
		OH: Soft, dark gray organic clay with peat.	ST 4	63 (100)		0.19													
		OH: Medium, dark gray organic clay with peat.	ST 5	67 (100)		0.27													
		(roots)	ST 6	53 (100)															
20		CH: Very soft, gray clay.	ST 7	92 (100)		0.1													
		SM-SC: Soft gray silty sand to silty clay (alternate layers).	ST 8	93 (100)		0.29													
		CH: Soft, gray clay with alternating layers of silty, fine sand.				0.19													
		Bottom of hole at 27.0 feet.																	

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BORING NUMBER 17-BOR-5

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CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (West)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/7/06 **COMPLETED** 2/7/06 **GROUND ELEVATION** 4.31 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** ---
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES at the last 2', drill rig deviated from vertical **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0														
0 - 10		FILL: Very stiff, tan and brown clay with silt.	ST 1	35 (100)		1.66								
10 - 15		CL-ML: Brown silty clay.												
15 - 18		WOOD: Wood and shells.	ST 2	40 (100)										
18 - 20		OL: Dark brown/black organic, half of area is wood.	ST 3	67 (100)										
20 - 22		OL: Wood, organic clay.	ST 4											
22 - 25		Wood, roots, organic matter.	ST 5											
25 - 27		CH: Very soft, gray clay with silt lenses and wood.	ST 6	92 (100)		0.12								
27 - 27.0		CH: Soft, gray clay with alternating seams of silty fine sand.	ST 7	90 (100)		0.18								
27.0		Bottom of hole at 27.0 feet.												

GEOTECH BH PLOTS ILIT - BORING LOGS, 17TH STREET.GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER 17-BOR-6

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/20/06 **COMPLETED** 2/20/06 **GROUND ELEVATION** -6.6 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** ---
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
0								PL	MC	LL	
								60	120	180	240
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
		Sample# 17-BOR-6-1 was not retrieved so after 17-BOR-6 was completed, moved ~3' and sampled 5' to 7' with 20.5"/30". Sample# 17-BOR-6A-1.	ST 1	68 (100)							
		CH: Gray clay, traces of organic matter, shells.	ST 2	77 (100)							
10		CH: Gray clay, silt lenses.	ST 3	90 (100)							
		Bottom of hole at 12.0 feet.									

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BORING NUMBER 17-CON-1

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CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (East)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 1/31/06 COMPLETED 1/31/06 GROUND ELEVATION -6.5 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary ▽ AT TIME OF DRILLING 4.0 ft / Elev -10.5 ft
 LOGGED BY D. Cobos-Roa CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES 6' East of driveway of 6914 Bellaire Drive AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲				
								20	40	60	80	
								PL	MC	LL		
								60	120	180	240	
								☐ FINES CONTENT (%) ☐				
								20	40	60	80	
0		SM: Loose, dark brown, silty fine sand, moist, with occasional root mass, and organic matter. FILL: Very loose, dark brown, silty fine sand, moist, with fine pea-sized gravel. SM: Brown, silty fine sand, moist, with shell fragments, with trace amount of 1"-1.5" subrounded gravel OL: Brown-black organics, moist, trace shells and sand. Changed to 4" mud rotary drill No Recovery, 2.5" diameter concrete block.	ST	75 (100)								
		FILL: Shell fill with pea gravel, 1" to 2" subangular gravel, and dark brown, very moist silty clay (CH). CH: Gray clay, trace amounts of organic material (fibrous peat), trace of fine angular gravels. CH: Soft, gray clay, thin silt lenses, decreasing fine gravel content.	ST 1	68 (100)								
10		CH: Soft, gray clay, moist, with occasional shells and fibrous material and trace organic matter. medium to high plasticity silt lens at 11.3' and 11.5'. CH: Gray clay, with shell fragments and silt lens at 13.5' and 13.75'. CH: Gray clay, trace of organic matter and decreasing shell content, silt lenses closely spaced. CH: Soft grading to firm, gray clay, with trace of organic matter. 2" silt pocket at 14.3'.	ST 2	100 (100)								
		CH: Soft to firm, gray clay, with trace organic matter.	ST	95 (100)								
		CH: Gray clay, with trace of organic matter.	ST	95 (100)								
20		CH: Gray clay, with trace of organic matter.	ST	98 (100)								
		CH: Very soft, gray clay, trace of silt, very moist.	ST 3	85 (100)								
		CH: Gray clay. Very soft zone at 23.6'.	ST 4	93 (100)								
		CH: Gray clay, grading to stiffer 25.3' to 26.0'.	ST	93 (100)								
		CH: Gray clay, occasional lens of medium subrounded gray and white sand. Transition layer of soft gray plastic clay (CH), moist. increasing trace of sand and shell fragments.	ST 5	100 (100)								
30		SM: Loose, gray silty sand with clay, moist, trace amounts of shells. decreasing fines content with depth. 3" diameter Shelby tubes used. Extruded and logged onsite. At 4' depth, changed to rotary mud drill (4"). 5 bulk samples taken. Bottom of hole at 30.0 feet.										

GEOTECH BH PLOTS ILIT. BORING LOGS. 17TH STREET.GPJ GINT US LAB.GDT 4/21/06



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BORING NUMBER 17-CON-2

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CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (East)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/1/06 COMPLETED 2/1/06 GROUND ELEVATION -2 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary AT TIME OF DRILLING ---
 LOGGED BY D. Cobos-Roa CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲					
								20	40	60	80		
								PL	MC	LL			
								60	120	180	240		
								☐ FINES CONTENT (%) ☐					
								20	40	60	80		
0		MH: Firm, brown silt, moist, with fine sand, organic matter and wood.	ST 1	40 (100)									
		ML: Moderately stiff, brown sandy silt with clay, moist, with 1.5"-2" thick fine and uniform sand lenses and fine root mass.	ST 2	55 (100)									
		grading stiffer and sandier as root mass increases	ST 3	75 (100)									
		WOOD: Damaged tube between 6' and 8'. Changed to 4" diameter mud rotary drill.											
10		OL: Dark brown, organic silt, with partially decomposed organic material, thin to 3/8" diameter wood fragments. Very strong organic odor. Rapidly losing fluid in borehole. Water rising from hole or CPT-1 drilled close by. Bentonite added to boring fluid.	ST 4	75 (100)									
		CH: Soft, gray clay, moist, with organic matter and partially decomposed wood. strong organic odor.	ST 5	75 (100)									
		Very moist, clearly increasing plasticity and decreasing organic content and fibrous material.	ST 6	85 (100)									
		Very soft clay, grading to firmer from about 14.8', trace of fine roots.	ST 7	95 (100)									
		ML: Medium plasticity, gray clayey silt, grading to stiffer, very moist.	ST 8	95 (100)									
		CH: Very soft, gray clay, trace of organic matter and roots.	ST 9	95 (100)									
		ML: Gray, medium plasticity silt. 1"-2" very fine uniform, moist sand lenses.	ST 10	100 (100)									
20		CH: Soft, gray silty clay, high water content. transitions to clayey silt (ML), grading to more firm from 18.5'.	ST 11	100 (100)									
		Very soft, clay, with 1"-1.5" silt lenses, trace thin wood fragments and roots. grading to stiffer.	ST 12	90 (100)									
		Firm, light gray to gray clay, moist, with trace organic matter and thin silt lenses.	ST 13	90 (100)									
		Soft, gray clay, moist, with trace wood and organic matter.	ST 14	95 (100)									
30		High moisture content with partially decomposed wood, strong organic odor.	ST 15	95 (100)									
		Firm, gray clay, with fine uniform sand lenses 1.5"-2" thick. trace of fresh water (oyster) shells from 31'-32'.	ST 16	100 (100)									
		Firm, gray clay, with silt lenses 1" thick. transitions to sand, grading stiffer.											
		SP: Loose, gray, fine, uniform sand, very moist, with trace of shells.											
		CLS: Firm, gray sandy clay, fine uniform sand pocket from 34'-34.4'.											
		Bottom of hole at 36.0 feet.											

GEOTECH BH PLOTS ILIT - BORING LOGS, 17TH STREET GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER 17-CON-3

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (East)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/1/06 COMPLETED 2/1/06 GROUND ELEVATION -1.7 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary AT TIME OF DRILLING ---
 LOGGED BY D. Cobos-Roa CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								20 40 60 80	PL MC LL
0								60 120 180 240	□ FINES CONTENT (%) □
		WOOD							
10		OL: Dark brown, organic silt, with organic matter, roots, and fibrous material. Root-induced diagonal crack zone at 9.5'.	ST 1	70 (100)					
		CH: Very soft, gray clay intermixed with black organic silt, saturated, strong organic odor.	ST 2	70 (100)					
		Transition to gray high plasticity clay, grading to stiffer, moist, with organic matter, roots, and wood.							
		Bottom of hole at 14.0 feet.							



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BORING NUMBER 17-CON-4

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/3/06 **COMPLETED** 2/3/06 **GROUND ELEVATION** -1.8 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** ---
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
0								20	40 60 80
		Drilled to 9.5' with mud rotary.						60	120 180 240
10		OH: Intermixing of dark brown, organic silt with fibrous material and organic matter, with gray high plasticity clay (CH).	ST 1	70 (100)					
		Bottom of hole at 11.5 feet.							



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BORING NUMBER 17-CON-4A

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/3/06 **COMPLETED** 2/3/06 **GROUND ELEVATION** -1.7 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** ---
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0														
10		OL: Dark brown, organic silt, very high moisture content, with organic matter and roots, with some gray clays down to 6.8'. OH: Very soft, gray clay mixed with dark brown and black silt (OH), and tan clay (CH), very high moisture content. CH: Grades to stiffer clay, decrease in water content. End of intermixing zone. Gray clay, with trace of organic matter. Bottom of hole at 10.0 feet.	ST 1	75 (100)										
			ST 2	60 (100)										

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BORING NUMBER 17-CON-5

PAGE 1 OF 1

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (West)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/7/06 COMPLETED 2/7/06 GROUND ELEVATION 4.31 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary AT TIME OF DRILLING ---
 LOGGED BY A. Athanasopoulos CHECKED BY D. Cobos-Roa AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
0		FILL: Dark brown clay, thin layer of crushed rock, with shells. Wood, concrete followed by stiff, dark brown clay with fine sand.	ST 1	65 (100)							
		CL-ML: Firm to stiff, gray-brown silty clay with shells. Red-brown, fill material consisting of silty clay.	ST 2	55 (100)							
		Stiff, gray silty clay, less silty fines. Silty clay, clay includes reddish brown traces. Gray silty clay.	ST 3	85 (100)							
		CH: Firm to stiff, gray brown clay with reddish traces and shells. Clay, contains mostly crushed shells.	ST 4	75 (100)							
10		SHELL: Shell layer followed by black organic traces.	ST 5	80 (100)							
		CH: Firm, gray silty clay with silt lenses, grades stiffer with more silt at 9.4'. Brown, medium stiff clay with reddish traces and lower silt content. Gray clay with shells.	ST 6	90 (100)							
		OH: Organic layer with wood and black organic matter.	ST 7	43 (100)							
		CH: Medium stiff clay becomes softer before becoming more organic.	ST 8	98 (100)							
		OH: Black organic matter.	ST 9								
		WOOD	ST 10								
		CH: Gray clay with black organic clay.	ST 11								
		OH: Firm, black clay with wood, silt, strong odor.	ST 12								
		Dark gray clay with roots, organics wood and roots for the 1st 3", strong odor. 3" to 6" contains plastic organic clay, shells, and gravel up to 2" in diameter.	ST 13								
		CH: Gray clay with wood.	ST 14								
		Wood at 15.4'	ST 15								
		Shells, roots, and organics, strong odor.	ST 16								
		First 1' sheared by wood. Large amount of organics and roots throughout.	ST 17								
20		3" chunk of wood	ST 18								
		CL-ML: Silty clay with organics and roots throughout. Very soft up 18.8'. Becomes stiffer silty clay.	ST 19								
		OL: Organics with wood and odor.	ST 20								
		CL-ML: Gray, silty clay. Clay is firm until 1.3' where it becomes softer.	ST 21								
		CH: Gray, high plasticity clay with silt lenses at 1.1', becomes more silty after 1.1', traces of black organic throughout and roots at the base of the sample.									
		Gray silty high plasticity clay with silt lenses every few inches. Large silt lens at 24.6'. Stiff, clean plastic clay from 25.3' to end. Silt lenses absent in this layer.									
		Clay with wood at 26.3' to 26.4'. Stiffer, gray silty clay with silt lenses. Appears to be fine sand mixed into the silt lenses from 27.45' to the end of the sample.									
30		Firm, gray, silty plastic clay.									
		Gray, softer clay, 1" sized gravel at 30.1'. Very soft 1/2" inclusion of plastic clay with high water content in filled root track from 30.3' to 30.6'. Silt lens at 30.7', firm, silty clay to the end of the sample.									
		Soft, gray plastic clay with even softer zones surrounding roots. Many shells and filled roots. Shells at 32.5' that is 1 5/8" across. This material is very soft, plastic, and has high water content until a silt lens at 32.8'. Firm clay from 32.8' to the end.									
		Roots in very soft clay through to 34.25'. Secondary interstitial clay in root tracks, very soft high water content very plastic clay.									
		Stiff clay.									
		Soft root track through clay until 37', highly plastic, high water content in soft filling.									
		Silt lens.									
40		SP: Dirty gray sand containing shell particles for last 1".									
		Dirty gray, medium grained sand throughout, contains shell fragments.									
		Bottom of hole at 42.0 feet.									

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BORING NUMBER 17-CON-6

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/20/06 **COMPLETED** 2/20/06 **GROUND ELEVATION** -6.6 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** N/A
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES 6946 Bellaire Drive **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								□ FINES CONTENT (%) □			
								20	40	60	80
0		TOPSOIL: Organic matter with roots (moist), topsoil and sediments, tan-brownish yellow sand.	ST 1	35 (100)							
		Brownish yellow sand, topsoil and sediments.	ST 2	40 (100)							
		Topsoil and sediments.	ST 3	73 (100)							
		OL: Organic silty matter with tan sand in the middle of cross section, roots. Grading to organic clay, roots, traces of red organic matter, strong odor.	ST 4	43 (100)							
		CH: Soft, gray clay with traces of organic matter grading to high PI gray clay with roots and shell fragments.	ST 5	43 (100)							
10		Soft, gray clay, shell fragments.	ST 6	95 (100)							
		Soft, gray clay, silt lens at 11.4' (~1" thick).	ST 7	90 (100)							
		Soft, gray clay.									
		Bottom of hole at 14.0 feet.									

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BORING NUMBER 17-CON-7

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (East)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/20/06 COMPLETED 2/20/06 GROUND ELEVATION 3.8 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary ▽ AT TIME OF DRILLING 13.5 ft / Elev -9.7 ft
 LOGGED BY D. Cobos-Roa CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES _____ ▽ .25hrs AFTER DRILLING 12.2 ft / Elev -8.4 ft

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
0		Auger first 2'.									
		FILL: Medium Firm, tan-brown, sandy clay with silt (CL) and trace amount of roots.	ST 1	55 (100)							
		Tan and gray clay with silt (CH) and small brick fragments.	ST 2	88 (100)							
		ML: Light gray, soft clayey silt, moist, with organic matter and roots.									
		OH: Dark brown and black, soft organic silt, moist, with roots and organic matter, trace amount of reddish-brown stains.			100 (100)						
		OH: Dark brown-black very soft organic silt, with trace of fine sand, organic matter, roots and organic odor.	ST 3	70 (100)							
10		Intermix zone. Dark brown organic silt mixed with very fine gray silty sand (SM), and gray clay (CH), very low density organics (OH).	ST 4	78 (100)							
		CH: Dark brown and gray clay with lenses of fine gray sand.									
		CL: Soft, gray silty clay, moist, trace amount of roots and organic matter.									
		OH: Very soft, black organic silt, low density, moist, with some gray clay, roots, and organic odor.	ST 5	90 (100)							
		CH: Intermixing zone. Very soft, dark brown-black organic silt (OH), moisture content increases with depth, mixed with gray clay (CH), and very fine silty sand (SM). Sand lens @11.5', horizontal crack on interface. Trace of wood and roots.	ST 6	75 (100)							
		ML: Very soft, gray, medium plasticity clayey silt, very moist.									
		OH: Very soft, dark brown, fibrous organic silt, very moist, low density, with significant amount of wood and strong organic odor.	ST 7	95 (100)							
		WOOD									
		OH: Black organic silt, with decomposed organic matter, saturated.	ST 8	100 (100)							
		WOOD (single core of wood in tube) fragments and roots.									
		CH: Very soft, dark gray and brown, high plasticity clay with fine sand lenses, organic matter and roots.									
		OH: Very soft, black-dark brown fibrous organic silt with trace amount of roots and strong organic odor, transitions to gray clays (CH).									
		CH: Medium firm, gray clay, trace of shells and organic matter. 1" to 2" thick silt pockets.									
		Bottom of hole at 19.0 feet.									



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BORING NUMBER 17-CON-8

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CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/20/06 **COMPLETED** 2/20/06 **GROUND ELEVATION** -2.0 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** N/A
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲					
								20	40	60	80		
0		GP: Stiff, gravel fill, light brown, silty-sandy clay, dark brown clay, traces of black organic.											
		CL-ML: Gray-brown clayey silt, interchanging with gray-brown silty clay, layered with brown, red lenses.											
		CLS: Interchanging of medium stiff clay, silt, fine sand in gray, brown, orange, red colors.											
		CH: Brown, gray clay with shells.											
10		SP: Very fine sand or silt lens. OL: Black organic matter, fibrous, with roots. OL: Organic matter, fibrous (Marsh). WOOD drilled through wood											
		OL: Black organic matter with roots.											
		CH: Gray clay with silt lenses. OL: Black organic matter, roots and wood, strong odor (Marsh).											
		OH: Contact with clay happens vertically (Marsh). SM: Silty fine sand. CH: Mixing gray clay with black organic matter. gray clay with fine sand clay with roots											
20		becomes firmer, silt content increases clayey silt with fine sand, trace roots Bottom of hole at 20.0 feet.											

GEOTECH BH PLOTS ILIT - BORING LOGS, 17TH STREET.GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER 17-CON-9

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/20/06 **COMPLETED** 2/20/06 **GROUND ELEVATION** -6.6 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary ∇ **AT TIME OF DRILLING** 0.0 ft / Elev -6.6 ft
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								□ FINES CONTENT (%) □			
								20	40	60	80
0		FILL: Loose, tan, fine, uniform sand (SP), with brick fragments and trace of organic matter.	ST 1	90 (100)							
		SM: Loose, brown, silty sand, saturated, with organic matter and roots.	ST 2	40 (100)							
		OH: Dark brown-black organic silt, saturated, with strong organic odor and light brown stains. Extremely soft, black-dark brown organic silt, low density, very high water content, vertically aligned roots and wood fragments, strong organic odor.	ST 3	78 (100)							
		CH: Transition to very soft, gray clay, high water content, with organic matter and trace of roots. Intermixing zone. Very soft, gray clay mixed with black, soft organic silt (OH), very high water content. Very soft, gray clay with fine sand lenses (1" to 2" thick) with trace amount of organic matter.	ST 4	58 (100)							
		Bottom of hole at 8.0 feet.									



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BORING NUMBER 17-CON-10

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME 17th Street Canal (East)
 PROJECT NUMBER _____ PROJECT LOCATION 17th Street Canal, New Orleans, Louisiana
 DATE STARTED 2/20/06 COMPLETED 2/20/06 GROUND ELEVATION -2 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary AT TIME OF DRILLING ---
 LOGGED BY C. Cheung CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0		FILL: Stiff, brown silty clay.												
		FILL: Gray, gravelly fill.												
		SC: Light brown to brown, clayey silty sand.												
		SM/SC to CL: Light brown, silty, clayey sand.												
		CH: Dark brown clay fill.												
		CL-ML: Firm, dark gray silty clay. Silt to fine sand lens.												
		CH: Gray clay, silty fine sand lens, mixing with above.												
		OH: Gray clay mixing with organics.												
		CH: Mixing gray clay with silt and fine sand, 7/4" cleaner gray clay.												
		OL: Dark brown organics, roots, fibrous.												
10		CH: Soft, light gray clay.												
		OH: Mixing of gray clay with black, fibrous organic matter.												
		OL: Dark brown, fibrous organics.												
		ML: Wood with silt.												
		Bottom of hole at 11.0 feet.												

GEOTECH BH PLOTS ILIT, BORING LOGS, 17TH STREET.GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER 17-CON-11

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CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** 17th Street Canal (East)
PROJECT NUMBER _____ **PROJECT LOCATION** 17th Street Canal, New Orleans, Louisiana
DATE STARTED 2/20/06 **COMPLETED** 2/20/06 **GROUND ELEVATION** -6 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** 0.0 ft / Elev -6.0 ft
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								□ FINES CONTENT (%) □			
								20	40	60	80
0	▽	No Recovery. Recently deposited sediment.	ST 1	0 (100)							
		OH: Very soft, black-dark brown organic silt, saturated, with organic matter, roots, wood, strong organic odor. Bottom is mixed with gray clay (CH).	ST 2	55 (100)							
		OH: Intermixing zone. Black organic silt, mixed with gray clay (CH). Extremely soft, very high water content with organic matter and wood.	ST 3	100 (100)							
		CH: Very soft, gray clay, high water content, trace of organic matter and roots. 1" thick silt lenses.	ST 4	84 (100)							
		CH: Very soft, gray clay with organic matter, wood and roots. Trace of black organic silt, very moist.									
		Bottom of hole at 8.0 feet.									



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BORING NUMBER LACW-BOR-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Avenue Outfall Canal - North (West)
PROJECT NUMBER _____ **PROJECT LOCATION** London Avenue Canal, New Orleans, Louisiana
DATE STARTED 2/13/06 **COMPLETED** 2/13/06 **GROUND ELEVATION** -5.6 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger **AT TIME OF DRILLING** 6'
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES Frontyard of 6109 Pratt Dr. (West-outside breach). **.25hrs AFTER DRILLING** 5'

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲											
								20	40	60	80								
0		Auger to 4'.																	
		Top- CH: Gray clay. Bottom- SM: silty sand	ST 1	80 (100)															
10			ST 2	73 (100)															
		SP: Very loose, gray sand, saturated.	SS	61 (100)	1-1-2 (3)														
		SP: Very loose, gray sand, saturated.	SS	33 (100)	3-2-2 (4)														
20			SS		4-4-4 (8)														
		Loose, fine, gray sand with shell fragments, strong organic odor.	SS		7-7-5 (12)														
		*Bottom of hole at 60.0 feet. Bottom of hole at 25.5 feet.																	

GEOTECH BH PLOTS LONDON NORTH (WEST).GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER LACW-BOR-2

CLIENT ILIT (Independent Levee Investigation Team)
PROJECT NUMBER _____
DATE STARTED 2/14/06 **COMPLETED** 2/14/06
DRILLING CONTRACTOR STE
DRILLING METHOD Hollow Stem Auger
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa
NOTES _____

PROJECT NAME London Avenue Outfall Canal - North (West)
PROJECT LOCATION London Avenue Canal, New Orleans, Louisiana
GROUND ELEVATION 2.8 ft N.A.V.D. **HOLE SIZE** 4"
GROUND WATER LEVELS:
AT TIME OF DRILLING N/A
AT END OF DRILLING ---
AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲		
								20	40	60
0		GP: Gravel fill (emergency repair). Augered to 5' using a hollow-stem auger.								
		Bottom- OL: Organic matter, roots, wood.								
		OH: Soft, dark organic clay with peat.	ST 1	43 (100)		0.13 0.12				
10		Bottom- CL-ML: Gray, sandy, silty clay.	ST 2	67 (100)						
		SM: Gray silty fine sand.	ST 3	67 (100)						
		Attempted to sample 16' to 18', no recovery, so cleaned 6" and performed SPT at 16.5'.	ST 4	63 (100)						
			SS	33 (100)	1-2-1 (3)					
20			SS	100 (100)	1-0-1 (1)					
			SS	100 (100)	0-0-1 (1)					
			SS	44 (100)	1-1-0 (1)					
			SS	44 (100)	2-3-2 (5)					
			SS	44 (100)	1-3-3 (6)					
30			SS	56 (100)	3-5-8 (13)					
		SP: Light gray sand.	SS	61 (100)	2-4-5 (9)					
			SS	56 (100)	4-5-6 (11)					
40		Bottom of hole at 40.0 feet.								

GEOTECH BH PLOTS LONDON NORTH (WEST).GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER LACW-BOR-3

CLIENT ILIT (Independent Levee Investigation Team)
PROJECT NUMBER _____
DATE STARTED 2/14/06 **COMPLETED** 2/14/06
DRILLING CONTRACTOR STE
DRILLING METHOD Hollow Stem Auger
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa
NOTES _____

PROJECT NAME London Avenue Outfall Canal - North (West)
PROJECT LOCATION London Avenue Canal, New Orleans, Louisiana
GROUND ELEVATION 4.47 ft N.A.V.D. **HOLE SIZE** 4"
GROUND WATER LEVELS:
AT TIME OF DRILLING 6'-6.5'
AT END OF DRILLING ---
N/Ahrs AFTER DRILLING N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0		Augered through 2' of emergency repair gravel.												
		FILL: Brown clay.	ST 1	47 (100)		3.0								
		FILL: Stiff, brown clay.	ST 2	40 (100)		1.25								
		CLS to SC: Dark gray, sandy clay to clayey sand, light-brown oxidation root tracks.	ST 3	78 (100)		.5								
10		becoming cleaner light gray sand (sugar sands) MLS: Silt content increases, very fine sand with traces of organics. Increasing organic traces with depth, sandy silt matrix. OH: Dark organic clay, alternate layers of sand, silt, and clay.	ST 4	68 (100)		0.28								
		OL: Organic matter, fibrous, roots, black to 5", continuous organics but not as much fibrous mixing with gray clay. no roots, no fiber, peat and clay, increase in gray clay content with depth.	ST 5	43 (100)										
		OH: Dark gray clay, wood, organic. Sample extruded because low recovery.												
		OL: Organic matter.	ST 6	80 (100)										
20		SM: Gray silty sand.	SS	83 (100)	2-1-1 (2)									
		SM: Gray silty sand.	SS	67 (100)	1-0-0 (0)									
30		SP: Gray, light gray sand.	SS	67 (100)	1-2-2 (4)									
		SP: Light gray, gray sand.	SS	67 (100)	5-10-17 (27)	1.25								
		Bottom of hole at 35.5 feet.												

GEOTECH BH PLOTS LONDON NORTH (WEST).GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER LACW-BOR-4

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME London Avenue Outfall Canal - North (West)
 PROJECT NUMBER _____ PROJECT LOCATION London Avenue Canal, New Orleans, Louisiana
 DATE STARTED 2/14/06 COMPLETED 2/14/06 GROUND ELEVATION 2.6 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Hollow Stem Auger AT TIME OF DRILLING N/A
 LOGGED BY D. Cobos-Roa CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES 30ft. South of south end of Breach, Levee Crest. N/Ahrs AFTER DRILLING N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
								20 40 60 80	60 120 180 240
								☐ FINES CONTENT (%) ☐	
								20 40 60 80	
0		Auger to 2.5'.							
		FILL: Tan clay.	ST 1	40 (100)		0.54			
		OH: Stiff, organic clay with roots.							
		FILL: Stiff, brown clay.	ST 2	43 (100)					
		SP: Light brown (tan), fine sand, 2" from bottom, trace of organics (?).				0.25			
		OH: Medium, gray organic clay with wood and peat.							
10		CH: Soft, gray clay with peat and wood.	ST 3	70 (100)		0.17			
		OH: Black, dark brown organic clay.							
		WOOD: wood or big root.							
		OL: Marsh.	ST 4	47 (100)					
		SC: Clayey sand.	ST 5	87 (100)					
		No recovery. Change to SPT.							
		SM: Gray, loose, silty sand, saturated.	SS	56 (100)	2-2-1 (3)				
20		With shell fragments.	SS	72 (100)	2-2-3 (5)				
		SP: Gray, loose, fine uniform sand with shell fragments and trace silt.	SS	56 (100)	3-3-2 (5)				
		Auger 28.5' depth.							
30		SP: Gray, loose, fine, uniform sand with shell fragments and trace silt, grading denser.	SS	83 (100)	4-7-10 (17)				
		Auger to 35' depth.							
		SP: Light gray, dense, fine uniform sand, subangular particles with shell fragmens and trace amount of roots. Changed to split-spoon. Used older split-spoon with oxide on inner walls.	SS	83 (100)	11-16-21 (37)				
40		Gray, very dense, fine, uniform sand, subangular particles, trace shell fragments.	SS		36-41-52 (93)				
		Bottom of hole at 41.5 feet.							

GEOTECH BH PLOTS LONDON NORTH (WEST).GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER LACW-CON-1

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME London Avenue Outfall Canal - North (West)
 PROJECT NUMBER _____ PROJECT LOCATION London Avenue Canal, New Orleans, Louisiana
 DATE STARTED 2/13/06 COMPLETED 2/13/06 GROUND ELEVATION -5.6 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Hollow Stem Auger AT TIME OF DRILLING 6'
 LOGGED BY D. Cobos-Roa CHECKED BY A. Athanasopoulos AT END OF DRILLING ---
 NOTES Frontyard of 6109 Pratt Dr. .25hrs AFTER DRILLING 5'

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲					
								20	40	60	80		
								PL MC LL 60 120 180 240					
								☐ FINES CONTENT (%) ☐					
								20 40 60 80					
0		SM: Dark brown, deposited sediment.											
		ML: Dark brown, sandy silt with organic matter, trace clay, wood and brick fragments (FILL).	ST 1	30 (100)									
		SM: Very loose, dark gray and brown silty sand with organic matter and roots, moist.	ST 2	80 (100)									
		CH: Transitions to gray clay.											
		Gray clay with trace of organic matter, wood and fine sand.											
		SM: Medium dense, gray silty sand, saturated, fine-subrounded.	ST 3	70 (100)									
		SP: Loose, gray sand.	ST 4	65 (100)									
		SC: Extremely loose, gray clayey sand, fine, subangular, saturated zone from 6.7' to 6.8'.	ST 5	35 (100)									
		CL: Very soft, gray sandy clay, with trace wood and organic matter. High water content.											
		SP: Very loose, gray, very fine sand, trace silt, shells and organic matter. Brown stiff clay lenses.											
10		Loose, gray, very fine uniform sand with trace organic matter, roots, and wood fragments, saturated.											
		Auger down to 25'. Drilling fluid added.											
20													
		Dropped sample. Re-pushed samples and obtained 1.8' recovery.	ST 6	90 (100)									
		SP: Gray, medium dense, fine to medium sand, subangular, with shell fragments and trace organic matter, strong organic odor.											
		Augered down to 35'.											
30													
		No sample recovered.											
		Augered down to 44'.											
40													
		CH: Gray clay with trace of sand and shells. Sample not extruded.											
		Bottom of hole at 46.0 feet.											

GEOTECH BH PLOTS LONDON NORTH (WEST).GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER LAC-BOR-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Ave. Canal - North (East)
PROJECT NUMBER _____ **PROJECT LOCATION** London Ave. Canal, New Orleans, Louisiana
DATE STARTED 2/10/06 **COMPLETED** 2/10/06 **GROUND ELEVATION** -7.7 ft N.A.V.D. **HOLE SIZE** N/A
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** 1.8 ft / Elev -9.5 ft
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES _____ **.25hrs AFTER DRILLING** 1.3 ft / Elev -9.0 ft

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
0								20 40 60 80	60 120 180 240
		TOPSOIL: Topsoil sediments. Sample extruded because of low recovery. Very soft organic clay.	ST 1	20 (100)		0.06			
		CH: Soft, gray clay with fine sand.	ST 2	85 (100)		0.13			
		CH: Very soft, clay with 1/2" sand layer at bottom.	ST 3	90 (100)		0.07			
10		CLS: Very soft, gray sandy clay with wood and clay pockets.	ST 4	80 (100)		0.06			
		SP: Firm, gray fine sand with 2" clayey sand layer.				0.15			
		Bottom of hole at 10.5 feet.							



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BORING NUMBER LAC-BOR-1A

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Ave. Canal - North (East)

PROJECT NUMBER _____ **PROJECT LOCATION** London Ave. Canal, New Orleans, Louisiana

DATE STARTED 2/16/06 **COMPLETED** 2/16/06 **GROUND ELEVATION** -7.7 ft N.A.V.D. **HOLE SIZE** 4"

DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**

DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** ---

LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---

NOTES Front yard of 6076 Warrington Dr. (East of distressed section) **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0														
		Bottom- OL: Black organics.	ST 1	92 (100)										
		OL: Gray, black and dark brown organic silty sand with organic matter, roots.	ST 2	27 (100)										
		No Recovery. Osterberg sampler damaged.	ST 3	0 (100)										
10		Augered to 12ft. Started Standard Penetration Test.												
		SP: Very loose, gray, saturated, clean, uniform sand, with shell fragments.	SS		1-3-2 (5)									
		SP: Gray, saturated, clean, uniform sand, with shell fragments, grading denser.	SS		6-6-5 (11)									
		Augered to 21ft.												
20		SP: Gray, saturated, clean, uniform sand, with shell fragments.	SS		4-4-5 (9)									
		Bottom of hole at 22.5 feet.												

GEOTECH BH PLOTS LONDON NORTH (EAST).GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER LAC-BOR-2

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CLIENT <u>ILIT (Independent Levee Investigation Team)</u>	PROJECT NAME <u>London Ave. Canal - North (East)</u>
PROJECT NUMBER _____	PROJECT LOCATION <u>London Ave. Canal, New Orleans, Louisiana</u>
DATE STARTED <u>2/10/06</u> COMPLETED <u>2/11/06</u>	GROUND ELEVATION <u>-6.4 ft N.A.V.D.</u> HOLE SIZE <u>N/A</u>
DRILLING CONTRACTOR <u>STE</u>	GROUND WATER LEVELS:
DRILLING METHOD <u>Mud Rotary</u>	▽ AT TIME OF DRILLING <u>1.3 ft / Elev -7.7 ft</u>
LOGGED BY <u>A. Athanasopoulos</u> CHECKED BY <u>D. Cobos-Roa</u>	AT END OF DRILLING <u>---</u>
NOTES _____	▽ .17hrs AFTER DRILLING <u>1.2 ft / Elev -7.6 ft</u>

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲			
								20	40	60	80
								PL	MC	LL	
								60	120	180	240
								☐ FINES CONTENT (%) ☐			
								20	40	60	80
0		Drilled the first 4'. ▽									
10		Stopped @3:30pm 02/10/06 Started @10:40am 02/11/06	ST 1 ST 2 ST 3	93 (100)	2-3-4 (7)						
20		SP: Light gray sand, organic odor. trace amounts of shells gray sand			1-2-1 (3) 3-3-4 (7)						
30		light gray, clean sand			4-4-5 (9) 7-7-7 (14)						
40		Tried to get a sample of clay below sand but sample was sand with clay lens.			5-5-8 (13)						
46.0		CH: Medium, gray clay with some silt. CH: Medium, gray clay with silt seams and shell fragments. The night of 02/10/06 rained so rope for SPT on 02/11/06 was wet. Bottom of hole at 46.0 feet.	ST 4	92 (100)		0.3 0.32					

GEOTECH BH PLOTS LONDON NORTH (EAST).GPJ GINT US LAB.GDT 4/20/06



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BORING NUMBER LAC-BOR-3

PAGE 1 OF 1

CLIENT ILIT (Independent Levee Investigation Team) PROJECT NAME London Ave. Canal - North (East)
 PROJECT NUMBER _____ PROJECT LOCATION London Ave. Canal, New Orleans, Louisiana
 DATE STARTED 2/11/06 COMPLETED 2/11/06 GROUND ELEVATION -7.5 ft N.A.V.D. HOLE SIZE 4"
 DRILLING CONTRACTOR STE GROUND WATER LEVELS:
 DRILLING METHOD Mud Rotary ▽ AT TIME OF DRILLING 9.0 ft / Elev -16.5 ft
 LOGGED BY A. Athanasopoulos CHECKED BY D. Cobos-Roa AT END OF DRILLING ---
 NOTES _____ AFTER DRILLING N/A

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
								20 40 60 80	60 120 180 240
								☐ FINES CONTENT (%) ☐	
								20 40 60 80	
0		TOPSOIL: Augered through first 2' of fill.							
		SM: Gray silty sand with some dark brown organics. From top 2" to 3", transitions with gray clay with a lot (~50%) of shells about 7" to 9". signs of organic matter and roots at ~13". increasing organic content and roots with depth. OL: Organic matter, fibrous.	ST 1	60 (100)					
			ST 2	40 (100)					
		CLS: Medium, gray sandy clay to sand.	ST 3	60 (100)		0.27			
10		SC: Firm, gray sand with clay.	ST 4	68 (100)		0.37			
			⊗ SS	(100)	1-2-2 (4)				
			⊗ SS	(100)	3-3-4 (7)				
20			⊗ SS	(100)	4-4-8 (12)				
		Bottom of hole at 22.5 feet.							



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BORING NUMBER LAC-BOR-4

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Ave. Canal - North (East)
PROJECT NUMBER _____ **PROJECT LOCATION** London Ave. Canal, New Orleans, Louisiana
DATE STARTED 2/11/06 **COMPLETED** 2/11/06 **GROUND ELEVATION** -7.0 ft N.A.V.D. **HOLE SIZE** N/A
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **▽ AT TIME OF DRILLING** 1.5 ft / Elev -8.5 ft
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES _____ **▽ .25hrs AFTER DRILLING** 1.5 ft / Elev -8.5 ft

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲					
								20	40	60	80		
0													
	▽		ST 1	82 (100)									
		Did not recover soil, too weak perhaps due to rain of previous night.	ST 2	0 (100)									
	[Dotted pattern]	SP: Gray sand with fines.	SS	44 (100)	1-2-2 (4)								
10	[Dotted pattern]	SP: Gray sand with fines.	SS	44 (100)	1-3-2 (5)								
	[Diagonal lines]	SC: Soft, clayey sand to cleaner sand.	SS	67 (100)	2-2-2 (4)								
	[Dotted pattern]	SP: Almost clean sand, strong organic odor.	SS	83 (100)	4-5-5 (10)								
	[Dotted pattern]	SP: Clean, gray sand.	SS	89 (100)	3-6-7 (13)								
		Bottom of hole at 19.5 feet.											





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BORING NUMBER LAC-CON-1

PAGE 1 OF 1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Ave. Canal - North (East)
PROJECT NUMBER _____ **PROJECT LOCATION** London Ave. Canal, New Orleans, Louisiana
DATE STARTED 2/8/06 **COMPLETED** 2/8/06 **GROUND ELEVATION** -7.7 ft N.A.V.D. **HOLE SIZE** N/A
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** 2.8 ft / Elev -10.5 ft
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES _____ **.25hrs AFTER DRILLING** 1.7 ft / Elev -9.4 ft

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲					
								20	40	60	80		
0		TOPSOIL: Dark brown silty clay, roots.	ST 1	35 (100)									
		OH: Black organic clay, roots (fibrous), strong organic odor.	ST 2	63 (100)									
		CL-ML: Gray silty clay, trace organics, transitions to gray silty clay.	ST 3	80 (100)									
		SC: Gray, fine (sugar) sand with some silt.	ST 4	0 (100)									
		OH: Organic clay, roots.	SS 5	100 (100)	5-4-3 (7)								
		CL-ML: Gray silty clay.	SS 6	67 (100)	3-2-3 (5)								
		SC-SM: Gray silty, clayey sand.	SS 7	67 (100)	0-0-1 (1)								
		SM: Gray sand.											
10		SM: Gray silty sand.											
		No recovery.											
		SP: Light gray, clean sand, strong organic odor, shells seen half way through split spoon.	SS 8	100 (100)	4-6-10 (16)								
		Bottom of hole at 17.5 feet.											

GEOTECH BH PLOTS LONDON NORTH (EAST).GPJ GINT US LAB.GDT 4/20/06



Base map: Google Earth

LEGEND

●	SLON-#.05C	USACE 2005 CPT
●	LACS-CPT-#	ILIT 2006 CPT
⊕	LACS-BOR-#	ILIT 2006 BORING
⊖	LACS-CON-#	ILIT 2006 CONTINUOUS BORING

**LONDON AVENUE CANAL (SOUTH)
APPROXIMATE ILIT BORING AND CPT LOCATIONS
New Orleans, Louisiana**

SIZE	DATE 04/21/2006	DWG NO. LACS BOR & CPT SitePlan	REV
SCALE	Not Drawn To Scale		SHEET



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BORING NUMBER LACS-BOR-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Avenue Outfall Canal -South
PROJECT NUMBER _____ **PROJECT LOCATION** London Avenue Canal, New Orleans, Louisiana
DATE STARTED 2/16/06 **COMPLETED** 2/16/06 **GROUND ELEVATION** -15 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** 8.5 ft / Elev -8.7 ft
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES ~40ft (?) north of breach on protected side. **.25hrs AFTER DRILLING** 8.1 ft / Elev -8.3 ft

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
0								20	40 60 80
		Bottom-FILL: Tan clay.	ST 1	48 (100)					
		CH: Soft, gray clay with organics.	ST 2	62 (100)					
		Auger to 8.5'.							
10		SC: Interface of clays and sands sampled. Bottom-Loose sand, 3" gap between sample and bottom of tube.	ST 3	70 (100)					
		Bottom of hole at 10.5 feet.							



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BORING NUMBER LACS-BOR-2

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Avenue Outfall Canal -South

PROJECT NUMBER _____ **PROJECT LOCATION** London Avenue Canal, New Orleans, Louisiana

DATE STARTED 2/16/06 **COMPLETED** 2/16/06 **GROUND ELEVATION** 4.6 ft N.A.V.D. **HOLE SIZE** 5"

DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**

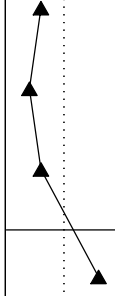
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** N/A

LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---

NOTES ~20ft south of breach **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0														
		GP: Emergency fill. Augered through first 5'.												
10			ST 1	40 (100)										
			ST 2	67 (100)										
20			ST 3	90 (100)										
			SS	67 (100)	3-5-7 (12)									
			SS	44 (100)	2-3-5 (8)									
			SS	67 (100)	4-6-6 (12)									
30			SS	83 (100)	11-18-14 (32)									
		Bottom of hole at 32.5 feet.												

GEOTECH BH PLOTS LONDON SOUTH.GPJ GINT US LAB.GDT 4/20/06





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BORING NUMBER LACS-BOR-3

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Avenue Outfall Canal -South
PROJECT NUMBER _____ **PROJECT LOCATION** London Avenue Canal, New Orleans, Louisiana
DATE STARTED 2/15/06 **COMPLETED** 2/15/06 **GROUND ELEVATION** -2.3 ft N.A.V.D. **HOLE SIZE** 6"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** N/A
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES 100ft east from old sheetpile wall **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲						
								20	40	60	80			
0		Hollow-stem auger to 5'.												
			ST 1	57 (100)										
		Interface sampled.	ST 2	55 (100)										
10		SP: Loose, saturated sands.	SS	67 (100)	2-6-9 (15)									
		Bottom of hole at 11.5 feet.												



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BORING NUMBER LACS-CON-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Avenue Outfall Canal -South

PROJECT NUMBER _____ **PROJECT LOCATION** London Avenue Canal, New Orleans, Louisiana

DATE STARTED 2/14/06 **COMPLETED** 2/15/06 **GROUND ELEVATION** -15 ft N.A.V.D. **HOLE SIZE** 4"

DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**

DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** 8.5 ft / Elev -8.7 ft

LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---

NOTES North of breach, inboard slope of levee, 5ft north of LACS-BOR-1. **.25hrs AFTER DRILLING** 8.0 ft / Elev -8.2 ft

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲					
								20	40	60	80		
								PL MC LL 60 120 180 240					
								☐ FINES CONTENT (%) ☐					
								20 40 60 80					
0		SP: Light gray, very fine sand with shell fragments, recently deposited sediment. Auger to 2'.											
		FILL: Stiff, tan-brown, medium plasticity clay (CL) with sand and traces of wood and roots. Reddish-brown stains (oxide) and fine sand lenses.	ST 1	43 (100)									
		FILL: Tan-brown medium plasticity clay, moist, grading stiffer.	ST 2	75 (100)									
		SC: Loose, very fine, uniform clayey sand lens, very moist.	ST 3	65 (100)									
		CH: Stiff, dark brown-black and gray clay, very moist, with organic matter, roots, and 1" thick sand lens.	ST 4	55 (100)									
		CH: Very soft, tan and gray clay with trace organic matter and very fine sand lenses, very high water content.	ST 5	110 (100)									
		SC: Clayey sand lens.											
		CH: Medium firm, gray clay, grading to stiffer with depth, very moist, with roots and wood fragments, and root induced channels of small diameters (diameter<1mm).											
		CL: Firm, gray sandy clay, saturated, transition zone.											
		SP: Gray, clean fine, uniform sand, subangular to subrounded particles, saturated, traces of wood and strong organic odor.	SS	67 (100)	6-6-12 (18)								
		SP: Medium dense, light gray and tan, very fine sand, very moist with shell fragments. Boring stopped 02/14/06 @14', 17:15. Restarted 02/15/06, 09:25.	SS	67 (100)	11-16-22 (38)								
		Boring stopped 02/14/06 @14', 17:15. Restarted 02/15/06 @09:25. 0.5' cleaned with 4" diameter auger.											
		SP: Medium dense, light gray, fine uniform sand, with organic odor.											
		Clean hole- auger 0.5'.											
		SP: Dense, light gray-white, clean, uniform sand, fine and grading to medium coarse subangular particles, moist, organic odor.	SS	73 (100)	20-36-50 (86)								
		Augered 6'.											
20													
		SP: Dense, light gray and white, fine to medium coarse sand, subangular particles.	SS		21-35-50 (85)								
		Bottom of hole at 25.5 feet.											

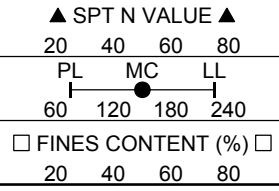


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BORING NUMBER LACS-CON-3

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** London Avenue Outfall Canal -South
PROJECT NUMBER _____ **PROJECT LOCATION** London Avenue Canal, New Orleans, Louisiana
DATE STARTED 2/15/06 **COMPLETED** 2/15/06 **GROUND ELEVATION** -2.3 ft N.A.V.D. **HOLE SIZE** 6"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Mud Rotary **AT TIME OF DRILLING** N/A
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES East bank. Backyard of house on Warrington & Wilton Dr. **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								20	40
0		GP: Gravel-repair fill. Hollow-stem auger to 5'. water velocity determined on toe of repair fill, approximately 30' West.							
10		CH: Soft, gray clay with 3/8" wood fragments, traces of organic matter, very moist.	ST 1	70 (100)					
		CH: Gray clay, grading to firmer, high water content, with root channels and reddish-brown (oxide?) stains surrounding the channels. These elements appear to be opened and connected.	ST 2	88 (100)					
		CH: Soft, light gray clay with abundant shell fragments and wood, very high moisture content, reddish-brown oxide stained root channels.	ST 3	83 (100)					
		SC: Very soft, gray fine, uniform clayey sand, subangular, very high water content, trace wood and roots.	SS	50 (100)	3-8-14 (22)				
		SP: Loose, gray, fine sand with organic matter and roots, grading to denser with depth.	SS	61 (100)	2-10-25 (35)				
		Clean hole- auger 0.5'.							
		Clean hole- auger 5'.							
20		SP: Medium dense sand. Same material as 13.5' to 15'.	SS		13-15-19 (34)				
		Bottom of hole at 21.5 feet.							



GEOTECH BH PLOTS LONDON SOUTH.GPJ GINT US LAB.GDT 4/20/06

FLORIDA AVE.

OLD SHEET PILE

JOURDAN AVENUE

NORTH CLAIBORNE AVE.

IHNC-N-CPT-1
 IHNC-N-BOR-1
 IHNC-N-CON-1

= N. Dorgenois St.

= N. Rocheblave St.

= N. Derbigny St.

= N. Miro St.

= N. Galvez St.

= N. Johnson St.

IHNC-S-BOR-3
 IHNC-S-CPT-3

IHNC-S-BOR-2
 IHNC-S-CPT-2

= N. Prieur St.

= N. Roman St.

IHNC-S-CPT-1
 IHNC-S-BOR-1
 IHNC-S-CON-1

= N. Derbigny St.

LEGEND

- IHBR-N-BOR-# IHNC NORTH 2006 ILIT BORING
- IHNC-N-CON-# IHNC NORTH 2006 ILIT CONTINUOUS BORING
- IHNC-S-CPT-# IHNC NORTH 2006 ILIT CONE PENETRATION TEST
- IHBR-S-BOR-# IHNC SOUTH 2006 ILIT BORING

**LOWER NINTH WARD
 APPROXIMATE ILIT BORING & CPT LOCATIONS**

New Orleans, Louisiana

SIZE	DATE	DWG NO.	REV
	04/21/2006	IHNC BOR & CPT SitePlan	

SCALE	Not Drawn To Scale	SHEET
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BORING NUMBER IHNC-N-BOR-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** Lower Ninth Ward
PROJECT NUMBER _____ **PROJECT LOCATION** Lower Ninth Ward, New Orleans, Louisiana
DATE STARTED 2/21/06 **COMPLETED** 2/21/06 **GROUND ELEVATION** -3.38 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger **AT TIME OF DRILLING** N/A
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES Middle of North breach (Florida Ave.) **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
0		Had to drill on the street because of concrete blocks found ~2' to 3' deep where initial location of borehole was selected. Augered through asphalt.							
		OL: Black, organic matter, roots, gray clay.	ST 1	30 (100)		0.09			
		CL: Dark brown, silty clay, roots, silty fines.	ST 2	53 (100)					
10		CH: Very soft, gray and dark gray clay with peat.	ST 3	77 (100)					
		CL-ML: Gray, silty clay, some very fine sand, roots.	ST 4	90 (100)					
		Bottom of hole at 15.0 feet.							



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BORING NUMBER IHNC-S-BOR-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** Lower Ninth Ward
PROJECT NUMBER _____ **PROJECT LOCATION** Lower Ninth Ward, New Orleans, Louisiana
DATE STARTED 2/17/06 **COMPLETED** 2/17/06 **GROUND ELEVATION** .93 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger **AT TIME OF DRILLING** N/A
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES South end of South breach (Claiborne) **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
0								20	40 60 80
		FILL: Augered through the first 6" to go through placed fill by USACE (fill came from old levee and was dumped).						60	120 180 240
		CH: Medium, gray clay.	ST 1	37 (100)		0.42			
10		WOOD	ST 2	68 (100)					
		CH: Soft, gray clay with organics and wood.	ST 3	63 (100)		0.13			
		Bottom of hole at 14.0 feet.				0.19			



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BORING NUMBER IHNC-S-BOR-2

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** Lower Ninth Ward
PROJECT NUMBER _____ **PROJECT LOCATION** Lower Ninth Ward, New Orleans, Louisiana
DATE STARTED 2/17/06 **COMPLETED** 2/17/06 **GROUND ELEVATION** -2.7 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger **AT TIME OF DRILLING** N/A
LOGGED BY A. Athanasopoulos **CHECKED BY** D. Cobos-Roa **AT END OF DRILLING** ---
NOTES Middle of South breach (Claiborne) **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
0								20	40 60 80
		Augered through first 4' to get below fill.						60	120 180 240
		roots	ST 1	53 (100)					
		CH: Gray clay.	ST 2	62 (100)					
10			ST 3	72 (100)					
			ST 4	90 (100)					
		Bottom of hole at 13.0 feet.							



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BORING NUMBER IHNC-S-BOR-3

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** Lower Ninth Ward
PROJECT NUMBER _____ **PROJECT LOCATION** Lower Ninth Ward, New Orleans, Louisiana
DATE STARTED 2/21/06 **COMPLETED** 2/21/06 **GROUND ELEVATION** -2.3 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger **AT TIME OF DRILLING** ---
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								PL	MC LL
0		Dry auger down to 7'.						20 40 60 80	
10		Top- CH: Gray clay. Bottom- CH: Gray clay and brown OH, roots.	ST 1	53 (100)				60 120 180 240	
		CH: Very soft, gray clay with peat.	ST 2	77 (100)		0.08			
		Bottom- Gray clay.	ST 3	77 (100)		0.11			
		Bottom of hole at 15.5 feet.							



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BORING NUMBER IHNC-S-CON-1

CLIENT ILIT (Independent Levee Investigation Team) **PROJECT NAME** Lower Ninth Ward
PROJECT NUMBER _____ **PROJECT LOCATION** Lower Ninth Ward, New Orleans, Louisiana
DATE STARTED 2/17/06 **COMPLETED** 2/17/06 **GROUND ELEVATION** .93 ft N.A.V.D. **HOLE SIZE** 4"
DRILLING CONTRACTOR STE **GROUND WATER LEVELS:**
DRILLING METHOD Hollow Stem Auger **AT TIME OF DRILLING** ---
LOGGED BY D. Cobos-Roa **CHECKED BY** A. Athanasopoulos **AT END OF DRILLING** ---
NOTES South side of South breach, on emergency fill east of sheet pile. **AFTER DRILLING** ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY %	BLOW COUNTS (N VALUE)	Su, Strength (tsf)	Dry Unit Weight (tsf)	▲ SPT N VALUE ▲	
								20	40
0		Augered down to 40' on emergency repair fill.							
10		CH: Firm, light brown gray clay with trace of roots and some root-channels with oxide stains. Transition to gray clay, moderately firm, moist, with increasing amount of wood and roots.	ST 1	70 (100)					
		OH: Very soft, dark brown-black organic clay with roots and wood, increasing water content. Bottom 0.4ft is wood.	ST 2	30 (100)					
		WOOD: Bottom 0.3' tube is mixed with soft, gray clay, very moist. Wood recovered from 5.6' to 8.3'. WOOD	ST 3	90 (100)					
		CH: Very soft, gray clay, saturated, with large amount of wood fragments and roots. High moisture content with trace organic matter, wood, and significant amount of roots. Grading to firmer with depth. Unable to perform vane due to large amount of roots and wood in sample.	ST 4	78 (100)					
		Bottom of hole at 12.0 feet.							