US Army Corps
of Engineers
New Orleans District

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
HURRICANE AND STORM DAMAGE
RISK REDUCTION SYSTEM (HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE
(WBV-14C.2)

JEFFERSON PARISH, LOUISIANA

ED09-071
OCTOBER 2009

THIS PROJECT WAS DESIGNED BY THE NEW ORLEANS DISTRICT CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152. SIGNATURES INDICATE OFFICIAL RECOMMENDATION OF ALL DRAWINGS IN THIS SET.

APPROVED BY:

DISTRICT COMMANDER

APPROVAL RECOMMENDED BY:

PTL CIVIL BRANCH

CHIEF CIVIL BRANCH

CHIEF ENGINEERING DIVISION

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

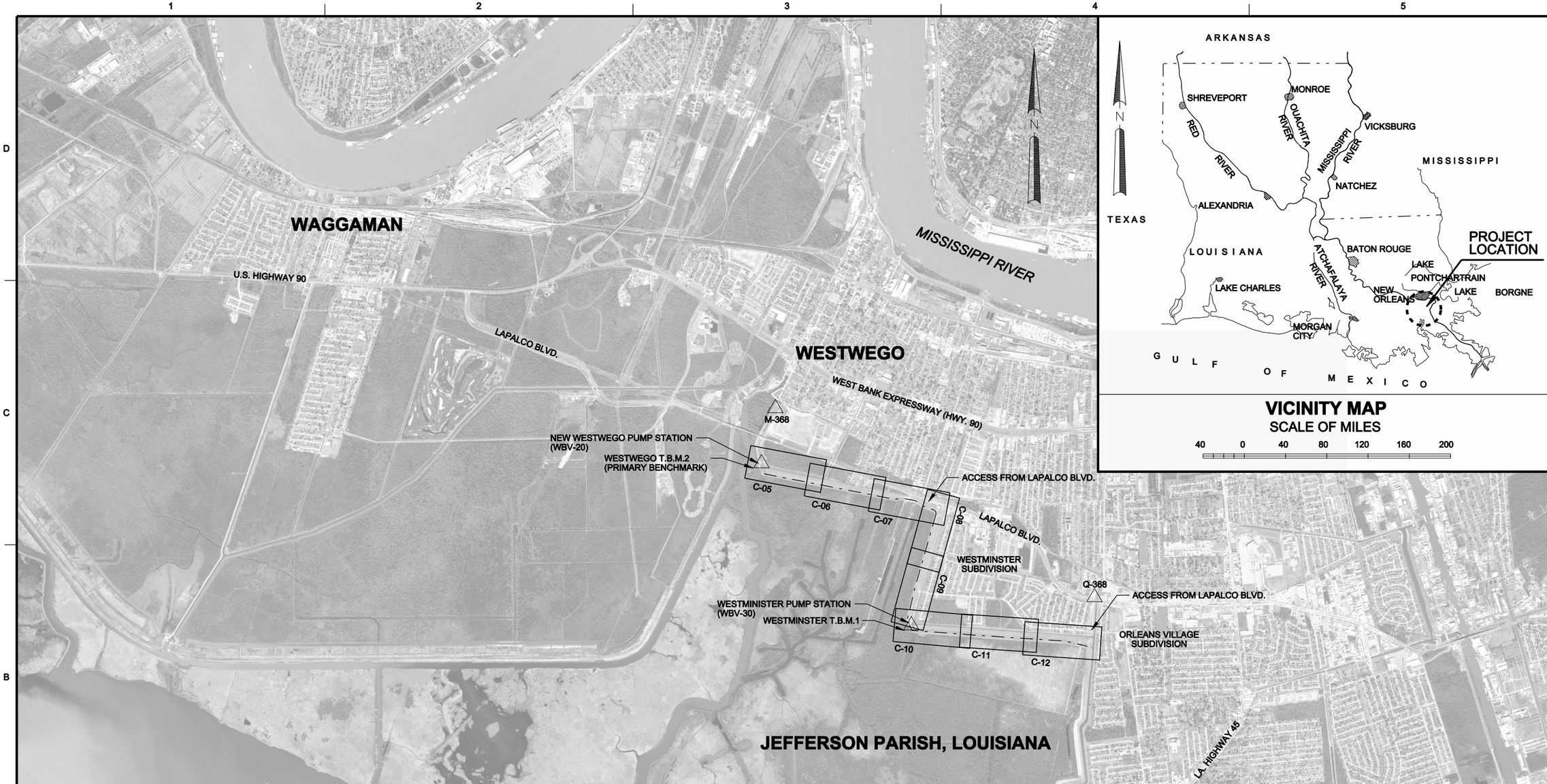
MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: BBN/ LJ/Jerry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
SIZE: ANSI D
FILE NAME: ED-09-071_C-01_00.dgn
DATE: HAC-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0026
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-8-48552

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
COVER SHEET
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-01



LOCATION MAP

SCALE: 1" = 2000'

2000' 0 2000' 4000' 6000' 8000'

VICINITY MAP

SCALE OF MILES

40 0 40 80 120 160 200

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NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
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SUBMITTED BY: Ellsworth J. Pitre, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
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DATE: 14-OCTOBER-2009
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CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-A-09002

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
LOCATION AND VICINITY MAPS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-02

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TABULATION OF BENCHMARK (VERTICLE CONTROL)

BENCH MARKS	ELEVATION	DESCRIPTION
M-368 2004.65 (NAVD88)	EL. 1.10 X= 3654384.874 Y= 508320.654 LAT : 29^53'33" LONG : 90^09'16"	1.8 KM (1.15 MI) ALONG U.S. HIGHWAY 90 FROM THE JUNCTION OF AVONDALE GARDEN ROAD IN AVONDALE, THENCE 4.4 KM (2.75 MI) SOUTHEAST ALONG LAPALCO BLVD. AT THE EAST END OF A LARGE CONCRETE BRIDGE OVER BAYOU SEGNETTE AND THE DISK SET IN TOP OF CURBING.
Q-368 2004.65 (NAVD88)	EL. 2.3 X= 3666840.25 Y= 502396.15 LAT : 29^52'33.0624" LONG : 90^06'55.2176"	2.4 KM (1.50 MI) NORTHERLY ALONG STATE HIGHWAY 45 (BARATARIA BOULEVARD) FROM THE JUNCTION OF STATE HIGHWAY 3134 IN MARRERO, THENCE 1.7 KM (1.05 MI) WESTERLY ALONG LAPALCO BOULEVARD, 21.1 M (69.2 FT) NORTH OF THE CENTERLINE OF THE WESTBOUND LANES OF THE BOULEVARD, 6.2 M (20.3 FT) EAST OF THE CENTER OF A ROAD LEADING TO THE MARRERO WASTE WATER TREATMENT PLANT AND WAREHOUSE AT 6250 LAPALCO BOULEVARD, 1.7 M (5.6 FT) EAST OF THE EAST POST OF A GATE, 0.5 M (1.6 FT) SOUTH OF A WITNESS POST AND THE SOUTHEAST CORNER OF A CHAIN-LINK FENCE ENCLOSING THE PLANT, AND 0.3 M (1.0 FT) BELOW THE LEVEL OF THE BOULEVARD. NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.
WESTWEGO T.B.M.2 2004.65 (NAVD88)	EL. -3.49 X= 3653925.864 Y= 507588.583 LAT : 29^53'25.8" LONG : 90^09'21.3"	AT THE NEW WESTWEGO PUMPING STATION, STAMPED WESTWEGO T.B.M.2, AN ALUMINUM CAP IS EPOXIED TO THE NORTHEAST CONCRETE GUIDE WALL NEAR BRIDGE, WHICH IS LOCATED IN EAST SIDE OF PUMPING STATION PAINTED YELLOW. (PRIMARY BENCHMARK)
WESTMINSTER T.B.M.1 2004.65 (NAVD88)	EL. -1.17 X= 3654395.266 Y= 507310.551 LAT : 29^53'23" LONG : 90^09'16"	AT THE WESTMINSTER PUMPING STATION, STAMPED WESTMINSTER T.B.M.1, AN ALUMINUM CAP IS EPOXIED TO THE SOUTHEAST CORNER OF THE PUMPING STATION AND THE SOUTHWEST CORNER OF A BRIDGE PAINTED YELLOW.

TABULATION OF HORIZONTAL CONTROL

MONUMENT	POSITION	DESCRIPTION
WW-28 2004.65 (NAVD88)	X= 3654059.41 Y= 507409.54 LAT : 29^53'24.014" LONG : 90^09'19.804"	THE MONUMENT IS AN ALUMINUM DISK SET ON A ROD STAMPED "WW-28, 2001" AND IS LOCATED IN THE TOWN OF WESTWEGO, JEFFERSON PARISH, LOUISIANA. IT LIES APPROXIMATELY 135 FEET EAST-SOUTHEAST OF THE SOUTHEAST END OF THE SOUTH INTAKE GUIDE WALL OF THE NEW WESTWEGO PUMP STATION AND 45 FEET SOUTH-SOUTHWEST OF THE SOUTH EDGE OF A DRAINAGE CANAL.
WL-8 2004.65 (NAVD88)	X= 3666459.97 Y= 500858.47 LAT : 29^52'17.883" LONG : 90^06'59.723"	THE MONUMENT IS A BRASS DISK SET ON A ROD STAMPED "WL-8, 1988" AND IS LOCATED IN THE TOWN OF WESTWEGO, JEFFERSON PARISH, LOUISIANA. IT LIES APPROXIMATELY 275 FEET SOUTH-SOUTHEAST OF THE INTERSECTION OF THE CENTERLINE OF LOUIS PHILLIPE STREET WITH THE EAST EDGE OF THE END OF PAVEMENT OF SAID STREET, 45 FEET SOUTH-SOUTHWEST OF THE SOUTH EDGE OF A DRAINAGE CANAL, AND 205 FEET WEST OF THE SOUTHWEST CORNER OF A FOOT BRIDGE OVER THE CANAL.

GENERAL NOTES:

1. THE DESCRIPTIONS OF HORIZONTAL AND VERTICAL CONTROL POINTS ARE AVAILABLE FROM THE NEW ORLEANS DISTRICT SURVEY SECTION (504) 862-1852.
2. ORIGINAL DATA COMPILED NAD 83 US SURVEY FOOT UNLESS OTHERWISE NOTED.
3. INSIDE PLAN AREAS, POLYCONIC PROJECTION 1983 NORTH AMERICAN DATUM IS REPRESENTED BY SOLID TICKS AND LAMBERT CONFORMAL CONIC PROJECTION IS REPRESENTED BY DASHED TICKS.
4. XY COORDINATES USED IN DRAWINGS REFER TO HORIZONTAL DATUM: NAD 83, STATE PLANE, LA SOUTH, ZONE 1702, US FEET.
5. AERIAL PHOTOGRAPHY FLOWN IN 2008.
6. AZIMUTHS SHOWN ARE MEASURED CLOCKWISE FROM THE NORTH.
7. ALL AZIMUTHS ARE 90° UNLESS OTHERWISE STATED.
8. DIMENSIONS AND/OR ELEVATIONS MARKED PLUS OR MINUS (+/-) ARE APPROXIMATE READING. THE CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN THE FIELD.
9. DRAWINGS ARE GENERALLY TO SCALE, BUT SHOULD NOT BE SCALED. ALL DIMENSIONS AND ELEVATIONS MARKED N.T.S. ARE "NOT TO SCALE".
10. ALL ELEVATIONS ARE EXPRESSED IN FEET AND REFER TO NAVD 88 ADJUSTED LEVELING (2004.65), UNLESS OTHERWISE STATED.
11. LOCATION OF EXISTING UTILITIES INDICATED ON THE PLAN SHEETS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE BASED, IN PART, ON INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION. SEE SPECIFICATIONS FOR A LIST OF ALL UTILITY CONTACTS.
12. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONSTRUCTION OPERATIONS. THE DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
13. NOISE CONTROL - CONTRACTOR SHALL TAKE MEASURES TO AVOID UNNECESSARY NOISE APPROPRIATE FOR THE AMBIENT SOUND LEVELS IN THE AREA DURING WORKING HOURS. ALL CONSTRUCTION MACHINERY & VEHICLES SHALL BE EQUIPPED WITH STANDARD SOUND MUFFLING DEVICES, AND OPERATED IN A MANNER TO CAUSE THE LEAST NOISE, CONSISTENT WITH EFFICIENT PERFORMANCE OF THE WORK.
14. DUST CONTROL - CONTRACTOR SHALL TAKE MEASURES TO PREVENT UNNECESSARY DUST WHILE TRANSPORTING EARTHEN MATERIAL WITHIN THE LEVEE RIGHT-OF-WAY. THE EMBANKMENT SHALL BE KEPT MOIST TO PREVENT BLOWING.
15. CONTRACTOR SHALL VISIT THE SITE OF WORK AND COMPLETELY INFORM HIMSELF RELATIVE TO THE EXISTING CONDITIONS PRIOR TO THE START OF CONSTRUCTION.
16. ALL WORK AROUND HIGH VOLTAGE POWER LINES SHALL BE IN ACCORDANCE WITH OSHA AND ENTERGY REQUIREMENTS, AND USACE SAFETY MANUAL "EM-385-1-1"
17. THE CONTRACTOR SHALL MAKE HIS OWN INTERPRETATION OF THE CHARACTER AND CONDITION OF THE MATERIALS WHICH WILL BE ENCOUNTERED BETWEEN THE BORING LOCATIONS. THE CONTRACTOR, AT HIS OWN EXPENSE, MAY MAKE ADDITIONAL SURVEYS AND INVESTIGATIONS AS NECESSARY TO DETERMINE CONDITIONS WHICH WILL AFFECT THE PERFORMANCE OF THE WORK.
18. ALL BRASS DISKS FOUND IN THE FIELD AND MARKED "COE" ARE 1" PIPES AND 3 1/2" BRASS DISKS. THESE DISKS HAVE BEEN PREVIOUSLY SET TO ESTABLISH THE PROJECT BASELINE.
19. OFFSETS REFLECT A PERPENDICULAR OFFSET (90 DEGREES) FROM THE B/L LISTED AS LT. (LEFT) OR RT. (RIGHT), UNLESS OTHERWISE NOTED.

GENERAL CROSS-REFERENCING SYMBOLS

DETAIL/SECTION — A — SECTION/DETAIL TITLE ON SAME DRAWING (CENTERED UNDER SECTION/DETAIL)
SUPPLEMENTAL INFORMATION
SCALE:

DETAIL/SECTION — 2 / 99/999 — SECTION/DETAIL TITLE ON ANOTHER DRAWING (CENTERED UNDER SECTION/DETAIL)
SCALE:

TOP FRONT SIDE
ELEVATION SECTION A — VIEW SUBTITLE (CENTERED UNDER EACH VIEW)

2 — SECTION CUT W/ VIEW SHOWN ON SAME DRAWING

2 / 99/999 — SECTION CUT W/ VIEW SHOWN ON ANOTHER DRAWING

A — DETAIL SYMBOL W/ VIEW SHOWN ON SAME DRAWING

DETAIL SYMBOL W/ VIEW SHOWN ON ANOTHER DRAWING

ABBREVIATIONS

* UNLESS OTHERWISE NOTED ON EACH SHEET

APPROX	APPROXIMATE	HT	HEIGHT
AZ	AZIMUTH	P/L	PIPELIINE
B/L	BASELINE	R/W	RIGHT OF WAY
F/S	FLOOD SIDE	L/W	LANDWARD
P/S	PROTECTED SIDE	MAX	MAXIMUM
L/S	LAND SIDE	MIN	MINIMUM
FS&M	FERTILIZE, SEED AND MULCH	MIRR	MIRRORED
EL.	ELEVATION	MISC	MISCELLANEOUS
EX	EXISTING	NF	NEAR FACE
EXIST	EXISTING	NO	NUMBER
V	VERTICAL	OC	ON CENTER
H	HORIZONTAL	OS	OFFSET
DIA	DIAMETER	MISC	MISCELLANEOUS
DWG	DRAWING	SAN	SANITARY
DIST	DISTANCE	SPEC	SPECIFICATIONS
EJ	EXPANSION JOINT	SST	STAINLESS STEEL
P.I.	POINT OF INFLECTION	T&B	TOP AND BOTTOM
STA	STATION	TYP	TYPICAL
EXIST	EXISTING	UNO	UNLESS NOTED OTHERWISE
FT	FEET	UGND	UNDERGROUND
S/P	SHEET PILE	WJLD	WEST JEFF. LEVEE DISTRICT
N.T.S.	NOT TO SCALE	DOTD	DEPT. OF TRANS. & DEVELOP.

GENERAL LEGEND

P.I. POINT	UNDISTURB BORING LOCATION (97-41M)
FIRE HYDRANT	GENERAL SOIL BORING
MANHOLE	CONE PENETROMETER (CPT)
CATCHBASIN	SHEETPILE
WATER VALVE	FILL
POWER POLE	CUT
EXISTING SANITARY SEWER	LEVEE
EXISTING STORM SEWER	PERPETUAL FLOOD PROT. LEVEE EASEMENT
WATERMAIN	LIMIT OF CONSTRUCTION
EXISTING OVERHEAD P0WER	CONSTRUCTION EASEMENT
EXISTING FENCE	PROJECT BASELINE (B/L)
EXISTING GAS	C/L
EXISTING COMMUN. LINE (TELEPHONE)	
EXISTING CABLE (COAXIAL T.V.)	
EXISTING CULVERT PIPE	

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U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 11/10/2009
SIZE: ANSI D
FILE NAME: ED-SB-07T_C-03_GO.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: WB14C2-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-4-0052

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
INDEX, LEGEND AND ABBREVIATIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-03

TABULATIONS OF PERPETUAL FLOOD PROTECTION LEVEE EASEMENT

P.I.	B/L STATION	DISTANCES MEASURED FROM BASELINE	AZIMUTH	X - COORDINATE	Y - COORDINATE	P.I.	B/L STATION	DISTANCES MEASURED FROM BASELINE	AZIMUTH	X - COORDINATE	Y - COORDINATE
1	67+75.00	304.5'	RT.	3653683.834	507408.047	20	173+62.22	463.3'	RT.	3659652.097	502942.060
2	67+75.00	115.0'	RT.	3653837.042	507519.524	21	187+57.33	1.2'	LT.	3659739.901	501465.136
3	68+06.00	137.4'	RT.	3653837.089	507481.118	22	188+73.12	513.5'	202°14'24.1"	3659223.913	501187.100
4	69+40.30	130.0'	RT.	3653921.883	507376.868	23	188+73.12	285.5'	202°14'24.1"	3659582.842	501097.610
5	69+92.80	292.6'	RT.	3653821.452	507238.855	24	189+04.94	503.0'	RT.	3659703.891	500849.400
6	69+94.62	534.3'	228° 13' 57.04"	3653767.596	506961.787	25	189+95.92	10.0'	RT.	3659831.466	501334.235
7	121+21.88	60.0'	RT.	3659080.848	506374.811	26	191+39.12	503.0'	RT.	3659937.423	500831.901
8	121+07.28	2.4'	LT.	3659078.366	506438.777	27	191+39.12	517.0'	RT.	3659936.375	500817.957
9	123+82.71	29.5'	LT.	3659353.925	506412.985	28	195+19.00	517.0'	RT.	3660315.190	500789.550
10	126+68.05	29.8'	LT.	3659634.099	506358.964	29	195+19.00	503.0'	RT.	3660316.243	500803.548
11	126+75.55	62.5'	LT.	3659647.702	506389.710	30	213+54.74	502.0'	202°14'24.1"	3662148.956	500667.182
12	128+33.40	34.6'	LT.	3659797.333	506332.223	31	213+54.74	10.0'	202°14'24.1"	3662183.674	501157.960
13	128+36.90	54.3'	LT.	3659804.518	506350.925	32	248+72.17	503.0'	RT.	3665660.207	500432.023
14	130+77.83	481.8'	RT.	3659892.568	505774.383	33	249+00.78	10.0'	RT.	3665721.565	500922.025
15	131+65.12	19.3'	LT.	3660116.376	506231.112	34	257+56.45	258.4'	LT.	3666737.582	500822.890
16	131+63.27	0.7'	RT.	3660109.191	506212.410	35	262+37.45	295.8'	RT.	3666195.848	500306.059
17	136+27.48	39.6'	RT.	3660544.044	506045.344	36	263+00.00	361.7'	RT.	3666183.271	500244.272
18	136+28.20	530.0'	RT.	3660407.681	505574.241	37	263+00.00	151.0'	LT.	3666694.501	500206.798
19	140+94.45	28.0'	71°50'9.2"	3661029.590	505962.243						

TABULATIONS OF NEW LEVEE CENTERLINE

C/L STATION P.I.	B/L STATION	DISTANCES MEASURED FROM BASELINE	AZIMUTH	X - COORDINATE	Y - COORDINATE
0+00.00	69+94.62	268.7'	20°19'53.17"	3653965.723	507157.510
18+39.83	87+94.35	266.4'	RT.	3655771.656	506805.948
52+23.24	121+67.14	274.1'	RT.	3659091.776	506154.595
54+05.15	123+43.08	205.7'	RT.	3659270.274	506189.667
55+05.15	124+14.98	135.5'	RT.	3659354.223	506244.888
60+50.64	129+72.63	129.9'	RT.	3659889.846	506141.615
61+50.64	130+48.04	196.4'	RT.	3659943.708	506056.788
64+29.24	133+11.24	287.7'	RT.	3660170.908	505895.533
68+86.03	137+67.25	315.9'	RT.	3660600.789	505741.081
70+20.38	144+98.45	244.5'	RT.	3660656.442	505632.478
98+82.81	173+61.17	238.1'	RT.	3659868.762	502880.559
113+10.81	187+82.59	207.8'	RT.	3659531.205	501493.033
117+76.16	184+17.23	276.1'	RT.	3659734.888	501074.621
142+12.94	213+54.74	275.9'	RT.	3662164.862	500892.623
177+50.86	249+00.89	276.2'	RT.	3665694.927	500657.049
185+90.21	260+55.92	50.0'	RT.	3666511.985	500464.908

TABULATIONS OF EXISTING JEFFERSON PARISH DRAINAGE EASEMENT

P.I.	B/L STATION	DISTANCES MEASURED FROM BASELINE	AZIMUTH
1	67+63.37	162.39'	LT.
2	68+01.75	243.61'	LT.
3	70+74.67	167.25'	LT.
4	92+62.73	166.81'	LT.
5	92+17.81	11.04'	RT.
6	140+94.45	90.50'	75°41'57.2"
7	146+66.00	81.39'	LT.
8	146+68.34	153.13'	LT.
9	190+27.85'	114.57'	LT.
10	213+54.74	111.42'	LT.
11	249+00.89	111.02'	LT.
12	255+97.80	115.42'	LT.

TABULATIONS OF FACILITIES WITHIN THE PERPETUAL FLOOD PROTECTION LEVEE EASEMENT

ITEM	OWNER	DESCRIPTION	B/L STATION	DISPOSITION
CUL	ABANDONED	48" CONCRETE PIPE CULVERT	103+50(+/-) \ 350' RT	○ (1) (B)
G-1	WJLD	GATE @ CENTRAL AVE.	106+07(+/-) \ 60' LT	△
P-1	ENTERGY	AERIAL TRANSMISSION LINES W/ POLES	118+53(+/-)	• • (2) (A)
F-1	WJLD	CHAIN LINK FENCE AND GATE	125+10(+/-)	• (1)
T-1	AT&T	AERIAL TELEPHONE CABLE W/ POLES	125+63(+/-)	• • (2) (A)
P-2	ENTERGY	AERIAL POWERLINE	125+63(+/-)	• • (2) (A)
F-2	PRIVATE	CHAIN LINK FENCE AND GATE	125+38(+/-) \ 250' RT	• (1)
R-1	PRIVATE	RAMP	125+86(+/-) \ ON C/L	• (1)
BB	PRIVATE	BILLBOARD WITH PILE FOUNDATION	130+30 (+/-) \ 30' RT	○ (3) (A)
P-3	ENTERGY	AERIAL POWERLINES W/ POLES	125+63 - 138+15 (ALONG LAPALCO)	▲
F-3	WJLD	CHAIN LINK FENCE	138+15(+/-) \ 154' RT	• (1)
F-4	WJLD	CHAIN LINK FENCE AND GATE	145+07(+/-) \ ON C/L	• (1)
G-2	WJLD	GATE @ RUE LOUIS PHILLIPE	175+10(+/-) \ 110' LT	△
F-5	WJLD	CHAIN LINK FENCE AND GATE	186+40(+/-) \ ON C/L	▲
PL-1	GULF SOUTH PIPELINE	20" DIA. GAS PIPELINE	255+65(+/-) \ ON C/L	▲ ▭ (1) -OR- • • (2)
G-3	WJLD	ACCESS GATE @ ACCESS ROAD	256+43(+/-) \ 258' LT	▲
F-6	WJLD	CHAIN LINK FENCE AND GATE	259+02(+/-) \ ON C/L	• (1)
N/A	WJLD	METAL STATION MARKERS	69+94.62 - 260+56	• (2)

DISPOSITION LEGEND

*	TO BE REMOVED & REPLACED AFTER CONSTRUCTION	(1)	BY CONTRACTOR
• •	TO BE RELOCATED	(2)	BY OWNER
○	TO BE REMOVED	(3)	BY OTHERS
◪	TO BE DE-ENERGIZED	(A)	PRIOR TO CONSTRUCTION
▲	DO NOT DISTURB	(B)	CONCURRENT WITH CONSTRUCTION
△	DO NOT DISTURB, NO ACCESS	▭	TIMBER MAT BRIDGE

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NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DATE: 14-OCTOBER-2009
DWN BY: B.J.L.
CKD BY: T.W.W.
SOLICITATION NO.: W914CZ-09-H-0028
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WESTWEGO TO HARVEY CANAL
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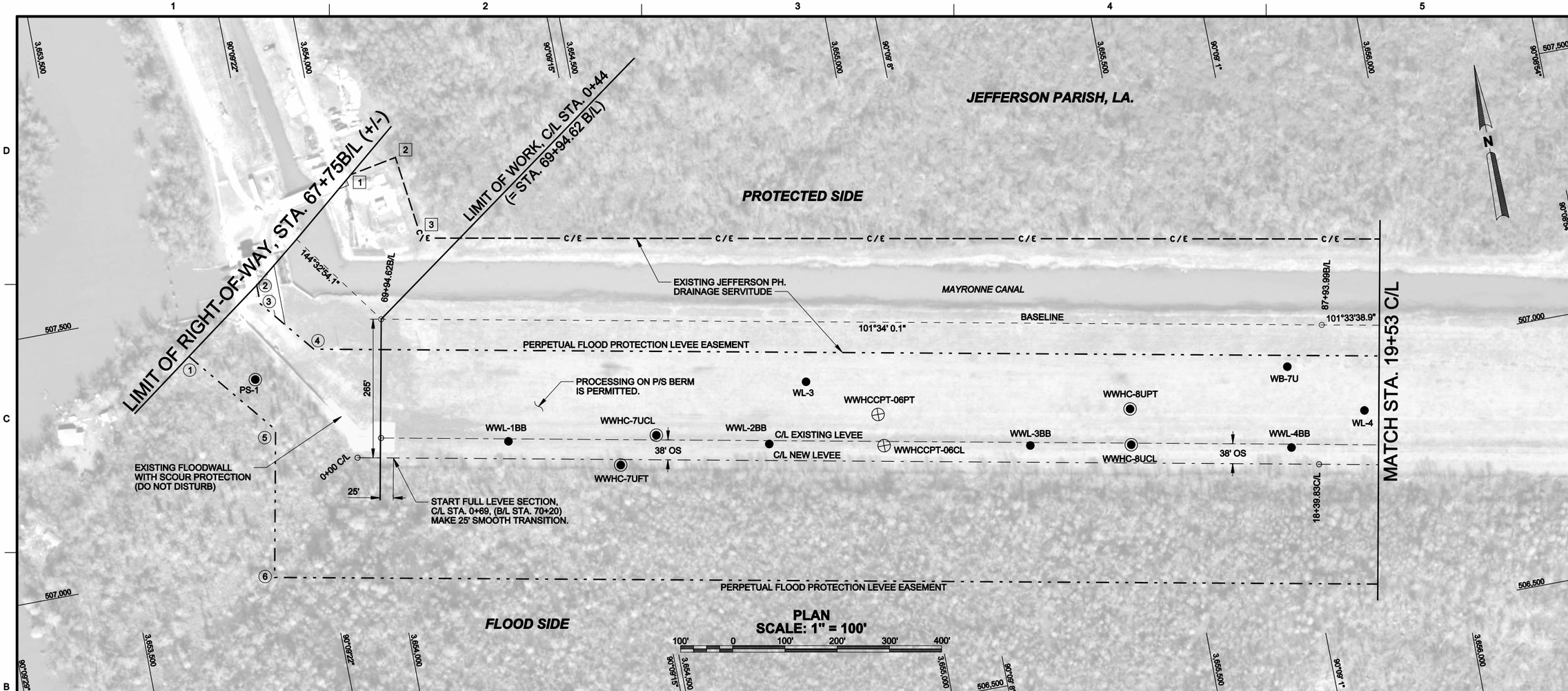
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
TABULATIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-04



PLAN
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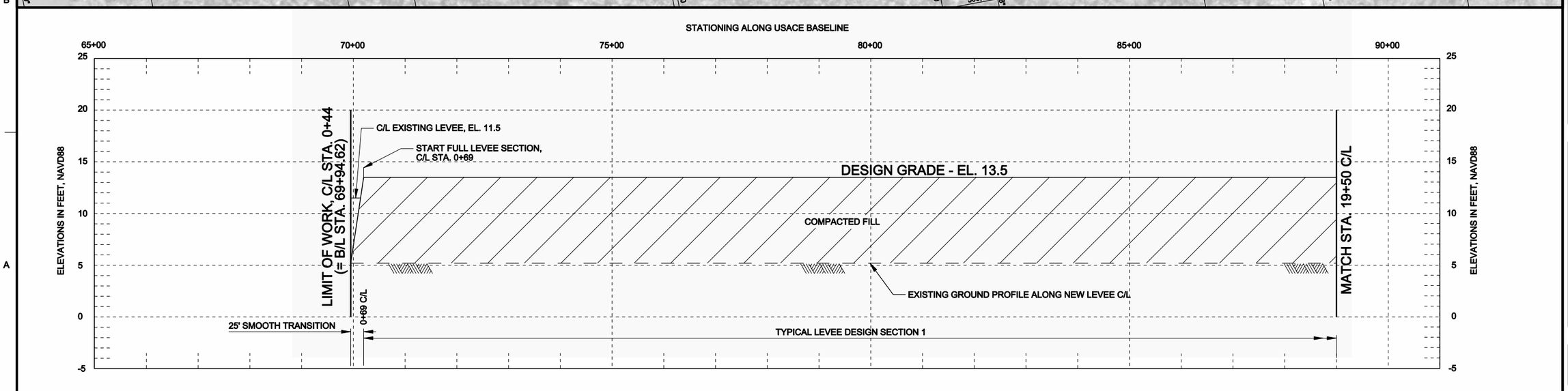


US Army Corps of Engineers®
NEW ORLEANS DISTRICT

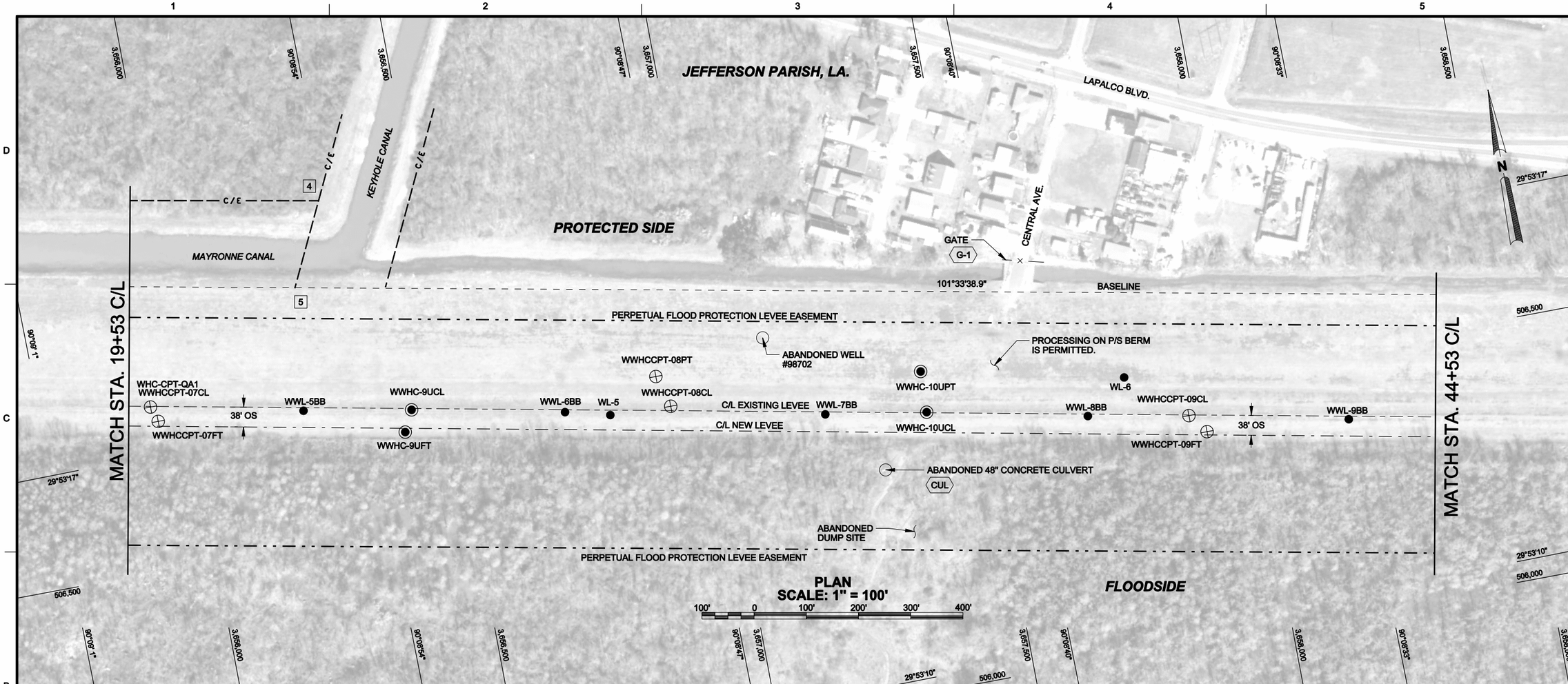
MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

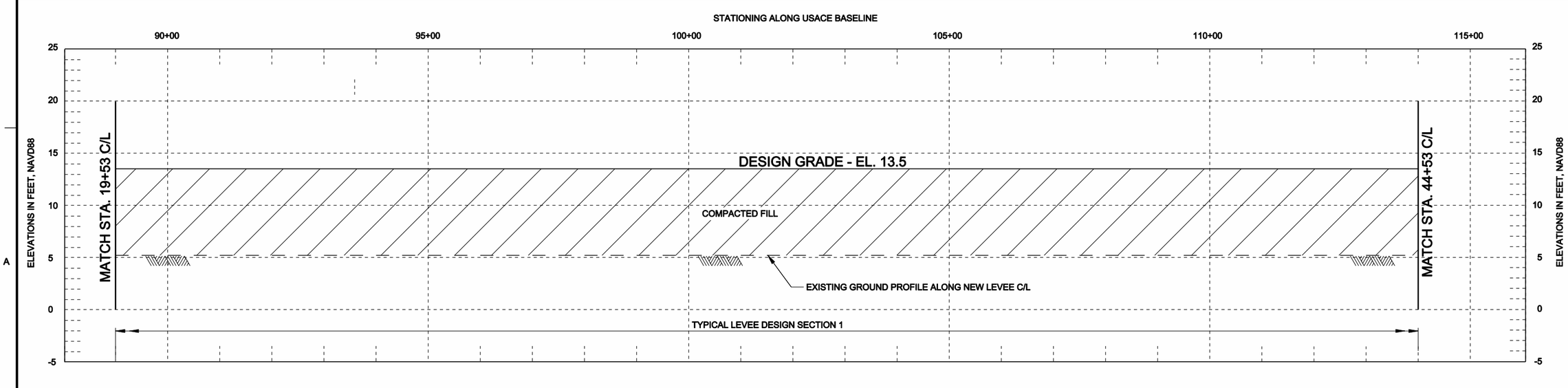
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0028
CONTRACT NO.: HUBZONE IMTOC
FILE NUMBER: H-Hydro
SIZE: ANSI D
FILE NAME: ED-09-071_C-05_C1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-05





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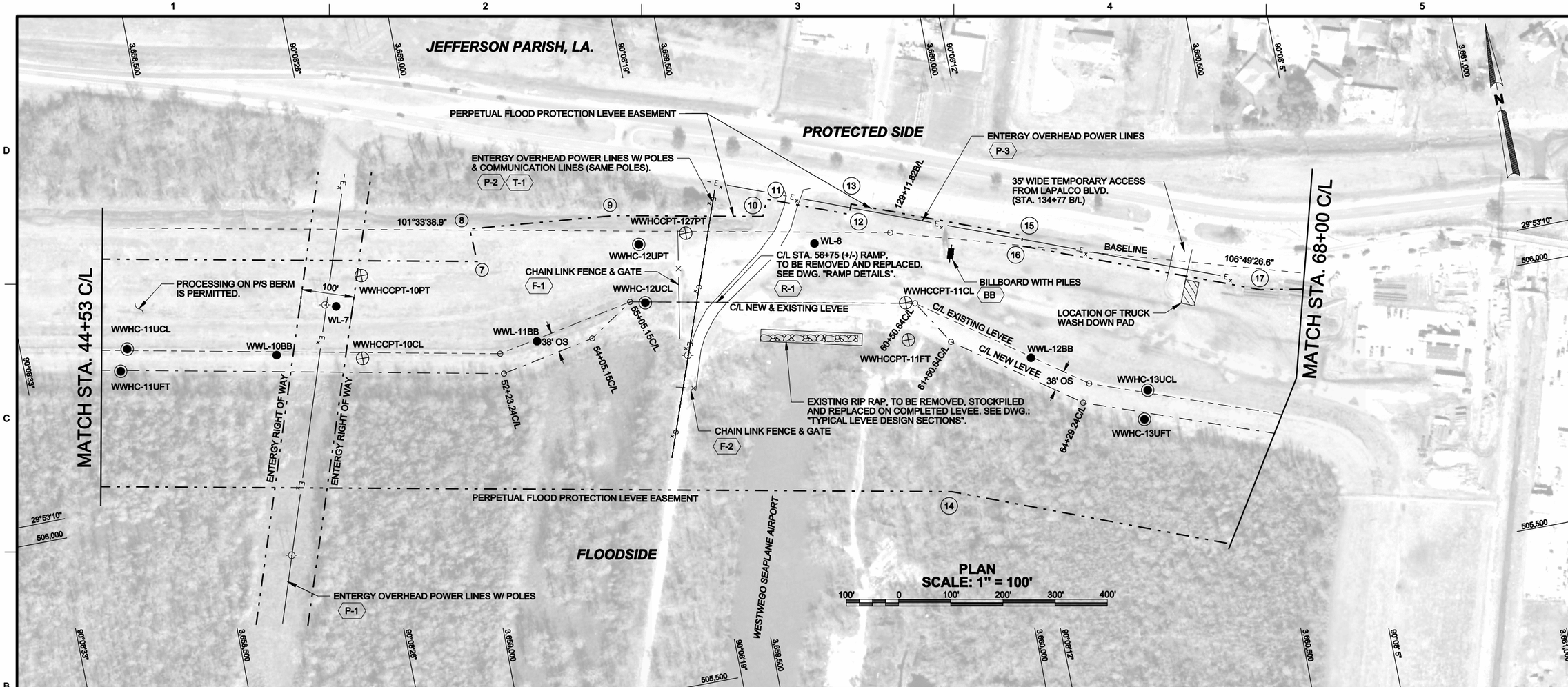
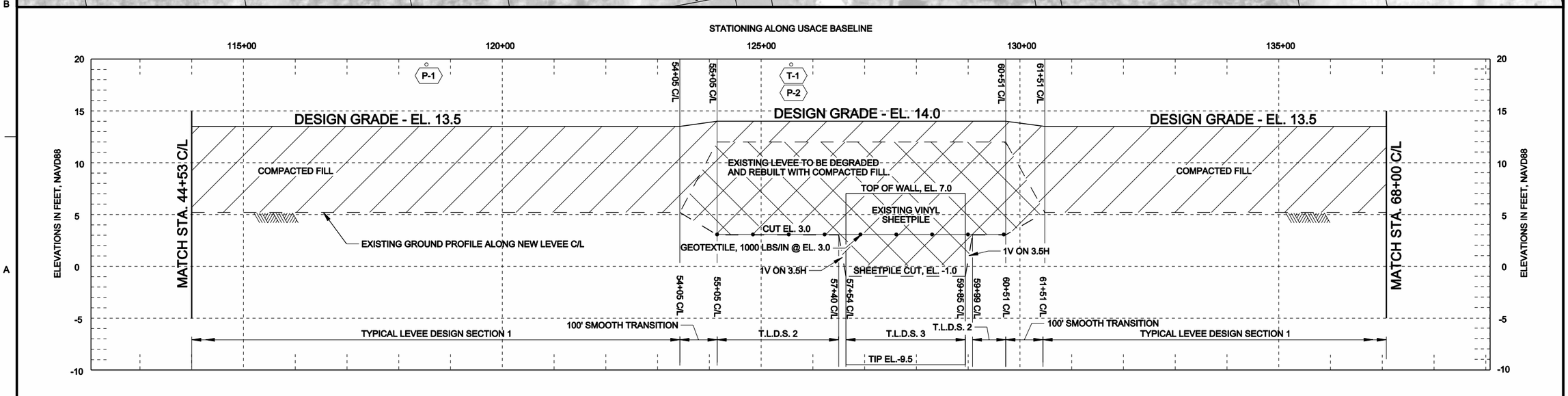
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1 ANSI D
PLOT DATE: 14-Nov-2009
SIZE: ANSI D
FILE NAME: E2-09-07_C-06_C1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W91ACZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-F-40202

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-06





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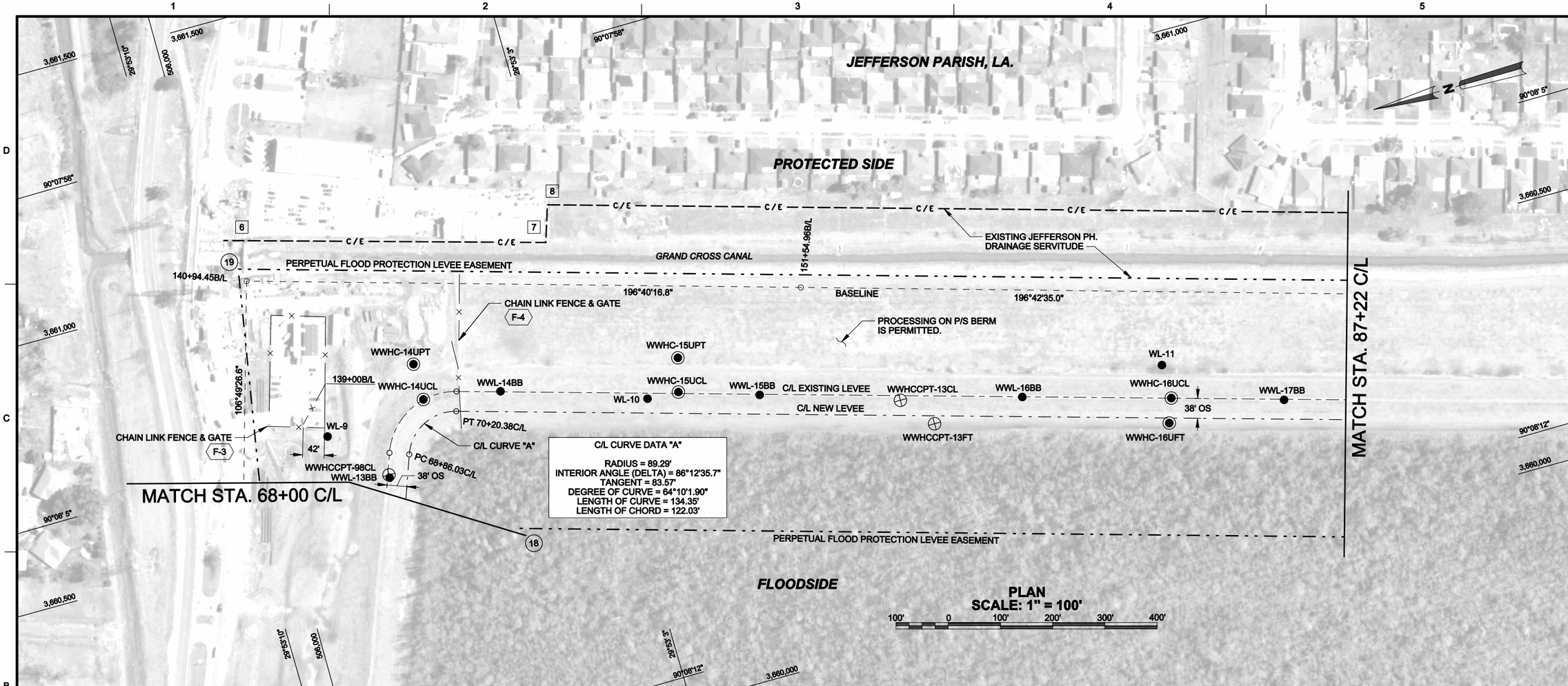
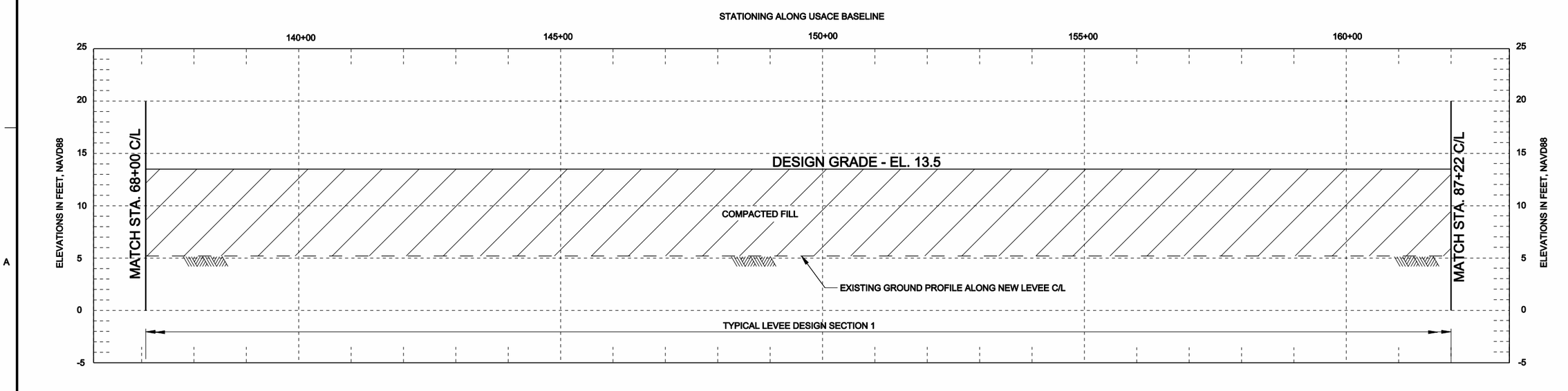
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914CZ-09-H-0028
CONTRACT NO.: HURZONE MATOC
PLOT SCALE: 1:1
PLOT DATE: 14-OCTOBER-2009
FILE NUMBER: H-4-40262
SIZE: ANSI D
FILE NAME: ED-09-071_C-07_C1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-07





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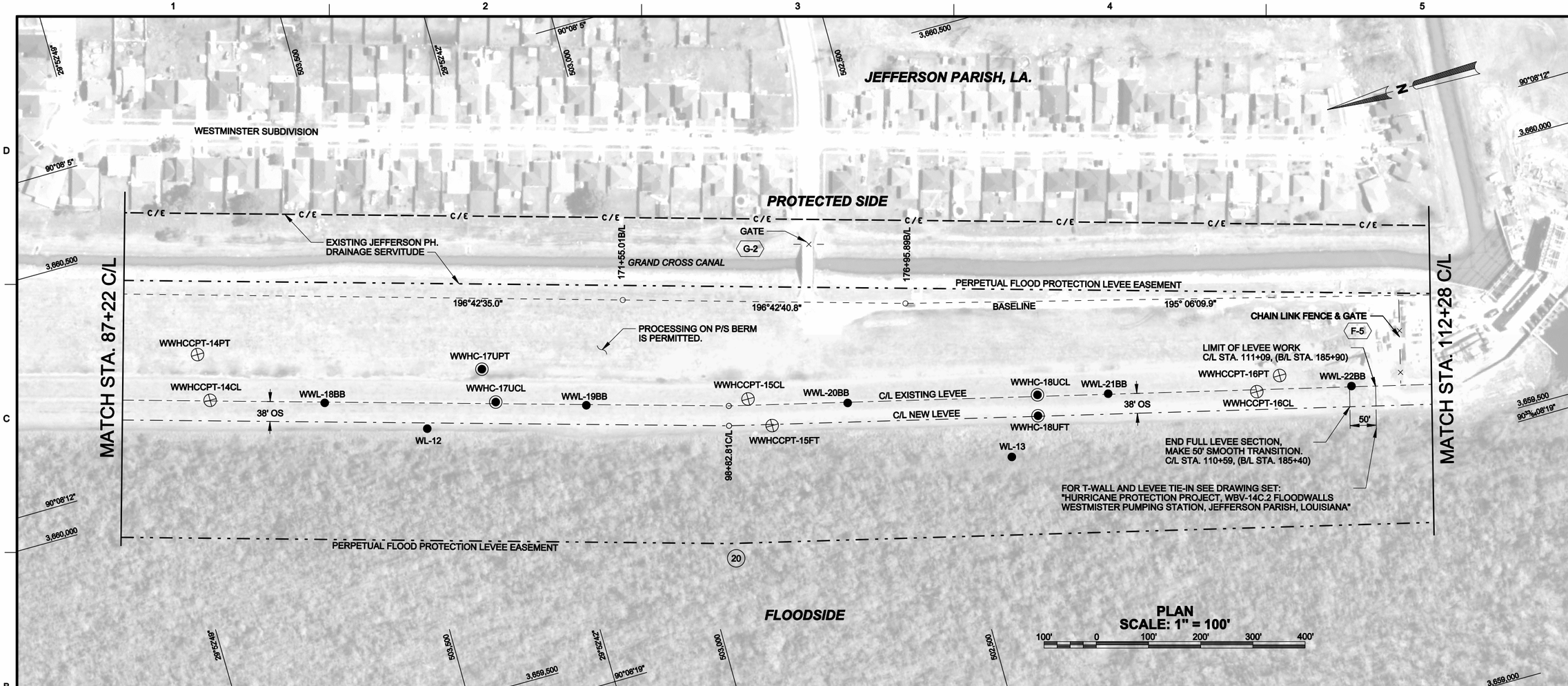
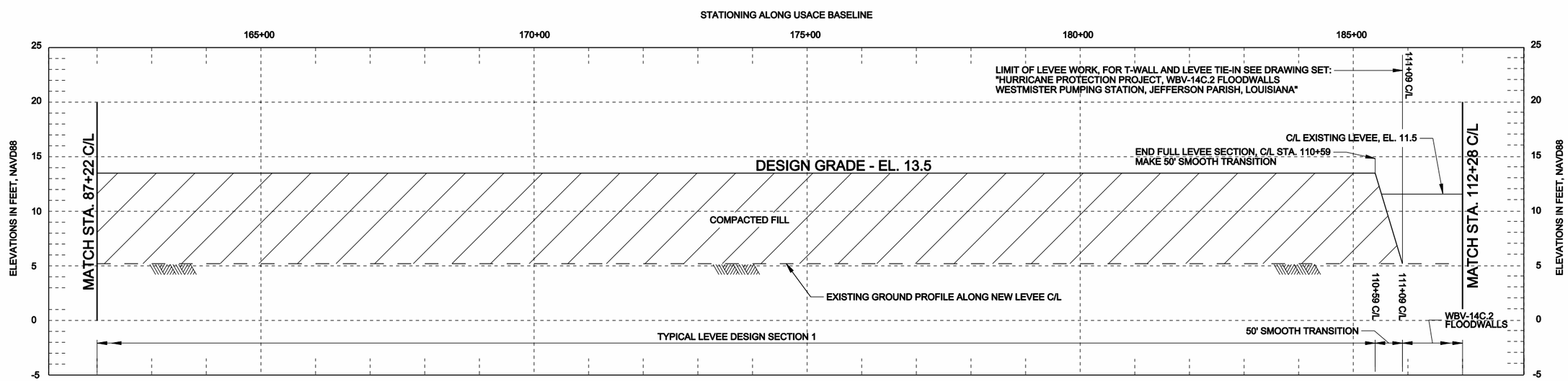
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.	SOLICITATION NO.: W914CZ-09-H-0028
SUBMITTED BY: Ellsworth J. Pike, P.E.	CONTRACT NO.: HUBZONE IMATOC
PLOT SCALE: 1:1	PLOT DATE: 14-NOVEMBER-2009	FILE NUMBER: H4-4-0262
SIZE: ANSI D	FILE NAME: ED-09-071_C-08_C1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-08





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U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.
SOLICITATION NO.: WB14C2-09-H-0028	
SUBMITTED BY: Ellsworth J. Pike, P.E.	CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1	PLOT DATE: 10/14/2009
PILE NUMBER: 04-14-0002	
SIZE: ANSI D	FILE NAME: ED-SB-071_C-09_C1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
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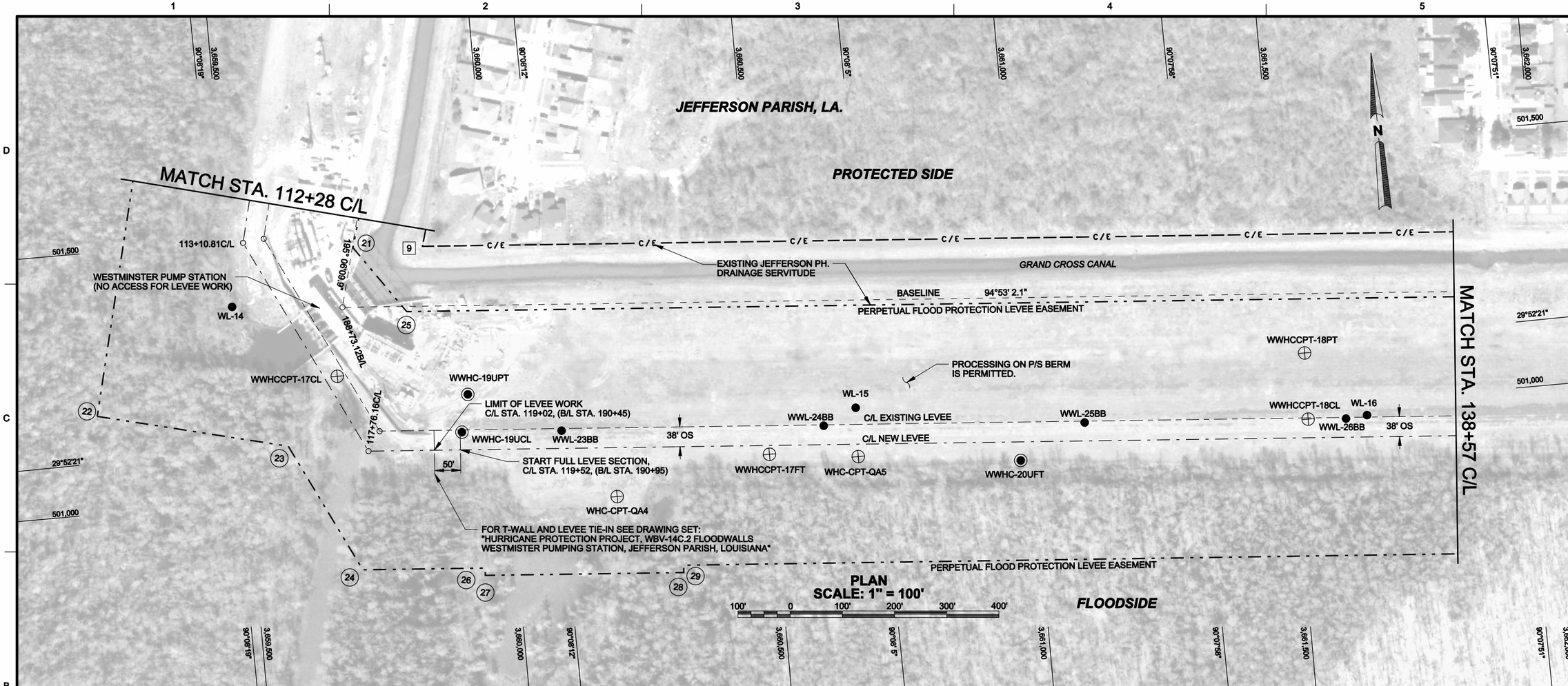

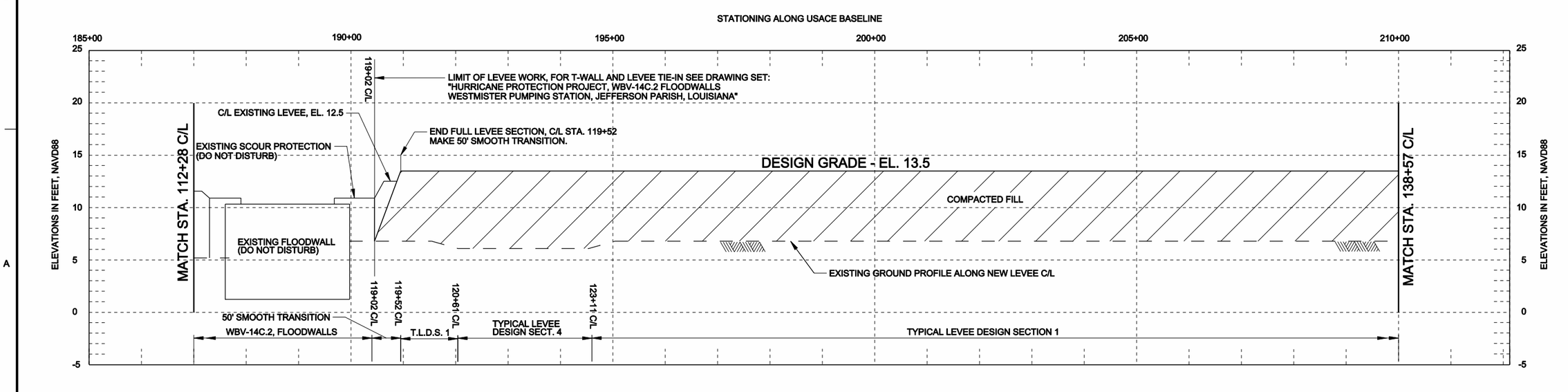

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MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.	SOLICITATION NO.: W914C2-09-H-0028
SUBMITTED BY: Ellsworth J. Pike, P.E.	CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1	PLOT DATE: 20-OCTOBER-2009	FILE NUMBER: 114-40608
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WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
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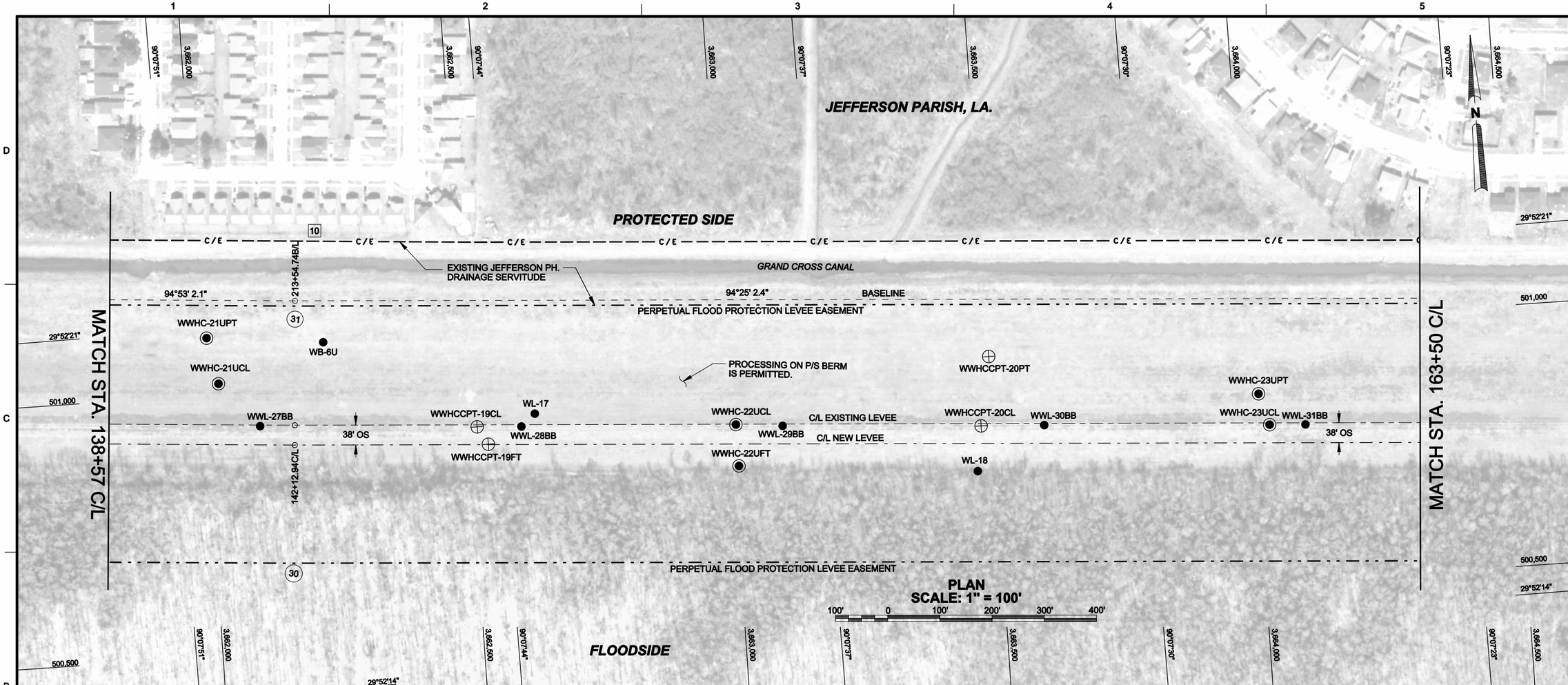

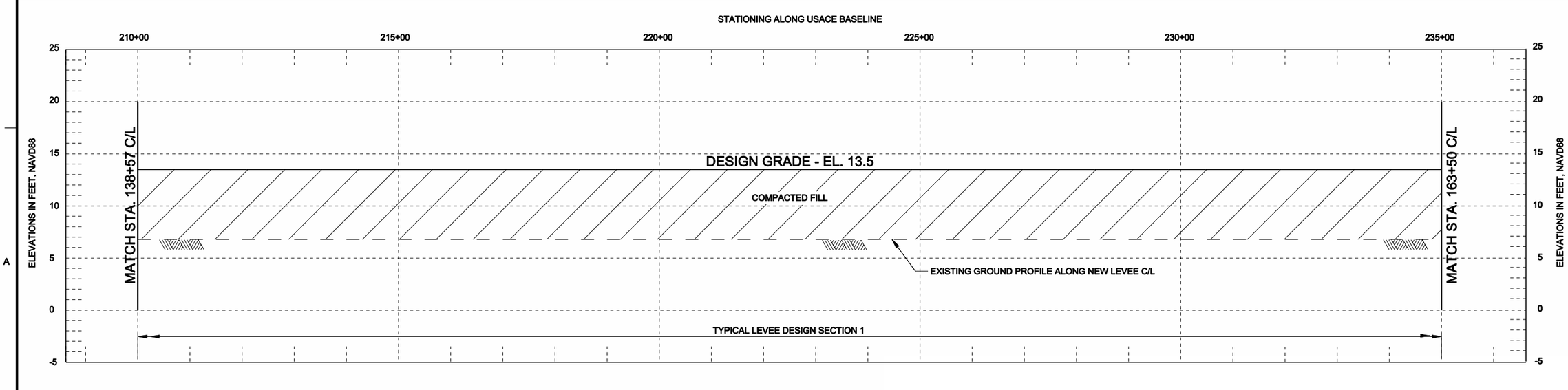

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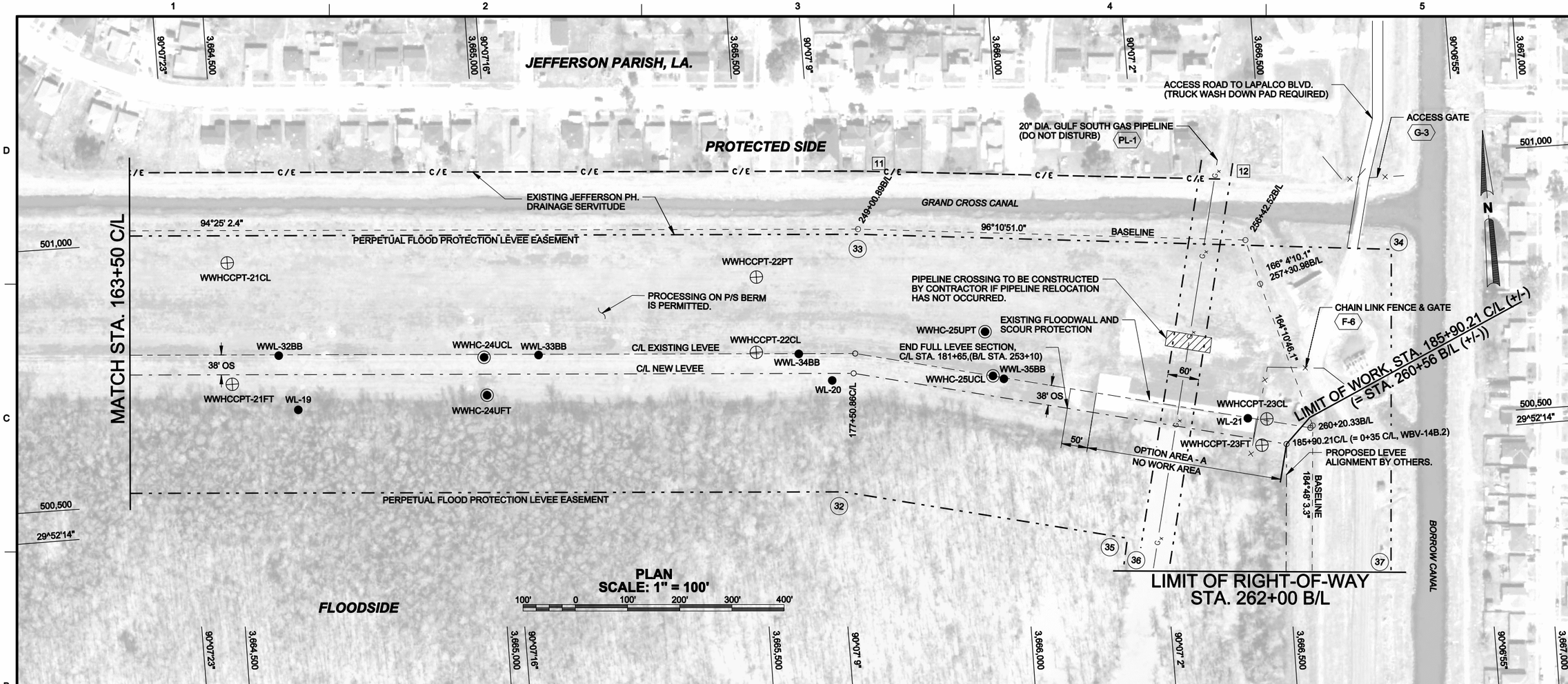
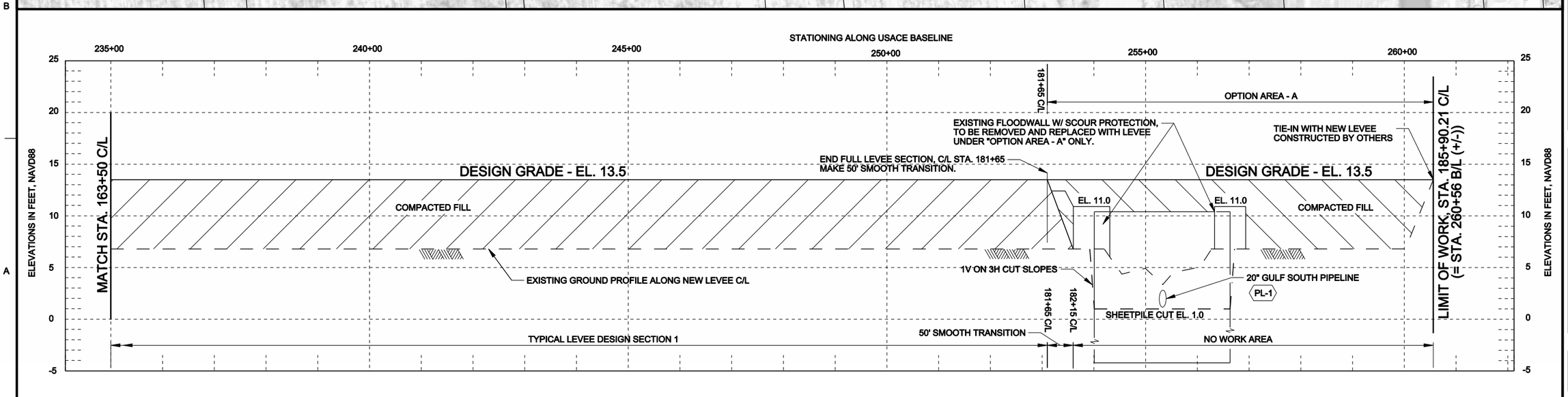
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.	SOLICITATION NO.: W914C2-09-H-0028
SUBMITTED BY: Ellsworth J. Pete, P.E.	CONTRACT NO.: HUBZONE IMATOC
PLOT SCALE: AS PLOTTED	PLOT DATE: 14-OCTOBER-2009	FILE NUMBER: 14-C-0002
SIZE: ANSI D	FILE NAME: ED-09-07_C-11_C1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-11





US Army Corps of Engineers®
NEW ORLEANS DISTRICT

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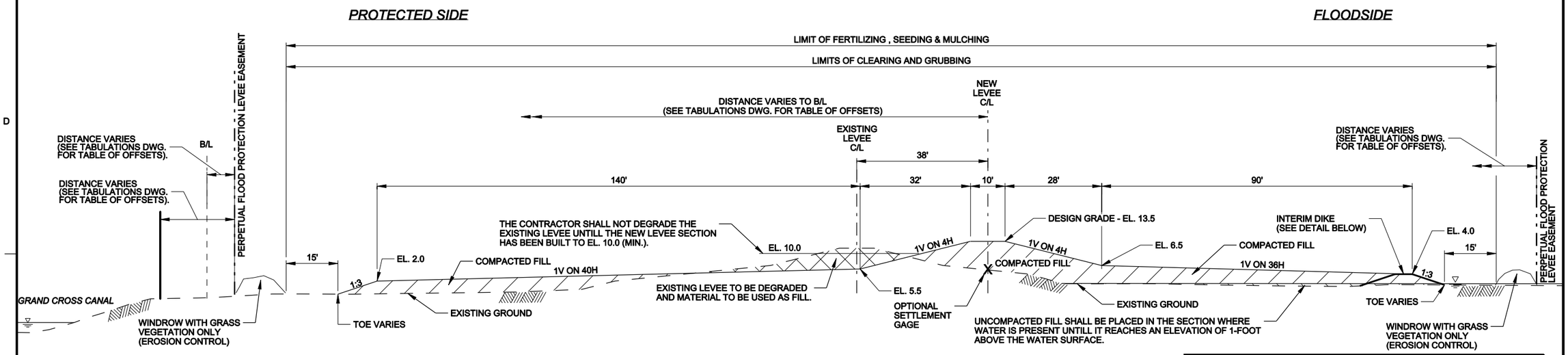
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.
SOLICITATION NO.: W914CZ-09-H-0028
SUBMITTED BY: Ellsworth J. Pike, P.E.	CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1	PLOT DATE: 14-OCTOBER-2009
FILE NUMBER: 14-4-0025
SIZE: ANSI D	FILE NAME: ED-Sb-071_C-12_C1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
PLAN AND PROFILE
JEFFERSON PARISH, LOUISIANA

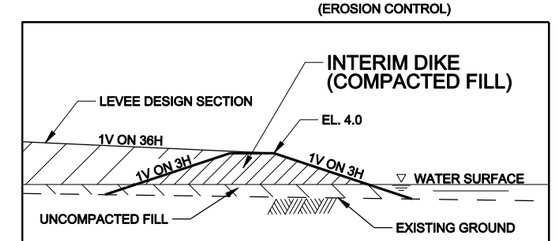
SHEET IDENTIFICATION
C-12



TYPICAL LEVEE DESIGN SECTION 1

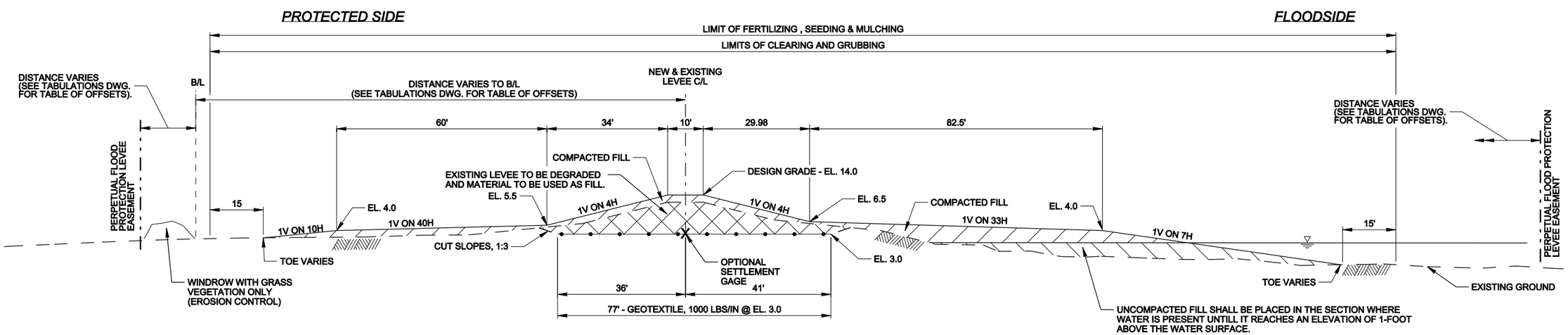
STA. 0+69 C/L TO STA. 54+05 C/L
STA. 61+51 C/L TO STA. 110+59 C/L
STA. 119+52 C/L TO STA. 120+61 C/L
STA. 123+11 C/L TO STA. 181+65 C/L

(SEE PLAN & PROFILE DWG'S. FOR TRANSITIONS BETWEEN SECTIONS)
NOT TO SCALE



NOTES:

1. THE CONTRACTOR SHALL PROVIDE A DIKING SYSTEM TO PREVENT TIDAL INUNDATION, WHERE NECESSARY.
2. DIKE SHALL BE INCORPORATED INTO FINAL LEVEE DESING SECTION.



TYPICAL LEVEE DESIGN SECTION 2

STA. 55+05 C/L TO STA. 57+40 C/L
STA. 59+99 C/L TO STA. 60+51 C/L

(SEE PLAN & PROFILE DWG'S. FOR TRANSITIONS BETWEEN SECTIONS)
NOT TO SCALE

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NEW ORLEANS DISTRICT

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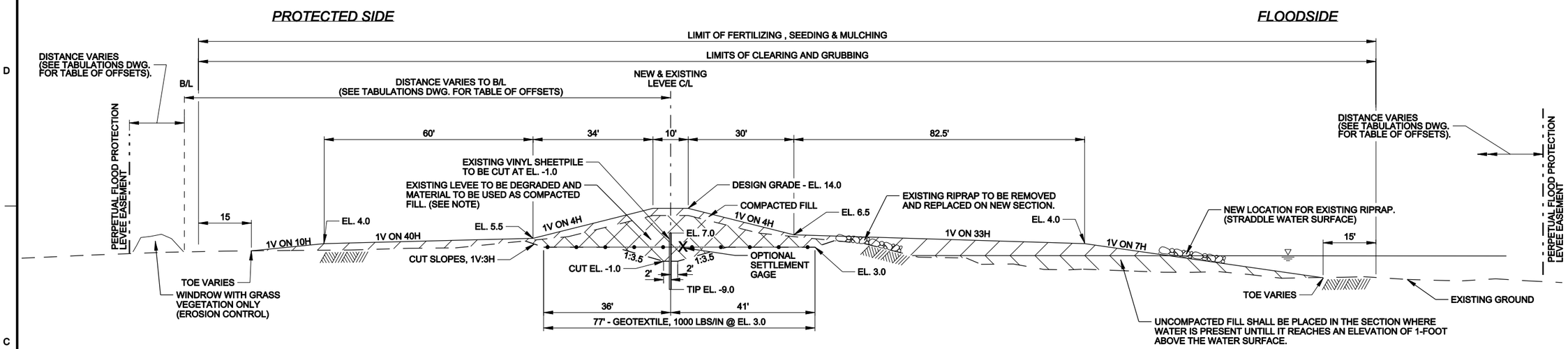
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 14-Nov-2009
SIZE: ANSI D
FILE NAME: ED-SB-071_C-13_C1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-4-40852

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
TYPICAL LEVEE DESIGN SECTION
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-13

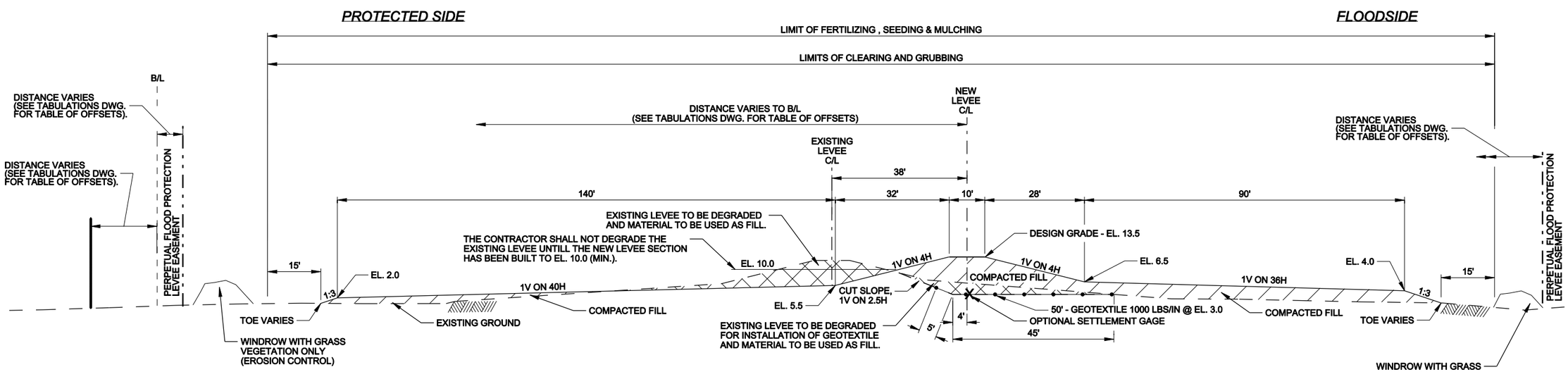


NOTE:
IF SAND LAYER IS ENCOUNTERED WHEN EXCAVATING IT SHALL NOT BE USED AS FILL WITHIN THE DESIGN SECTION. ALL EXCAVATED SAND SHALL BE USED AS VOID FILL FOR HOLES OUTSIDE OF THE DESIGN SECTION.

TYPICAL LEVEE DESIGN SECTION 3

STA. 57+54 C/L TO STA. 59+85 C/L

(SEE PLAN & PROFILE DWG'S. FOR TRANSITIONS BETWEEN SECTIONS)
NOT TO SCALE



TYPICAL LEVEE DESIGN SECTION 4

STA. 120+61 C/L TO STA. 123+11 C/L

(SEE PLAN & PROFILE DWG'S. FOR TRANSITIONS BETWEEN SECTIONS)
NOT TO SCALE

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NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
SIZE: ANSI D
FILE NAME: ED-09-07_C-14_C1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-4-0052

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
TYPICAL LEVEE DESIGN SECTION
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
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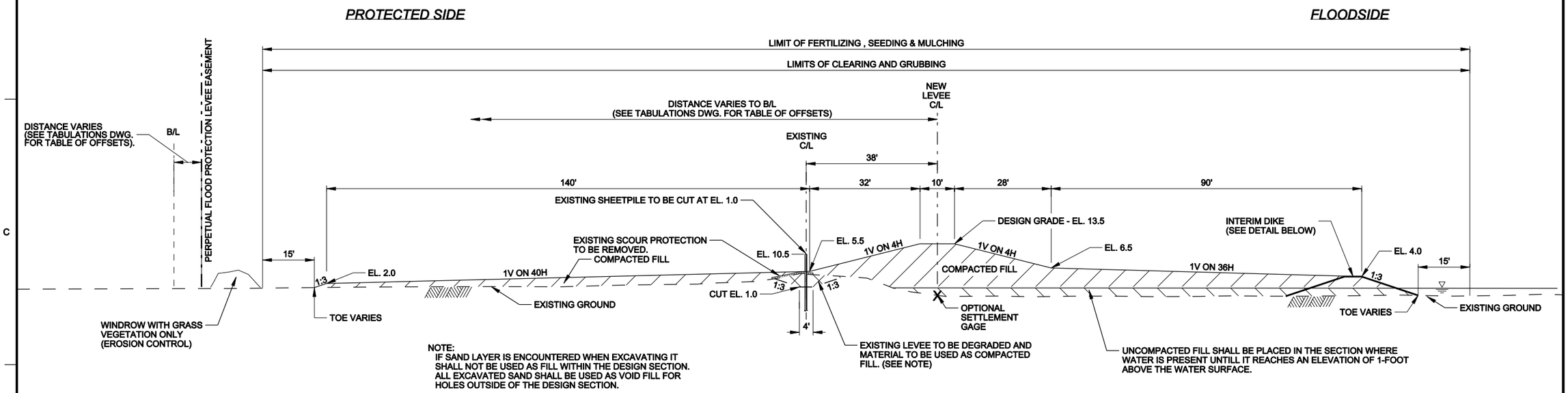
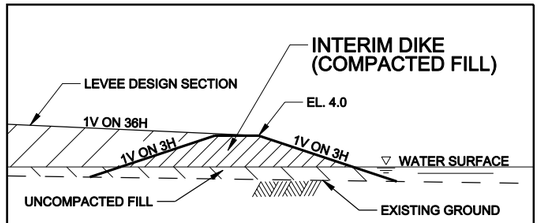


NOTE:
IF SAND LAYER IS ENCOUNTERED WHEN EXCAVATING IT SHALL NOT BE USED AS FILL WITHIN THE DESIGN SECTION. ALL EXCAVATED SAND SHALL BE USED AS VOID FILL FOR HOLES OUTSIDE OF THE DESIGN SECTION.

TYPICAL LEVEE DESIGN SECTION, OPTION AREA - A

STA. 181+65 C/L TO STA. 185+90.21 C/L

(SEE PLAN & PROFILE DWG'S. FOR TRANSITIONS BETWEEN SECTIONS)
NOT TO SCALE



NOTES:

1. THE CONTRACTOR SHALL PROVIDE A DIKING SYSTEM TO PREVENT TIDAL INUNDATION, WHERE NECESSARY.
2. DIKE SHALL BE INCORPORATED INTO FINAL LEVEE DESING SECTION.

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NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pitre, P.E.
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914C2-09-H-0028
CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
FILE NUMBER: H-A-46652
SIZE: ANSI D
FILE NAME: ED-B-071_C-15_C1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
TYPICAL LEVEE DESIGN SECTION, OPTION AREA - A
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-15

PROTECTED SIDE

LAPALCO BLVD.

OVERHEAD POWER & COMMUNICATION LINES (WITH POLES).

PERPETUAL FLOOD PROTECTION LEVEE EASEMENT

101°33'38.9"

7" CRUSHED STONE SURFACING SHALL EXTEND 10' BEYONG THE TOE OF THE RAMP.

12.5'

25'

129+11.82B/L

BASELINE

35' WIDE TEMPORARY ACCESS FROM LAPALCO BLVD. (STA. 134+77 B/L)

BILLBOARD WITH PILES

106°49'26.6"

TOE VARIES

1V ON 3H

EL. 2.0

1V ON 10H

EL. 4.0

1V ON 10H

EL. 4.0

1V ON 10H

CHAIN LINK FENCE.

1V ON 3H SLOPES

1V ON 3H SLOPES

1V ON 40H

EL. 5.5

1V ON 4H

1V ON 4H

1V ON 40H

EL. 5.5

EL. 14.0 — C/L NEW & EXISTING LEVEE

C/L STA. 56+75 (+/-) RAMP, TO BE REMOVED AND REPLACED. (SEE NOTE BELOW)

1V ON 4H

1V ON 3H SLOPES

1V ON 4H

EL. 6.5

55+05.15C/L

60+50.64C/L

C/L EXISTING LEVEE

1V ON 33H

1V ON 33H

1V ON 3H SLOPES

1V ON 40H

C/L EXISTING LEVEE

1V ON 4H

54+05.15C/L

EL. 6.5

C/L NEW LEVEE

1V ON 4H

61+50.64C/L

C/L NEW LEVEE

1V ON 4H

EL. 13.5

EL. 13.5

EL. 4.0

1V ON 7H

EL. 4.0

1V ON 7H

7" CRUSHED STONE SURFACING SHALL EXTEND 10' BEYONG THE TOE OF THE RAMP.

52+23.24C/L

1V ON 36H

EL. 4.0

1V ON 3H

TOE VARIES

12.5'

25'

1V ON 36H

EL. 4.0

1V ON 3H

TOE VARIES

64+29.24C/L

LOCATION OF TRUCK WASH DOWN PAD

NOTE:

1. OWNER WILL NEED OCCASIONAL ACCESS TO FLOODSIDE OF LEVEE. CONTRACTOR WILL NEED TO CONTACT OWNER AND COORDINATE WORK \ ACCESS IN THE AREA OF RAMP.

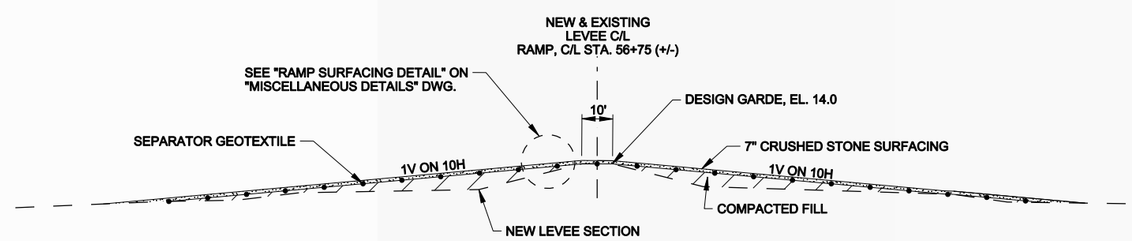
PERPETUAL FLOOD PROTECTION LEVEE EASEMENT

FLOOD SIDE

WESTWEGO SEAPLANE AIRPORT

SCALE: 1" = 50'

50' 0 50' 100' 150' 200'



DETAIL "A"

NOT TO SCALE

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.

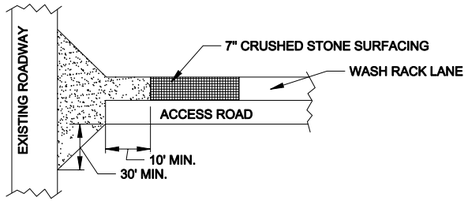
MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.
SOLICITATION NO.: WB14C2-09-H-0028	
SUBMITTED BY: Ellsworth J. Pitre, P.E.	CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1	PLOT DATE: 10-NOVEMBER-2009
FILE NUMBER: H-A-W0002	
SIZE: ANSI D	FILE NAME: E209-071_C-16_C5.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
RAMP DETAILS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-16



TRUCK WASH DOWN RACK DETAIL

NOT TO SCALE

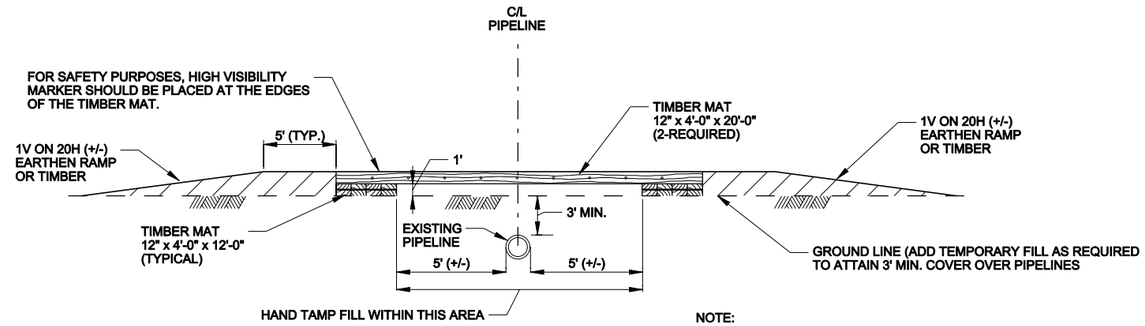
NOTES:

1. A WASH RACK SHALL BE LOCATED AT POINTS OF VEHICULAR EGRESS ONTO PAVED ROADWAY TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO THE PAVED ROADWAY. AN OPERATIONAL MECHANICAL SWEEPER SHALL BE ON STANDBY AT THE ROADWAY ENTRANCE FROM THE SITE DURING HAUL OPERATION TO ASSIST IN KEEPING THE ROADWAY CLEAN. WHEN THE MECHANICAL SWEEPER FAILS TO REMOVE CLUMPS OF MATERIAL, THE CLUMPS SHALL BE PHYSICALLY REMOVED WITH HAND TOOLS.

2. THE CONTRACTOR SHALL KEEP THE WASH RACK FREE OF MUD.

3. AN 7" (SEVEN INCH) MINIMUM CRUSHED STONE SURFACING SHALL BE MAINTAINED ON THE HAUL ROAD LANE BETWEEN THE WASH RACK LANE AND THE PAVED ROADWAY AND THE FULL WIDTH OF THE HAUL ROAD (30' MINIMUM) AND WITHIN 30' OF THE EDGE OF THE PAVED ROADWAY AS SHOWN.

4. LOCATION OF RACK CAN BE FIELD ADJUSTED WITH APPROVAL OF THE CONTRACTING OFFICER REPRESENTATIVE.

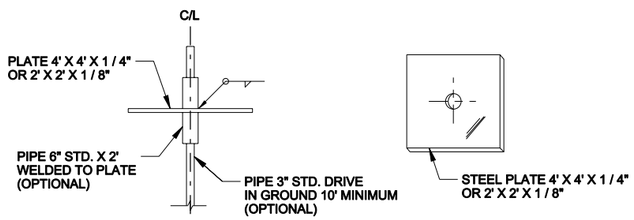


NOTE:

1. TEMPORARY HARDWOOD TIMBER HAUL ROAD MAT BRIDGE CROSSING AT PIPELINES TO BE REMOVED UPON COMPLETION OF CONSTRUCTION AND AREA RESTORED.

PIPELINE CROSSING DETAIL

NOT TO SCALE

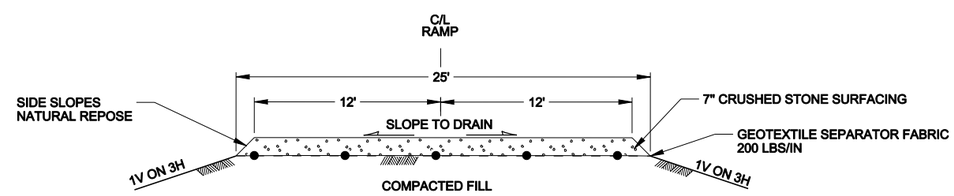


TYPICAL GAGE DETAIL

NOT TO SCALE

SETTLEMENT MEASUREMENT GAGES

SHOULD THE CONTRACTOR DESIRE PAYMENT FOR PLACING ADDITIONAL FILL DUE TO FOUNDATION SETTLEMENT DURING CONSTRUCTION, HE SHALL FURNISH AND INSTALL SETTLEMENT GAGES AT LOCATIONS SHOWN ON THE DESIGN SECTION AND AS SPECIFIED IN THE CONTRACT SPECIFICATIONS. THE SETTLEMENT MEASUREMENT RANGE FOR EACH SETTLEMENT GAGE SHALL BE FOR A DISTANCE OF 150 FEET IN EACH DIRECTION FROM EACH SETTLEMENT GAGE MEASURED ALONG THE CENTERLINE OF THE LEVEE SECTION, EXCEPT WHERE SETTLEMENT GAGES ARE PLACED AT LESS THAN 100 FOOT INTERVALS, IN WHICH CASE THE SETTLEMENT MEASUREMENT RANGE SHALL BE TO A POINT 1 / 2 THE DISTANCE BETWEEN SETTLEMENT GAGES. RISER PIPES ARE PERMITTED ON SETTLEMENT GAGES. LOCATION OF SETTLEMENT GAGES MAY BE MOVED HORIZONTALLY ON THE EXISTING LEVEE CROWN AT CONTRACTOR'S OPTION WITH THE APPROVAL OF THE CONTRACTING OFFICER.



RAMP SURFACING DETAIL

C/L STA. 56+75(+/-) (= B/L STA. 125+86(+/-))
NOT TO SCALE

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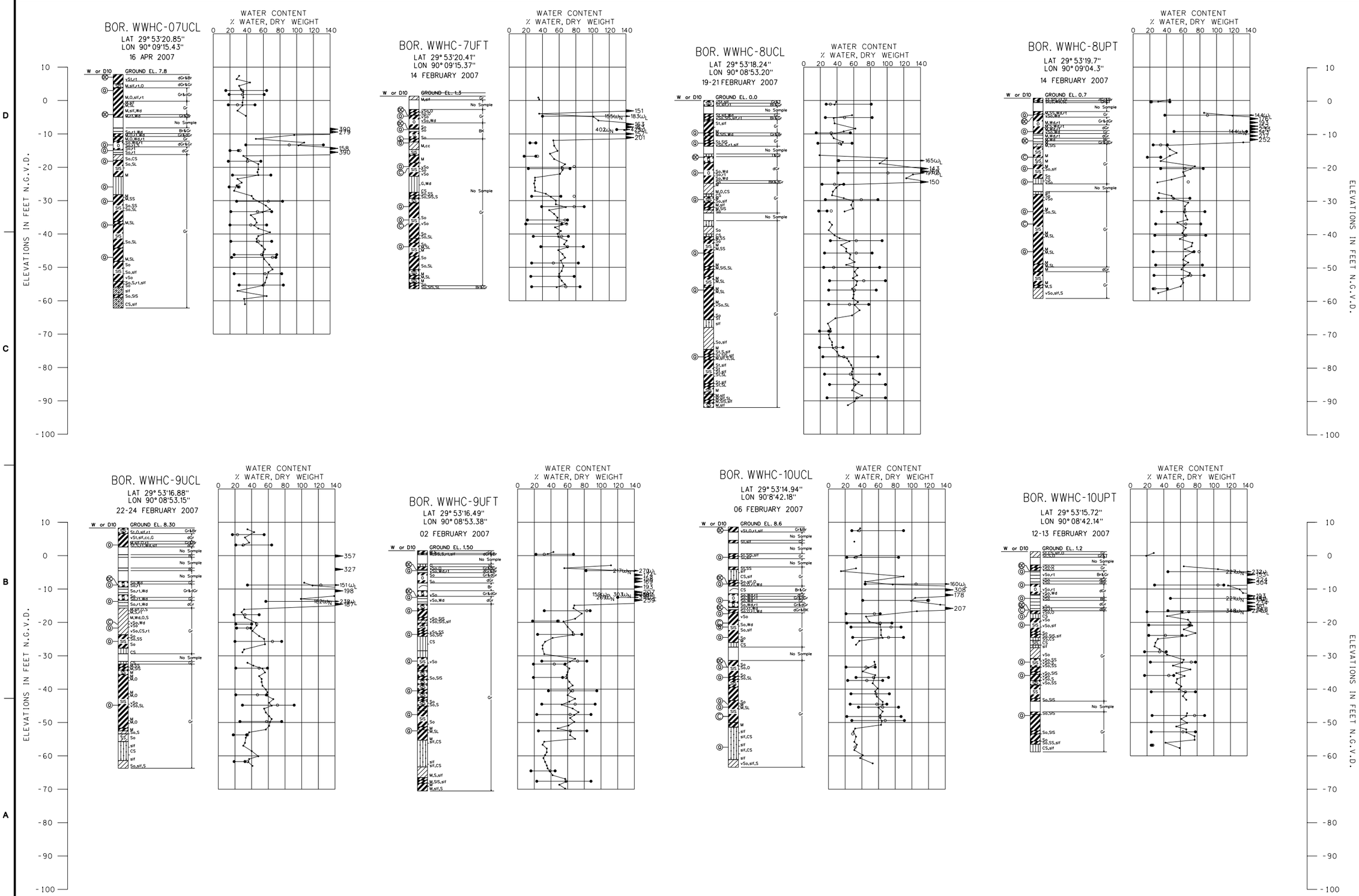
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
SIZE: ANSI D
FILE NAME: ED06-071_C-17_C6.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0028
CONTRACT NO.: HUBZONE IMTOC
FILE NUMBER: H-A-W-0002

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
MISCELLANEOUS DETAILS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-17



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DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Elsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/10/2009
SIZE: ANSI D
FILE NAME: E0-09-07_C-18_B1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-4-40262

U.S. ARMY CORPS OF ENGINEERS
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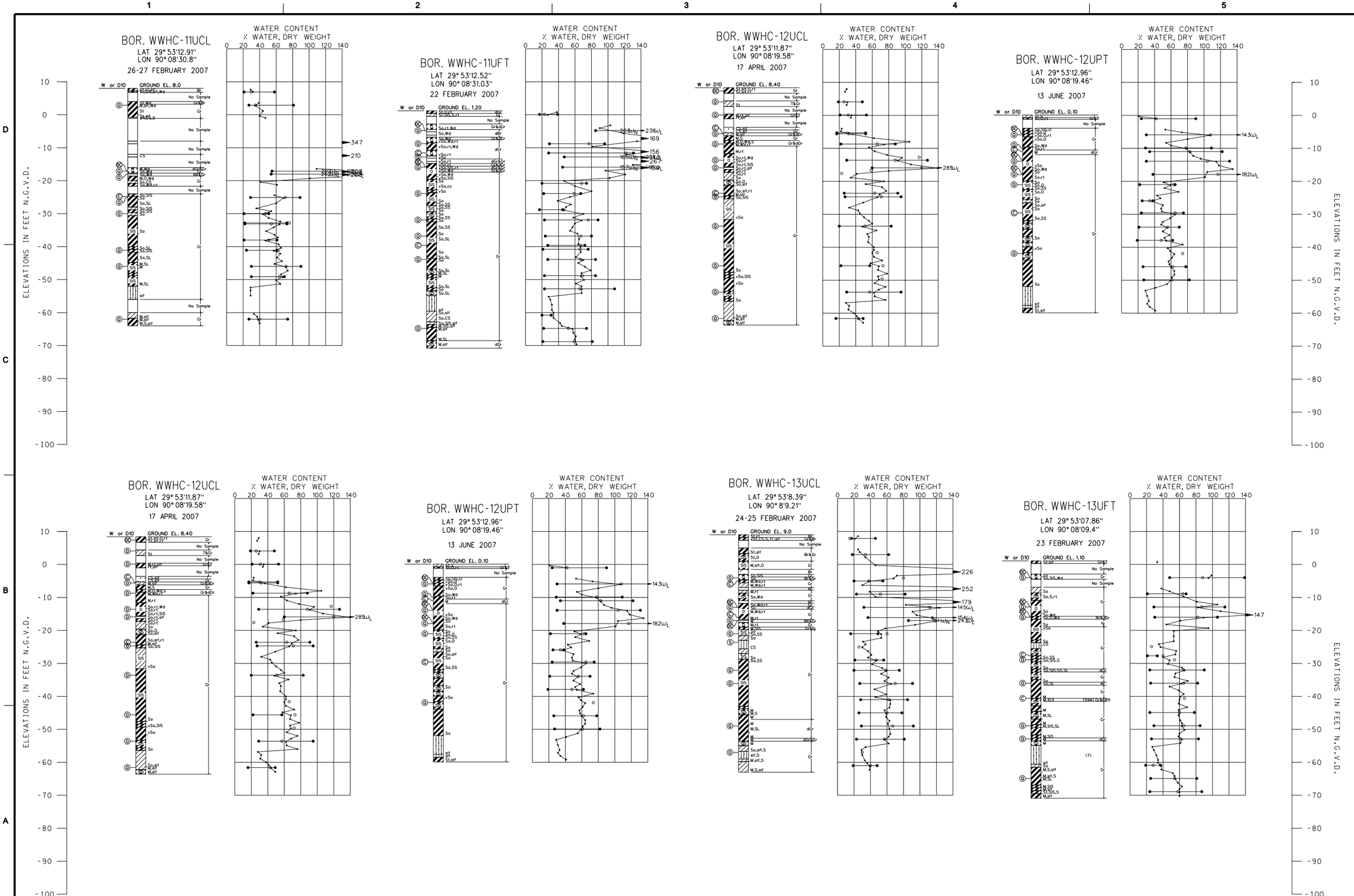
NEW ORLEANS, LOUISIANA

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
UNDISTURBED BORINGS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-18



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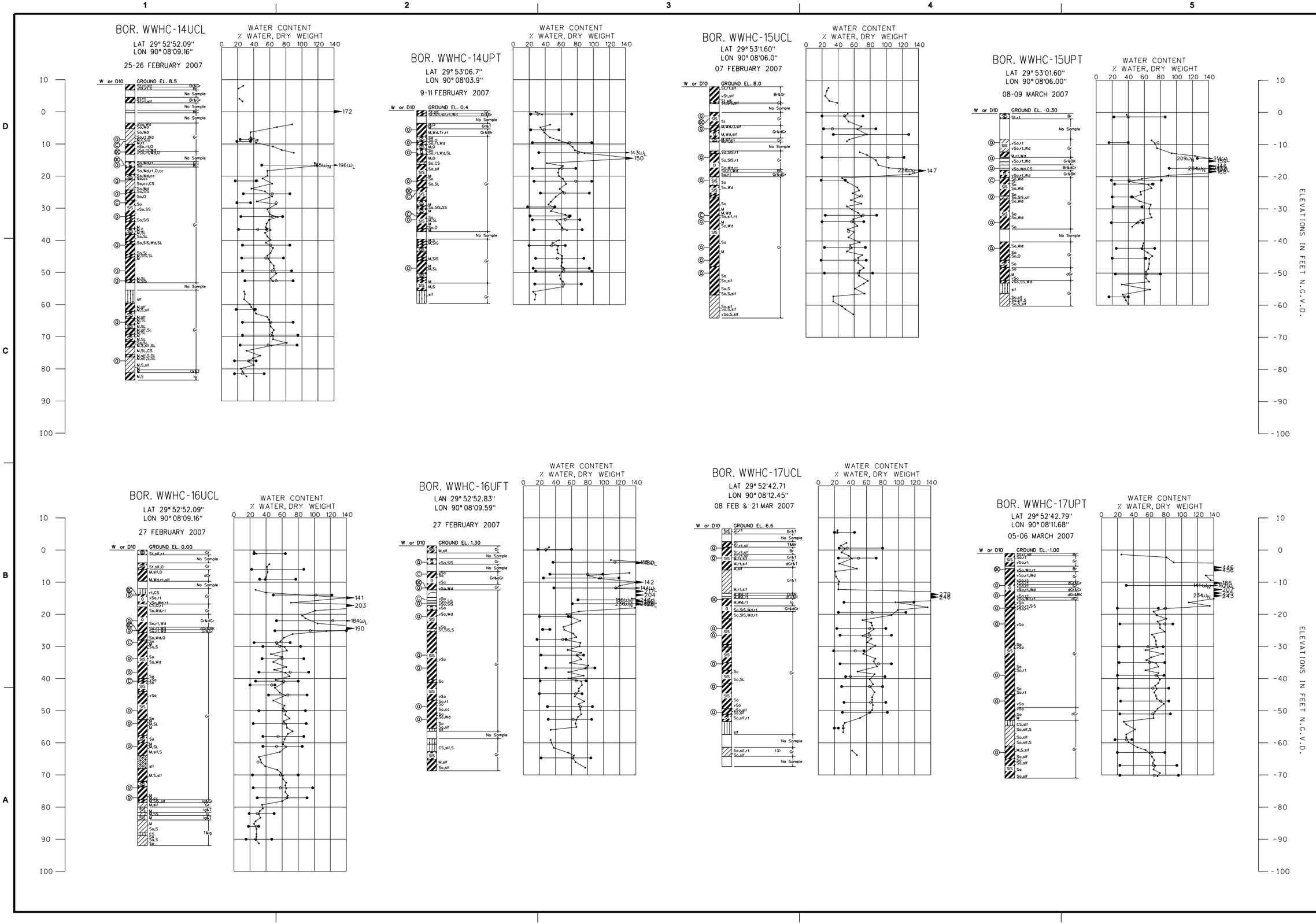
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE:
PLOT DATE: 9/10/2009
SIZE: ANSI D
FILE NAME: ED-09-071_C-19_B1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-F-40202

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
UNDISTURBED BORINGS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-19



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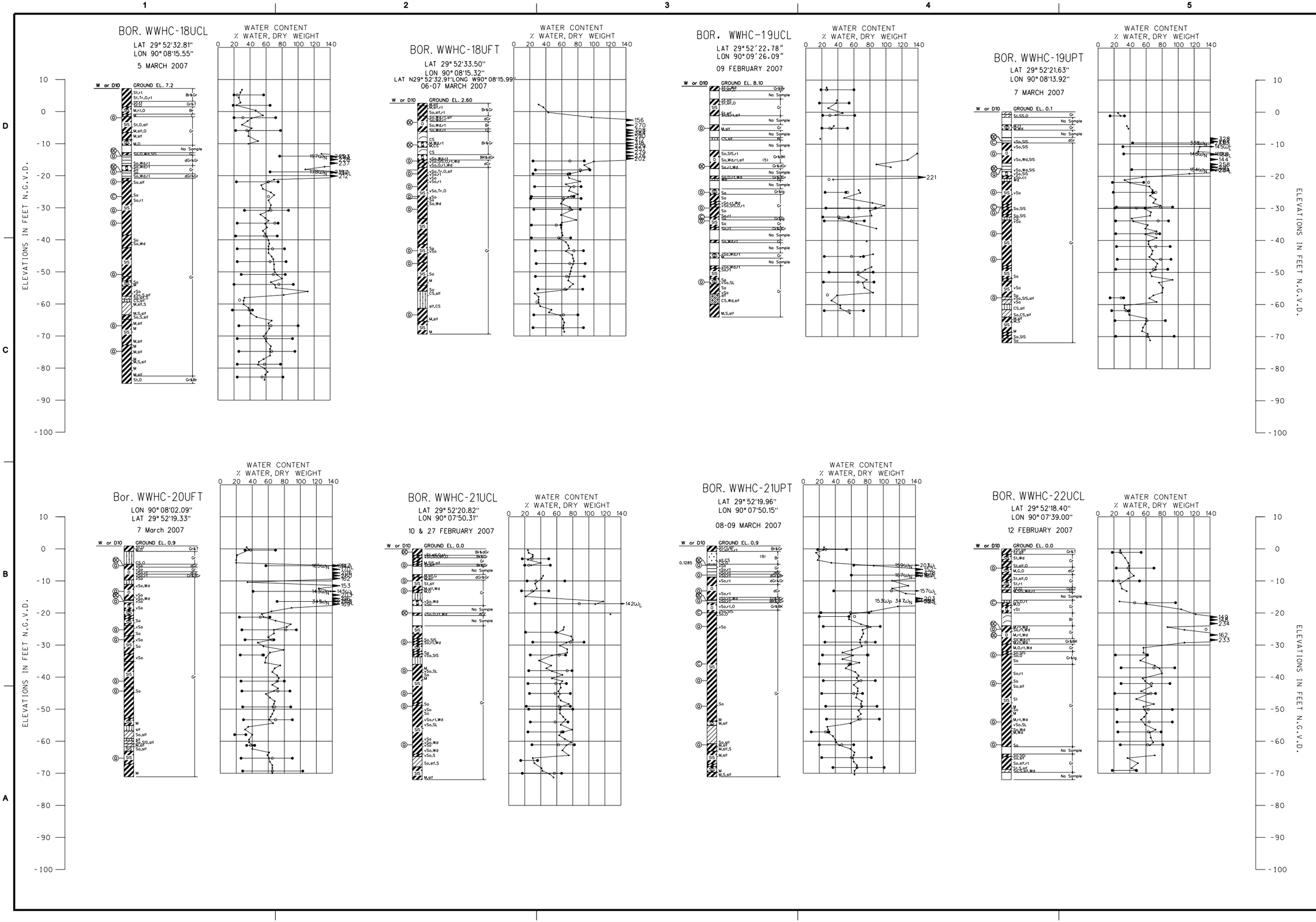
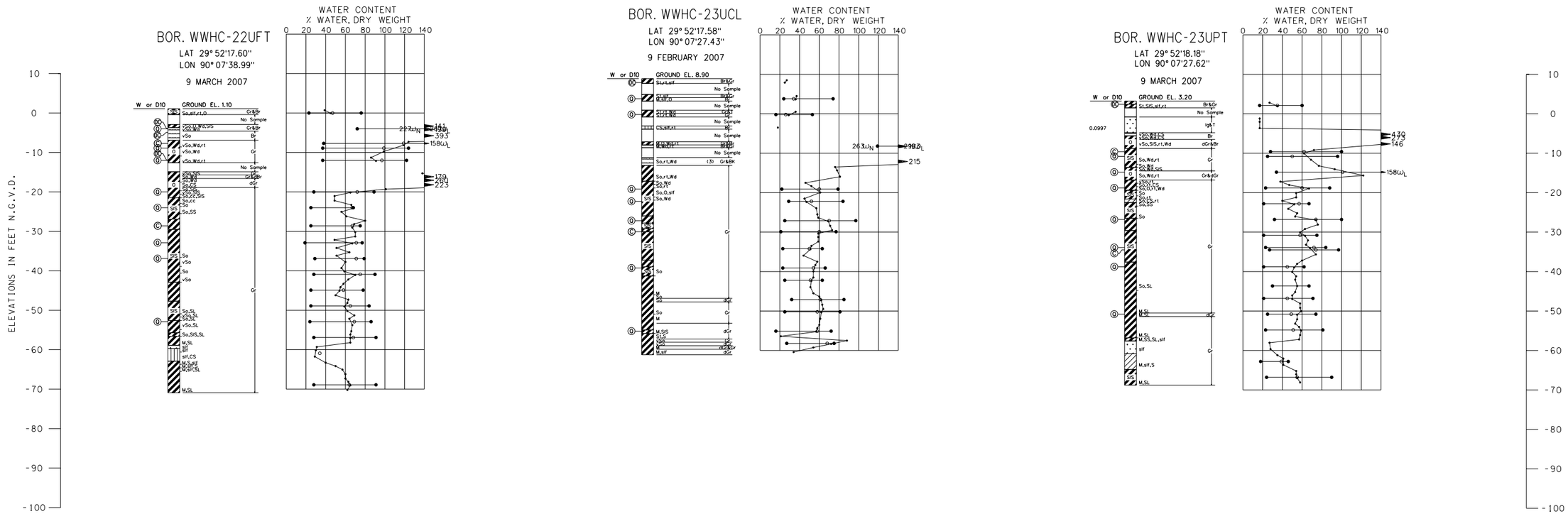
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 11/17/2009
SIZE: ANSI D
FILE NAME: ED-09-071_C-20_B1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-F-40202

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
UNDISTURBED BORINGS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-20


BOR. WWHC-18UCL
LAT 29° 52'32.81"
LON 90° 08'15.55"
5 MARCH 2007
BOR. WWHC-18UFT
LAT 29° 52'33.50"
LON 90° 08'15.32"
LAT N29° 52'32.91"LONG W90° 08'15.99"
06-07 MARCH 2007
BOR. WWHC-19UCL
LAT 29° 52'22.78"
LON 90° 09'26.09"
09 FEBRUARY 2007
BOR. WWHC-19UPT
LAT 29° 52'21.63"
LON 90° 08'13.92"
7 MARCH 2007
Bor. WWHC-20UFT
LON 90° 08'02.09"
LAT 29° 52'19.33"
7 March 2007
BOR. WWHC-21UCL
LAT 29° 52'20.82"
LON 90° 07'50.31"
10 & 27 FEBRUARY 2007
BOR. WWHC-21UPT
LAT 29° 52'19.96"
LON 90° 07'50.15"
08-09 MARCH 2007
BOR. WWHC-22UCL
LAT 29° 52'18.40"
LON 90° 07'39.00"
12 FEBRUARY 2007
WATER CONTENT
% WATER, DRY WEIGHT
0 20 40 60 80 100 120 140
W or D10
GROUND EL. 7.2
GROUND EL. 2.60
GROUND EL. 8.10
GROUND EL. 0.1
GROUND EL. 0.9
GROUND EL. 0.0
ELEVATIONS IN FEET N.G.V.D.
10 0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100
1 2 3 4 5
A B C D
US Army Corps of Engineers
NEW ORLEANS DISTRICT
MARK DESCRIPTION DATE APPR.
MARK DESCRIPTION DATE APPR.
DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
SIZE: ANSI D
FILE NAME: ED-S9-07_C-21_B1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-B-0028
CONTRACT NO.: HUBZONE IMATOC
FILE NUMBER: 14-C-0002
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA
WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
UNDISTURBED BORINGS
JEFFERSON PARISH, LOUISIANA
SHEET IDENTIFICATION
C-21



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NEW ORLEANS DISTRICT

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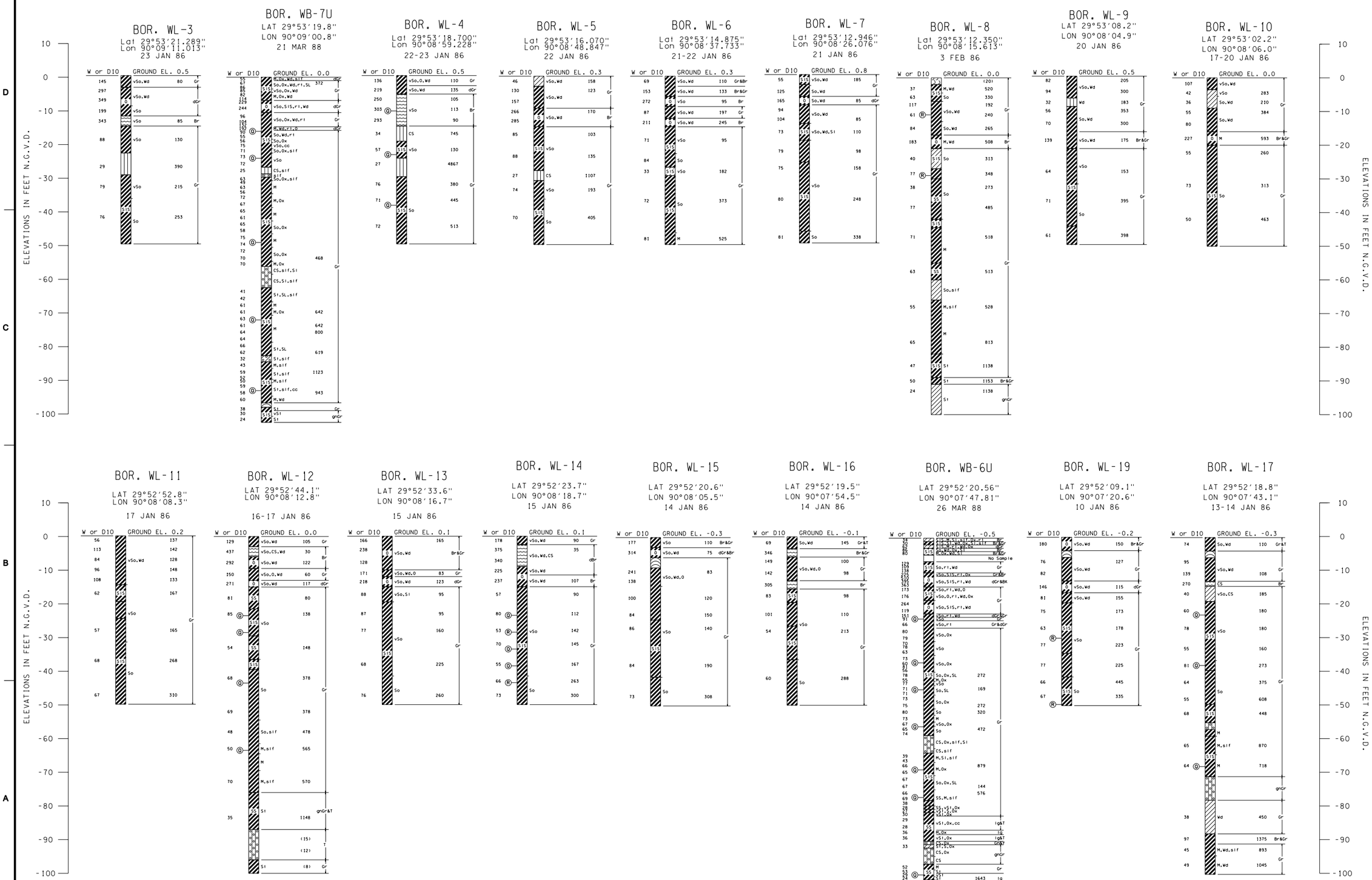
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L. / CKD BY: T.W.W.	SOLICITATION NO.: W914C2-09-H-0028
SUBMITTED BY: Ellsworth J. Pitts, P.E.	CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1 / PLOT DATE: 10/14/2009	FILE NUMBER: N-A-W6262
SIZE: ANSI D	FILE NAME: ED-Sp071_C-22_B1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
UNDISTURBED BORINGS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-22



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U.S. ARMY CORPS OF ENGINEERS
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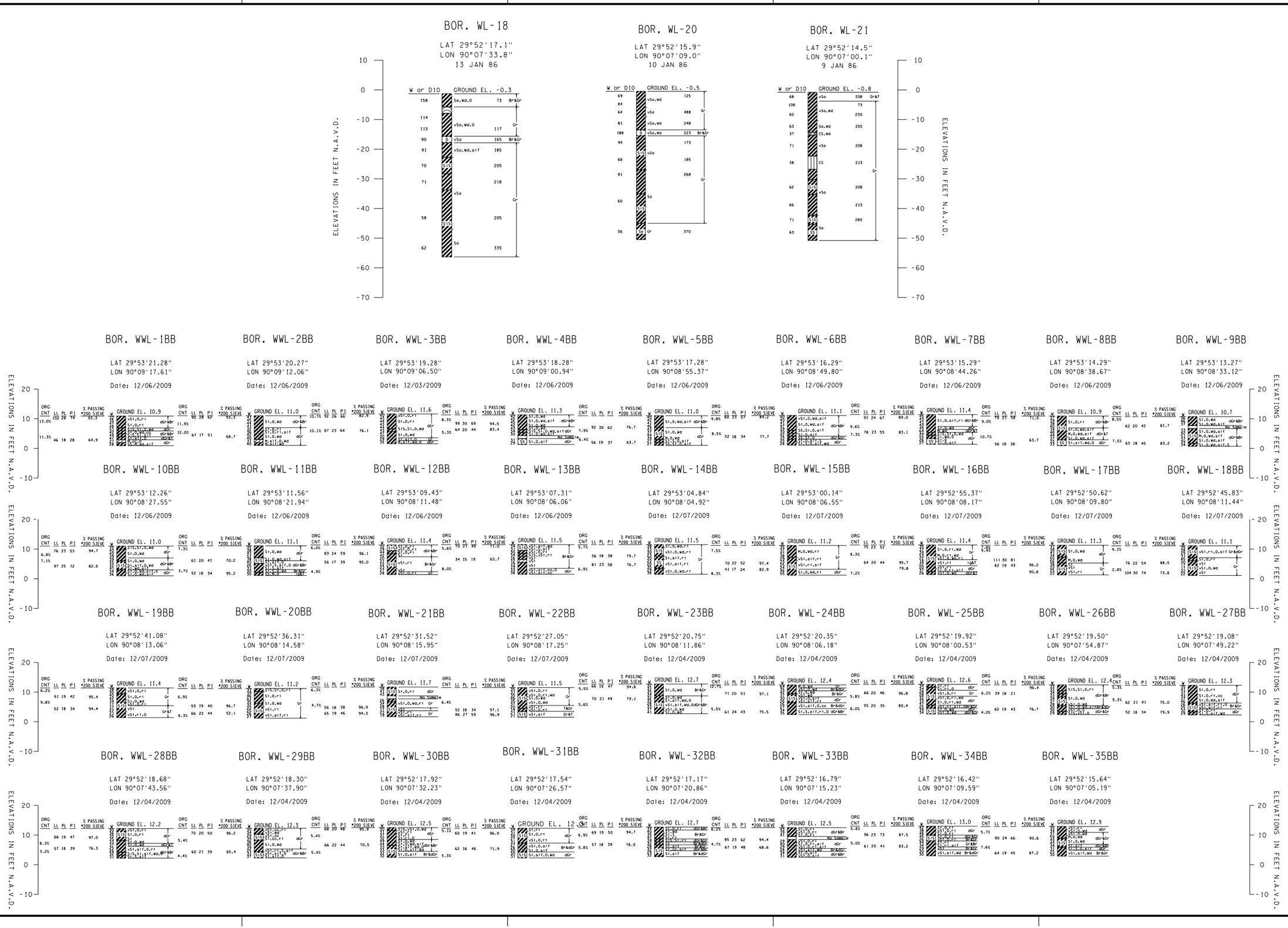
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Blanchard J. Pete, P.E.
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0028
CONTRACT NO.: HUBZONE BATOC
FILE NUMBER: 14-C-0028
PLOT SCALE: 1:1
PLOT DATE: 14-OCTOBER-2009
SIZE: ANSI D
FILE NAME: ED-Sa-07f_C-23_B1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
GENERAL BORINGS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-23



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U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landy
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Elsinore R. J. Pate, P.E.
PLOT SCALE: 1:1
PLOT DATE: 11/13/2009
SIZE: ANSI D
FILE NAME: ED-Sa-07_C-24_B1.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912HN-09-B-0028
CONTRACT NO.: HUREZONE IMATOC
FILE NUMBER: H-4-40028

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
GENERAL BORINGS AND BORROW BORINGS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-24

UNIFIED SOIL CLASSIFICATION

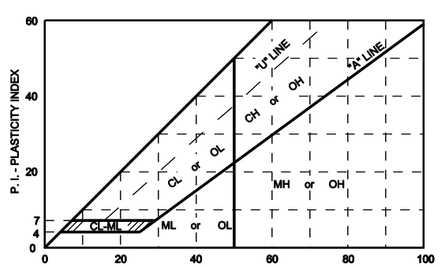
MAJOR DIVISION		TYPE	LETTER SYMBOL	SYMBOL	TYPICAL NAMES
COARSE - GRAINED SOILS More than half of material is larger than No. 200 sieve size.	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size.	CLEAN GRAVEL (Little or No fines)	GW		GRAVEL,Well Graded,gravel-sand mixtures,little or no fines
			GP		GRAVEL,Poorly Graded,gravel-sand mixtures,little or no fines
		GRAVEL WITH FINES (Appreciable Amount of Fines)	GM		SILTY GRAVEL,gravel-sand-silt mixtures
			GC		CLAYEY GRAVEL,gravel-sand-clay mixtures
	SANDS More than half of coarse fraction is smaller than No. 4 sieve size.	CLEAN SAND (Little or No Fines)	SW		SAND,Well-Graded,gravelly sands
			SP		SAND,Poorly-Graded,gravelly sands
		SANDS WITH FINES (Appreciable Amount of Fines)	SM		SILTY SAND,sand-silt mixtures
			SC		CLAYEY SAND,sand-clay mixtures
FINE - GRAINED SOILS More than half the material is smaller than No. 200 sieve size.		SILTS AND CLAYS (Liquid Limit 50)	ML		SILT & very fine sand,silty or clayey fine sand or clayey silt with slight plasticity
			CL		LEAN CLAY,Sandy Clay,Silty Clay,of low to medium plasticity
			OL		ORGANIC SILTS,and organic silty clays of low plasticity
		SILTS AND CLAYS (Liquid Limit 50)	MH		SILT,fine sandy or silty soil with high plasticity
			CH		FAT CLAY,inorganic clay of high plasticity
			OH		ORGANIC CLAYS of medium to high plasticity,organic silts
HIGHLY ORGANIC SOILS			Pt		PEAT,and other highly organic soil
WOOD			Wd		WOOD
SHELLS			Sl		SHELLS
NO SAMPLE			NS		No Sample Retrieved

NOTE: Soils possessing characteristics of two groups are designated by combinations of group symbols.

DESCRIPTIVE SYMBOLS

COLOR	SYMBOL
TAN	T
YELLOW	Y
RED	R
BLACK	BK
GRAY	Gr
LIGHT GRAY	lGr
DARK GRAY	dGr
BROWN	Br
LIGHT BROWN	lBr
DARK BROWN	dBr
BROWNISH-GRAY	brGr
GRAYISH-BROWN	gyBr
GREENISH-GRAY	gnGr
GRAYISH-GREEN	gyGn
GREEN	Gn
BLUE	Bl
BLUE-GREEN	BlGn
WHITE	Wh
MOTTLED	Mot

CONSISTENCY	CONSISTENCY FOR COHESIVE SOILS: COHESION IN LBS./SQ.FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL
VERY SOFT	250	vSo
SOFT	250-500	So
MEDIUM	500-1000	M
STIFF	1000-2000	St
VERY STIFF	2000-4000	vSt
HARD	4000	H



PLASTICITY CHART

For classification of fine-grained soils in accordance with ASTM D 2487

MODIFICATION	SYMBOL
Traces	Tr
Fine	F
Medium	M
Coarse	C
Concretions	cc
Rootlets	rt
Lignite fragments	lg
Shale fragments	sh
Sandstone fragments	sds
Shell fragments	slf
Organic matter	O
Clay strata or lenses	CS
Silt strata or lenses	SIS
Sand strata or lenses	SS
Sandy	S
Gravelly	G
Boulders	B
Slickensides	SL
Wood	Wd
Oxidized	Ox

NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN " W OR D_{10}"

Are natural water contents in percent dry weight

When underlined denotes D_{10} size in mm*

FIGURES TO LEFT OF BORING UNDER COLUMNS " LL" AND " PL"

Are liquid and plastic limits, respectively

SYMBOLS TO LEFT OF BORING

- ▽ Ground-water surface and date observed
- (C) Denotes location of consolidation test **
- (S) Denotes location of consolidated-drained direct shear test **
- (R) Denotes location of consolidated-undrained triaxial compression test **
- (Q) Denotes location of unconsolidated-undrained triaxial compression test
- (T) Denotes location of sample subjected to consolidation test and each of the above three types of shear test **
- FW Denotes free water encountered in boring or sample

FIGURES TO RIGHT OF BORING

Are values of cohesion in lbs./sq.ft. from unconfined compression tests

In parenthesis are driving resistances in blows per foot determined with a standard split spoon sampler (1 3/8" I.D., 2" O.D.) and a 140 lb. driving hammer with a 30" drop

Where underlined with a solid line denotes laboratory permeability in centimeters per second of undisturbed sample

Where underlined with a dashed line denotes laboratory permeability in centimeters per second of sample remoulded to the estimated natural void ratio

*The D_{10} size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D_{10}.

** Results of these tests are available for inspection in the U.S. Army Engineer District Office, if these symbols appear beside the boring logs on the drawings.

TYPICAL NOTES:

1. While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, local variations characteristic of the subsurface materials of the region are anticipated and, if encountered, such variations will not be considered as differing materially within the purview of the contract clause entitled "Differing Site Conditions".

2. Ground-water elevations shown on the boring logs represent ground-water surfaces encountered in such borings on the dates shown. Absence of water surface data on certain borings indicates that no ground-water data are available from the boring but does not necessarily mean that ground-water will not be encountered at the locations or within the vertical reaches of such borings.

3. Consistency of cohesive soils shown on the boring logs is based on driller's log and visual examination and is approximate, except within those vertical reaches of the borings where shear strengths from unconfined compression tests are shown.

4. Unless otherwise noted:

   a. Undisturbed borings, indicated by the letter "U", are taken with a 5" I.D. Piston Type Sampler.

   b. General type borings are taken with a 1 7/8" I.D. Tube Sampler and/or a 1 3/8" I.D. Split Spoon Sampler.

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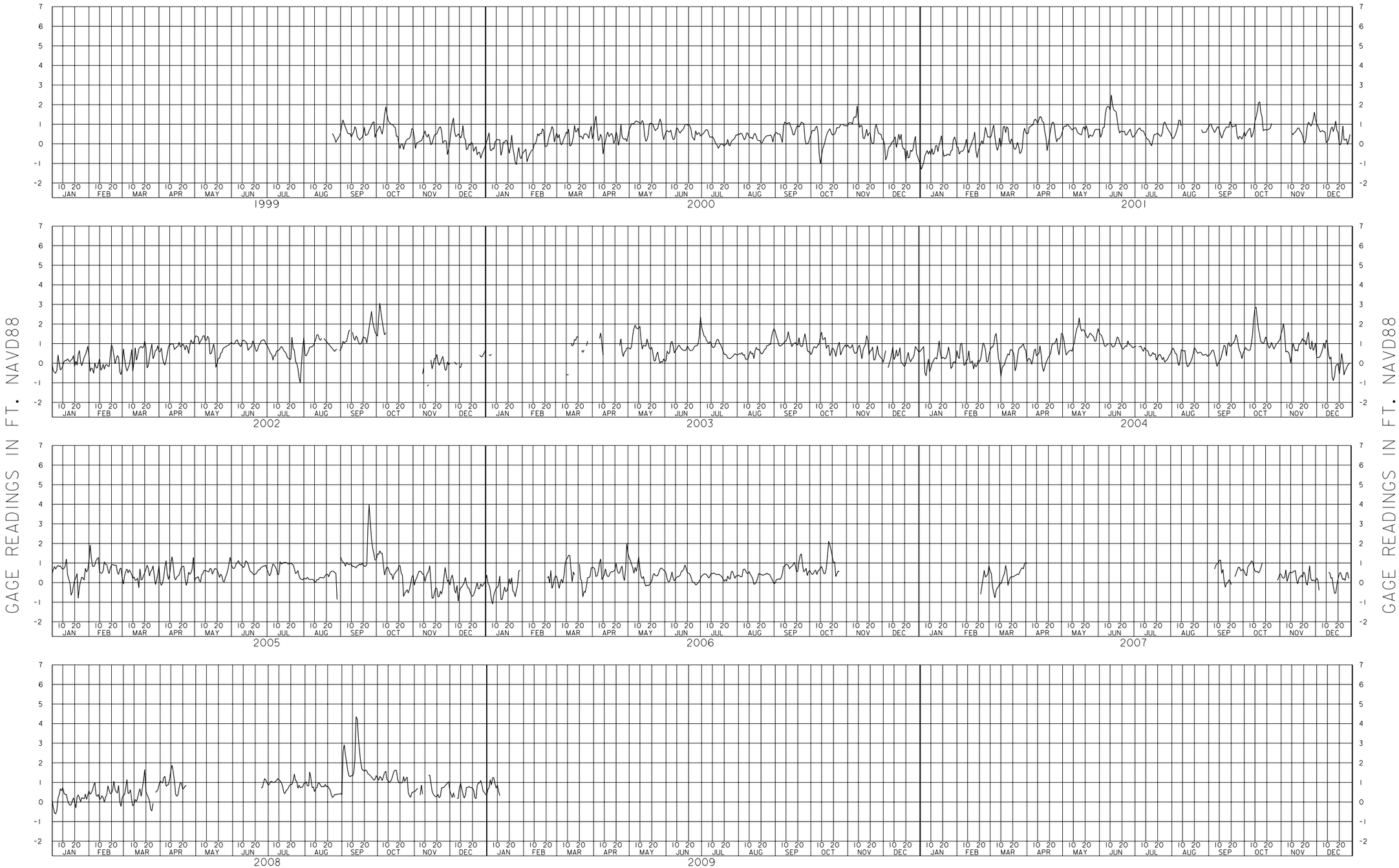
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pitre, P.E.
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
FILE NUMBER: H-A-W0002
SIZE: ANSI D
FILE NAME: ED-09-071_C-25_B1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
SOIL BORING LEGEND
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-25



BAYOU SEGNETTE @ LAPALCO BLVD.
STATION NO. 82740

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

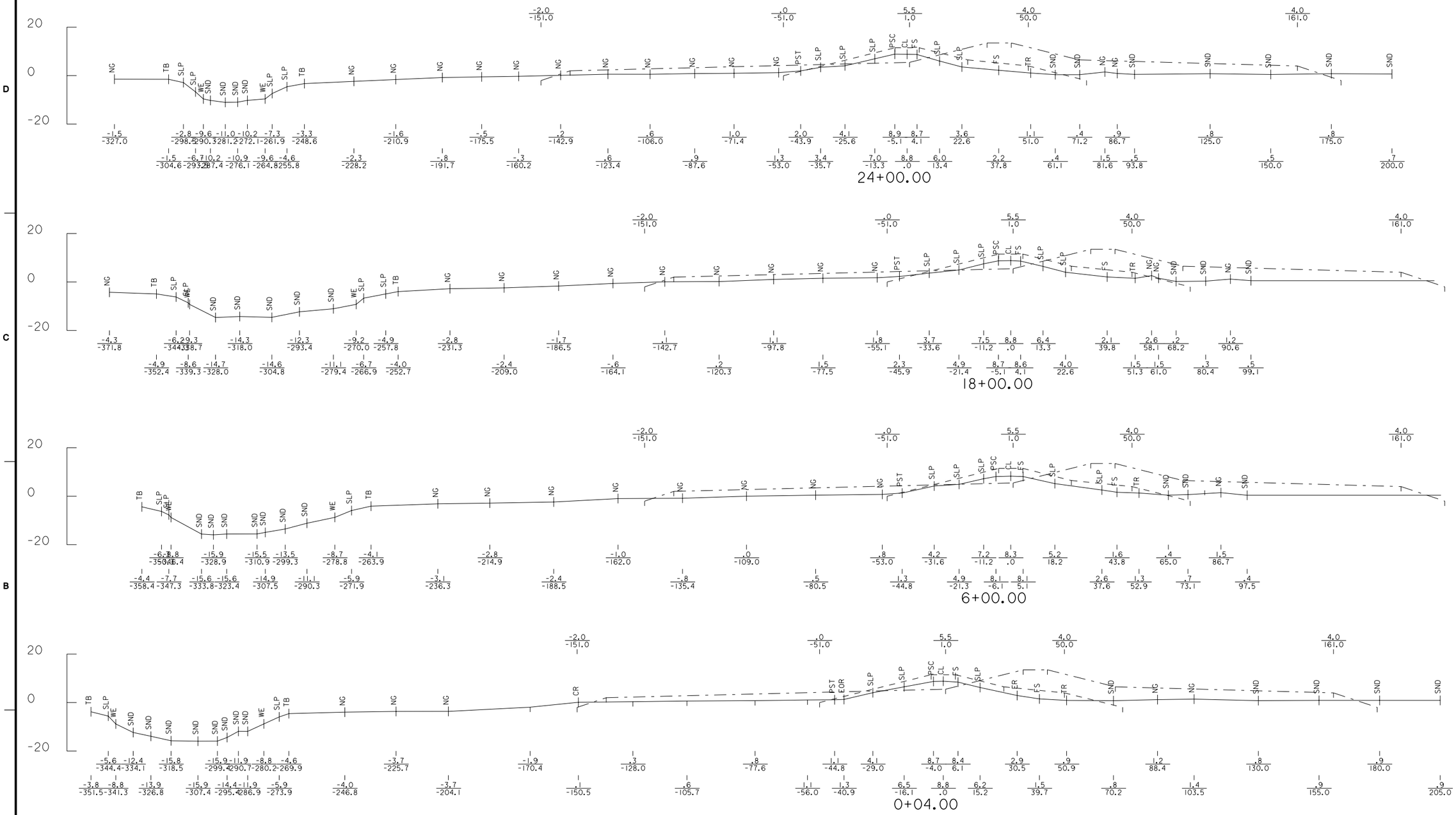
MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.
SOLICITATION NO.: W914C2-09-H-0028	
SUBMITTED BY: Ellsworth J. Pete, P.E.	CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1	PLOT DATE: 10/14/2009
FILE NUMBER: H4-4-0052	
SIZE: ANSI D	FILE NAME: ED-Sg-071_C-26_H1.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
STAGE HYDROGRAPH
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
C-26



CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.

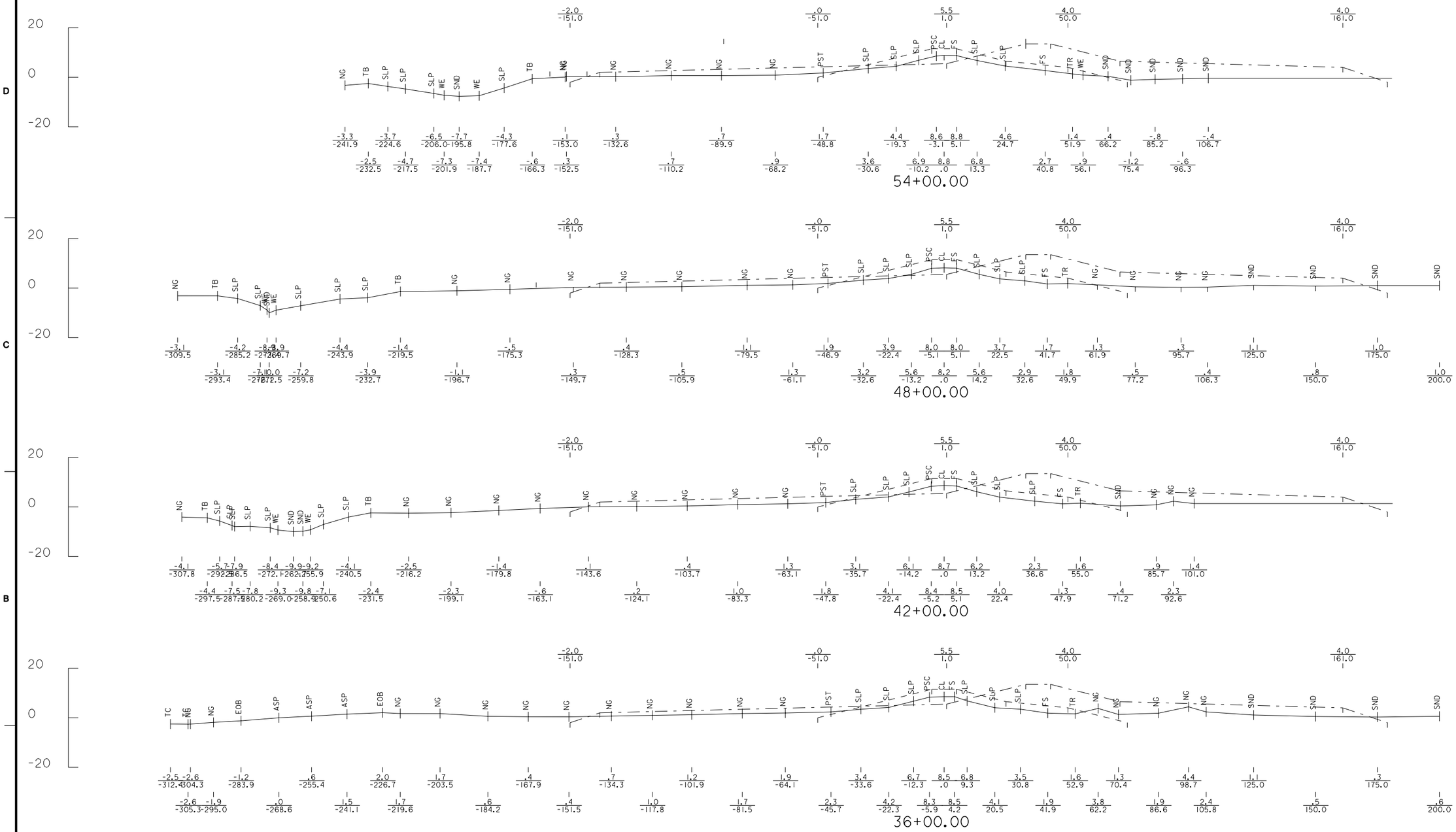
MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: Billy J. Landry	DATE: 14-OCTOBER-2009
DWN BY: B.J.L.	CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.	SOLICITATION NO.: W912CZ-09-H-0028
	CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1	PLOT DATE: 10/14/2009
SIZE: ANSI D	FILE NAME: E209-071_X-01_C3.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-01



CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.

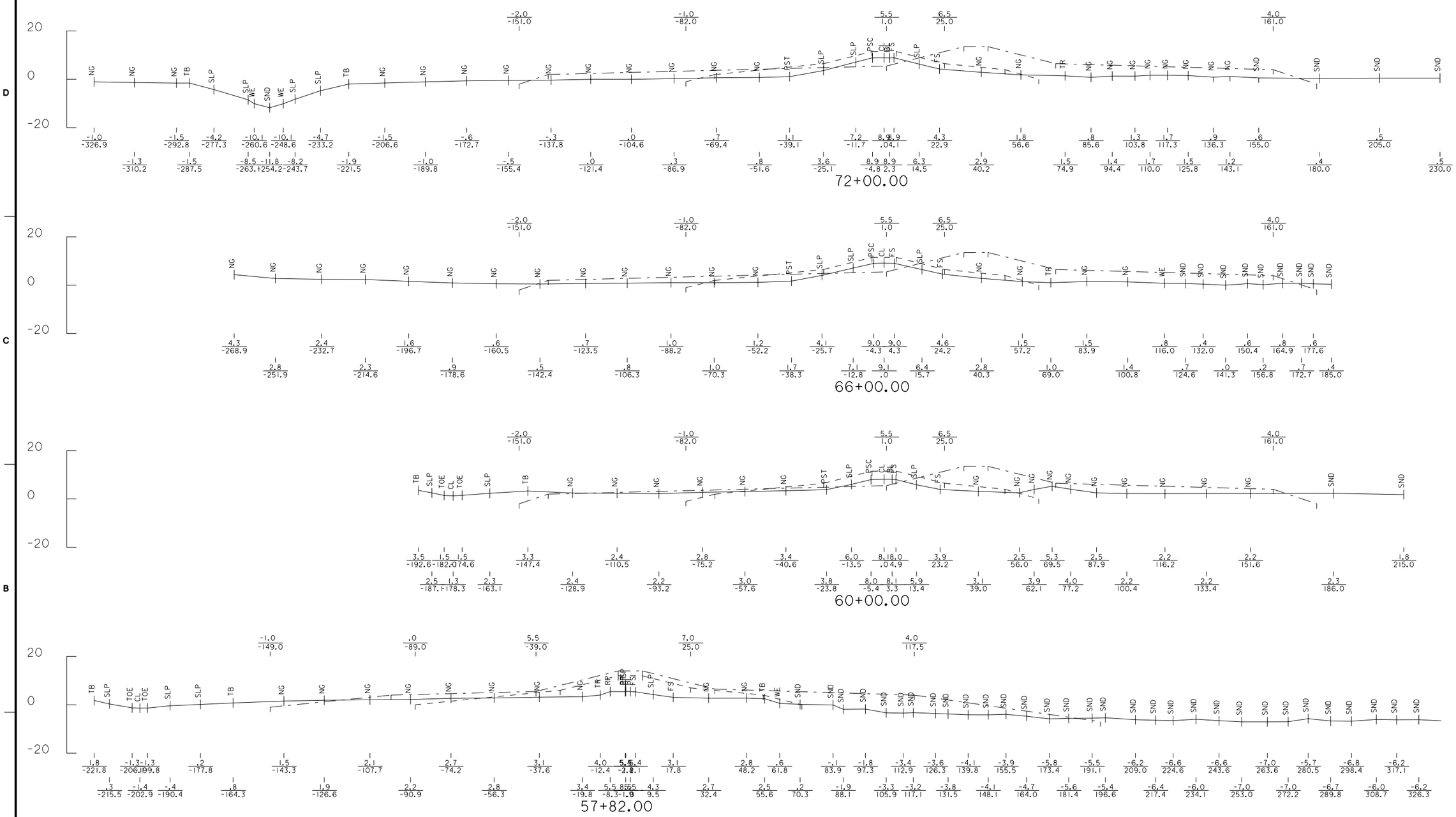
MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DATE: 14-OCTOBER-2009
DWN BY: B.J.L.
CKD BY: T.W.W.
SOLICITATION NO.: W912CZ-09-H-0028
SUBMITTED BY: Ellsworth J. Pitre, P.E.
CONTRACT NO.: HUBZONE MATOC
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
FILE NUMBER: H-A-W9026
SIZE: ANSI D
FILE NAME: ED09-071_X-02_C3.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-02



CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.

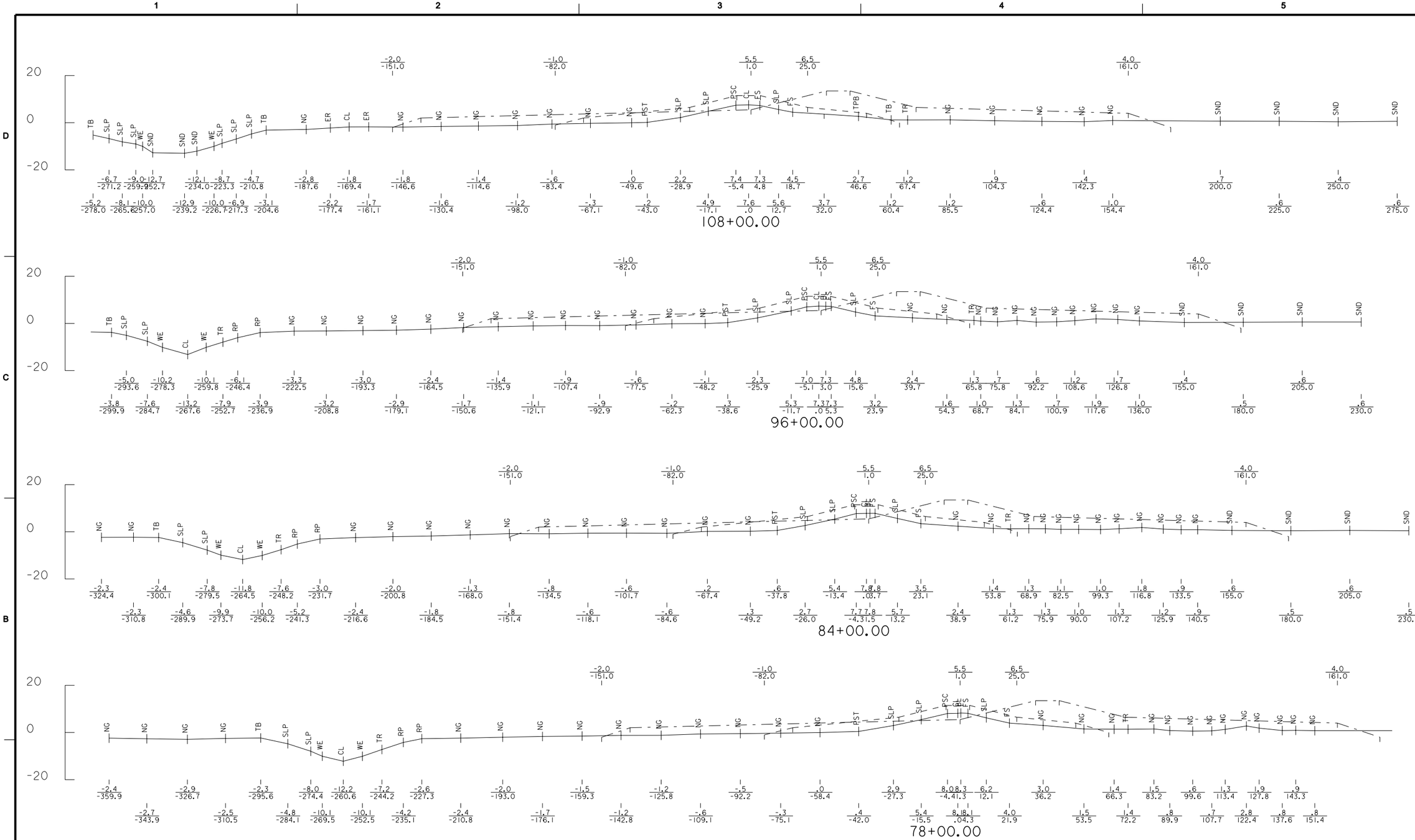
MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-4-49032
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
SIZE: ANSI D
FILE NAME: E009-071_X-03_C3.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-03



CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

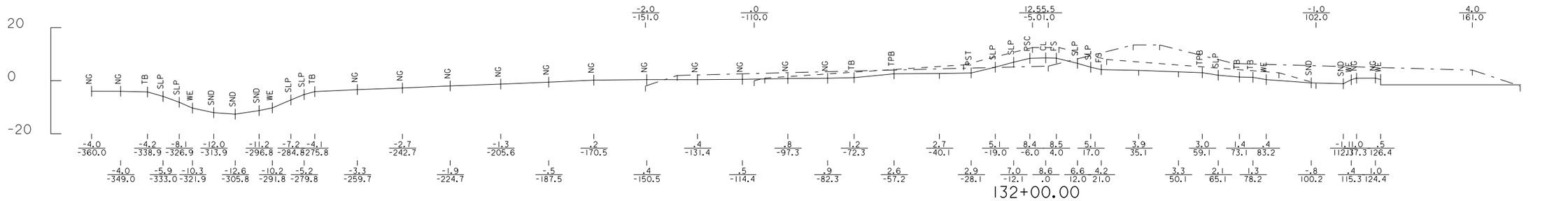
MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

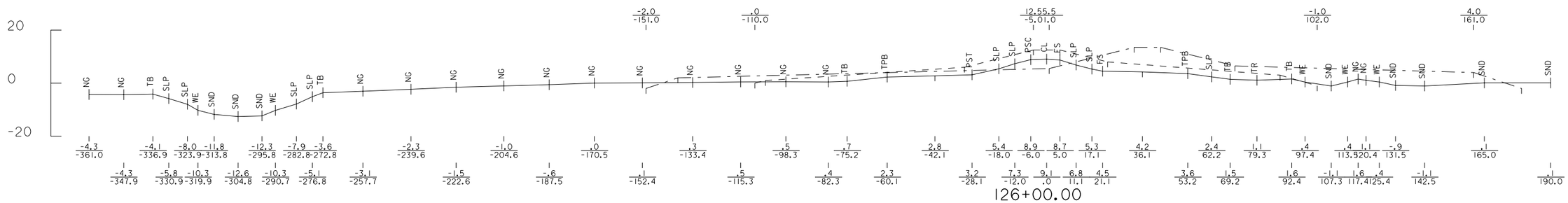
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

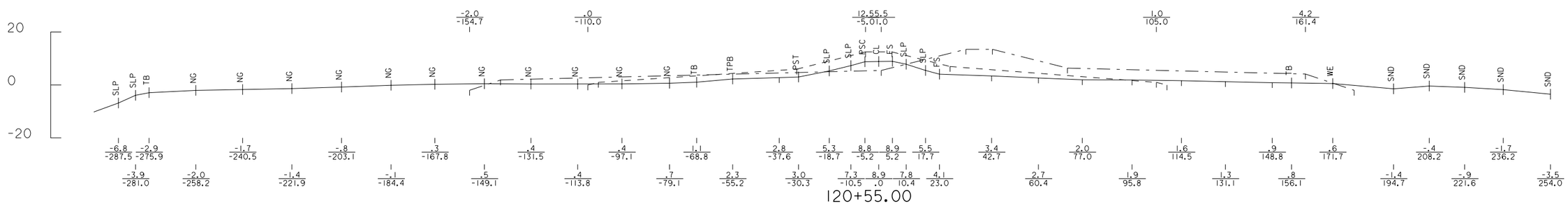
DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 10/14/2009
SIZE: ANSI D
FILE NAME: E209-071_X-04_C3.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0028
CONTRACT NO.: HUBZONE (MATOC)
FILE NUMBER: H-4-40026

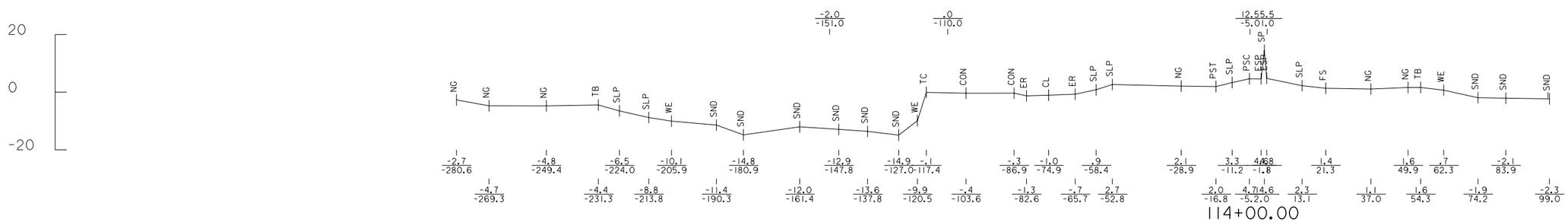
WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-04









CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.

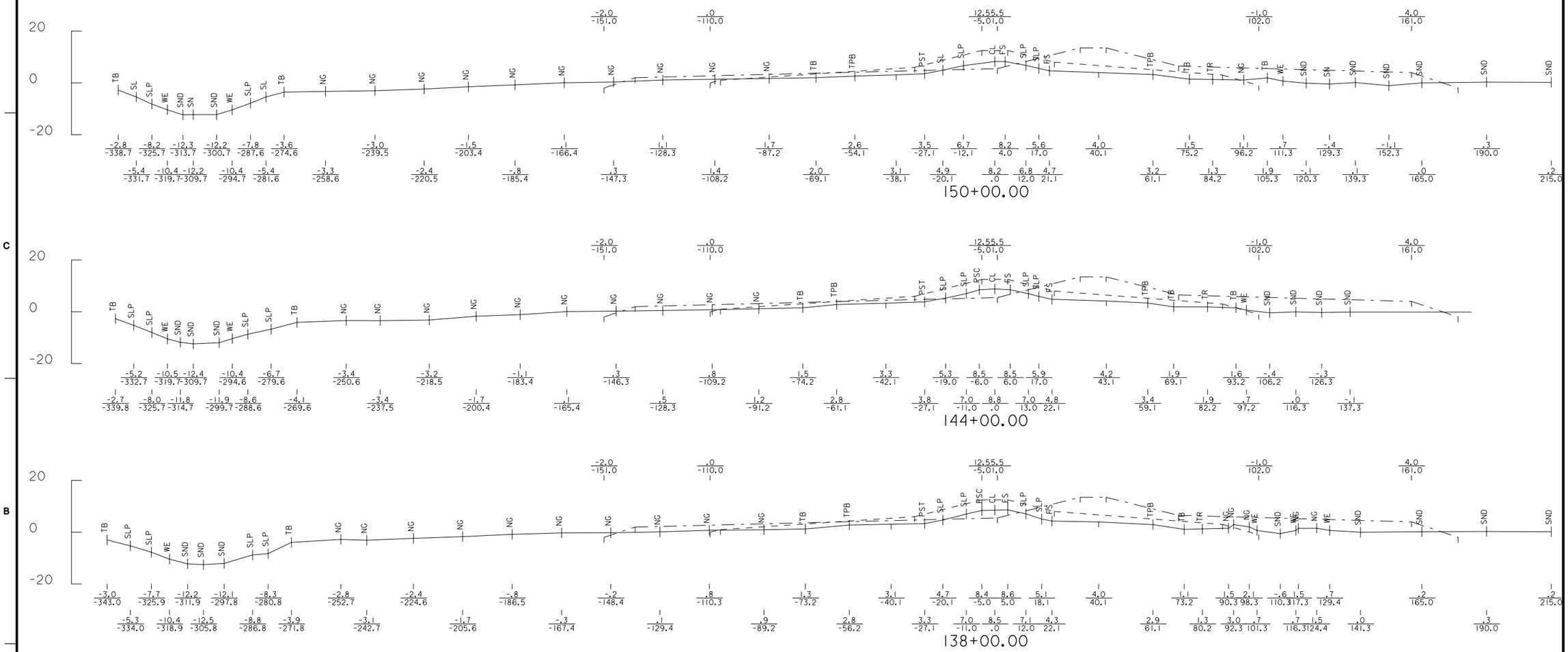
MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:20
PLOT DATE: 10/14/2009
SIZE: ANSI D
FILE NAME: ED06-071_X-05_C3.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W912CZ-09-H-0026
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-A-00026

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C-2)
LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-05



CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

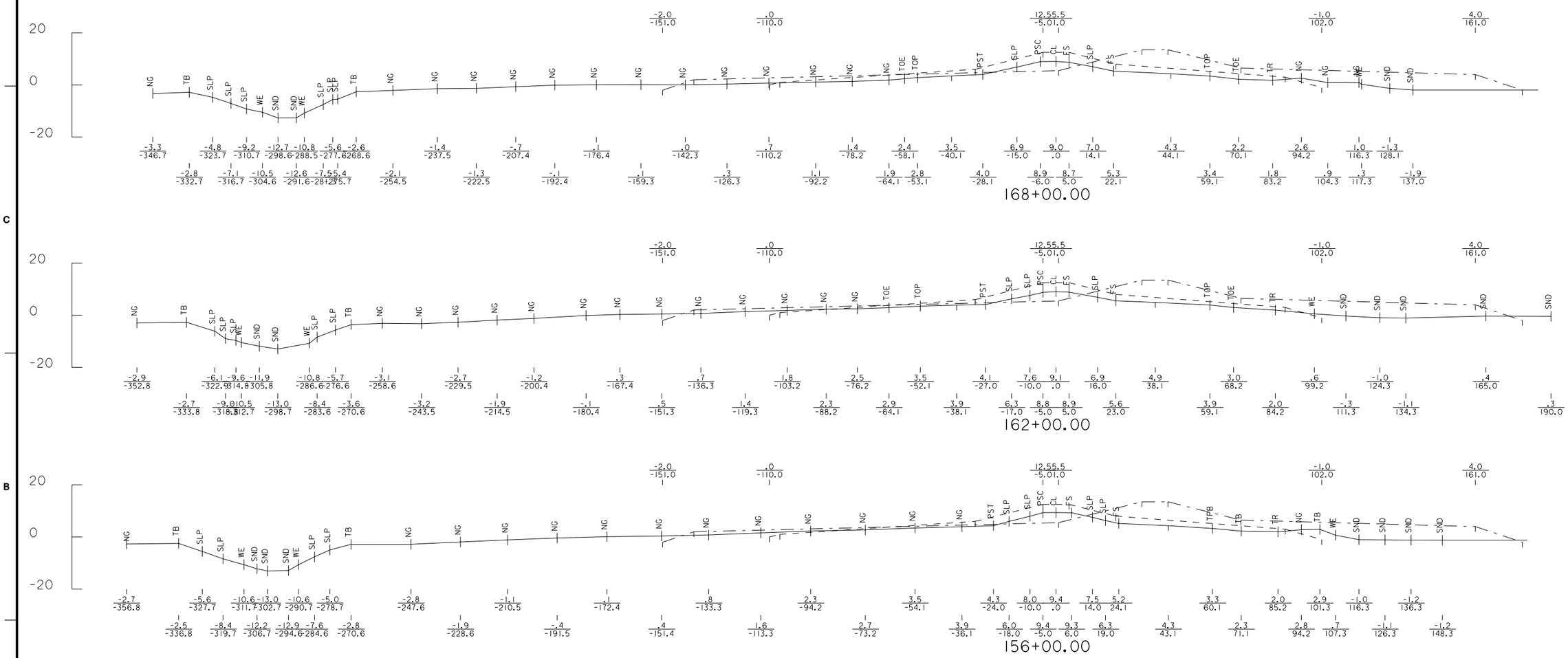
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Bby J. Landy
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth L. Pike, P.E.
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914C2-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-F-40202
PLOT SCALE: 1 = 1 INCHES
PLOT DATE: 14-OCTOBER-2009
SIZE: ANSI D
FILE NAME: E006-071_X-06_C3.dgn

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)

LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-06



CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

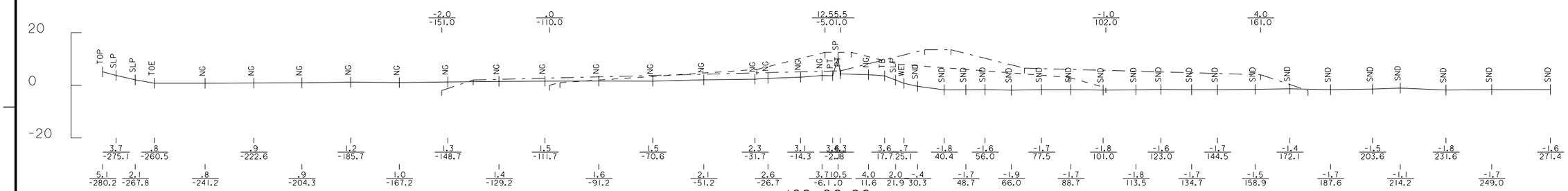
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

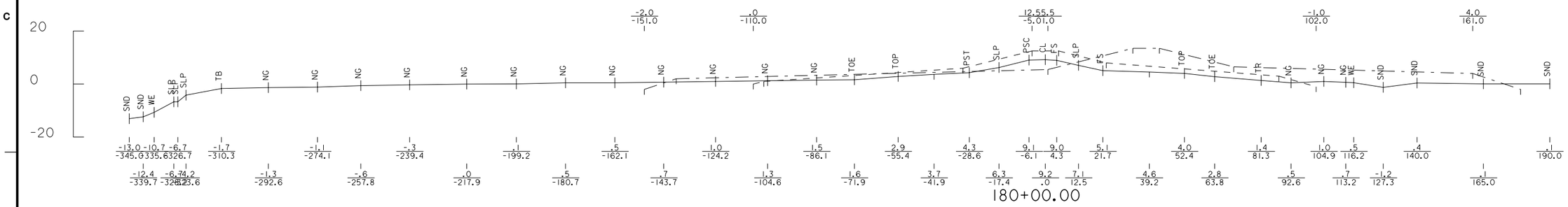
DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth J. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 7/17/2009
SIZE: ANSI D
FILE NAME: 2009-071_X-07_C3.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W81HC2-09-H-0028
CONTRACT NO.: HUBZONE IMTOC
FILE NUMBER: H-4-0082

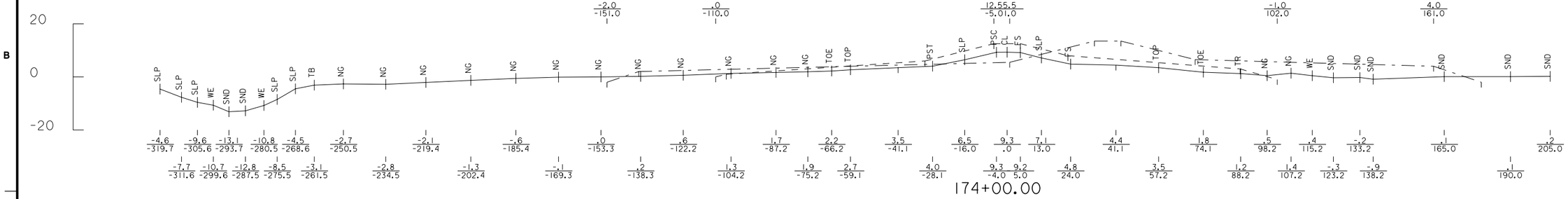
WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)

LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-07







CROSS SECTION LEGEND

- SURVEYED GROUND LINE
- PHASE 1 LEVEE ENLARGEMENT
- PHASE 2 FIRST LIFT LEVEE (CURRENT DESIGN)

US Army Corps of Engineers®
NEW ORLEANS DISTRICT

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: Billy J. Landry
DWN BY: B.J.L.
CKD BY: T.W.W.
SUBMITTED BY: Ellsworth L. Pike, P.E.
PLOT SCALE: 1:1
PLOT DATE: 7/17/2009
SIZE: ANSI D
FILE NAME: E006-071_X-08_C3.dgn
DATE: 14-OCTOBER-2009
SOLICITATION NO.: W914CZ-09-H-0028
CONTRACT NO.: HUBZONE MATOC
FILE NUMBER: H-F-46082

WEST BANK & VICINITY NEW ORLEANS, LOUISIANA
WESTWEGO TO HARVEY CANAL
(HSDRRS)
NEW WESTWEGO P.S. TO ORLEANS VILLAGE
PHASE 2, FIRST LIFT LEVEE (WBV-14C.2)
LEVEE CROSS SECTIONS
JEFFERSON PARISH, LOUISIANA

SHEET IDENTIFICATION
X-08

US Army Corps
of Engineers®
New Orleans District

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

Solicitation:

Contract:

LICENSED PROFESSIONAL ENGINEER
LAWRENCE W. SANDHAAS
14547
IOWA

I HEREBY CERTIFY THAT REVISION 0 TO THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

LAWRENCE W. SANDHAAS 1/22/10
LAWRENCE W. SANDHAAS 01-22-10

LICENSE NUMBER: 14547
MY LICENSE RENEWAL DATE IS 12-31-11
PAGES OR SHEETS COVERED BY THIS SEAL:
G-001 THRU G-006, B-620 THRU B-626,
C-100 THRU C-105, C-201, C-301, C-302,
C-501 THRU C-503, S-100, S-200, S-201,
S-401 THRU S-404, S-500, S-501, S-600

THIS PROJECT WAS DESIGNED FOR THE NEW ORLEANS DISTRICT CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF CORPS OF ENGINEERS INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152. SIGNATURES INDICATE OFFICIAL RECOMMENDATION OF ALL DRAWINGS IN THIS SET.

APPROVED BY:

DISTRICT COMMANDER

APPROVAL RECOMMENDED BY:

for
CHIEF ENGINEERING DIVISION

N/A
FTL CIVIL BRANCH

N/A
CHIEF CIVIL BRANCH

Daniel C. Bonura, P.E.
FTL STRUCTURAL BRANCH

P.E.
CHIEF STRUCTURAL BRANCH

US Army Corps of Engineers® New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: RAJ
DWN BY: NV
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC.
PLOT SCALE: NONE
PLOT DATE: 01-22-2010
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: H-48852
SIZE: ANSI D
FILE NAME: wbv-14c01g001__g-001---.dgn

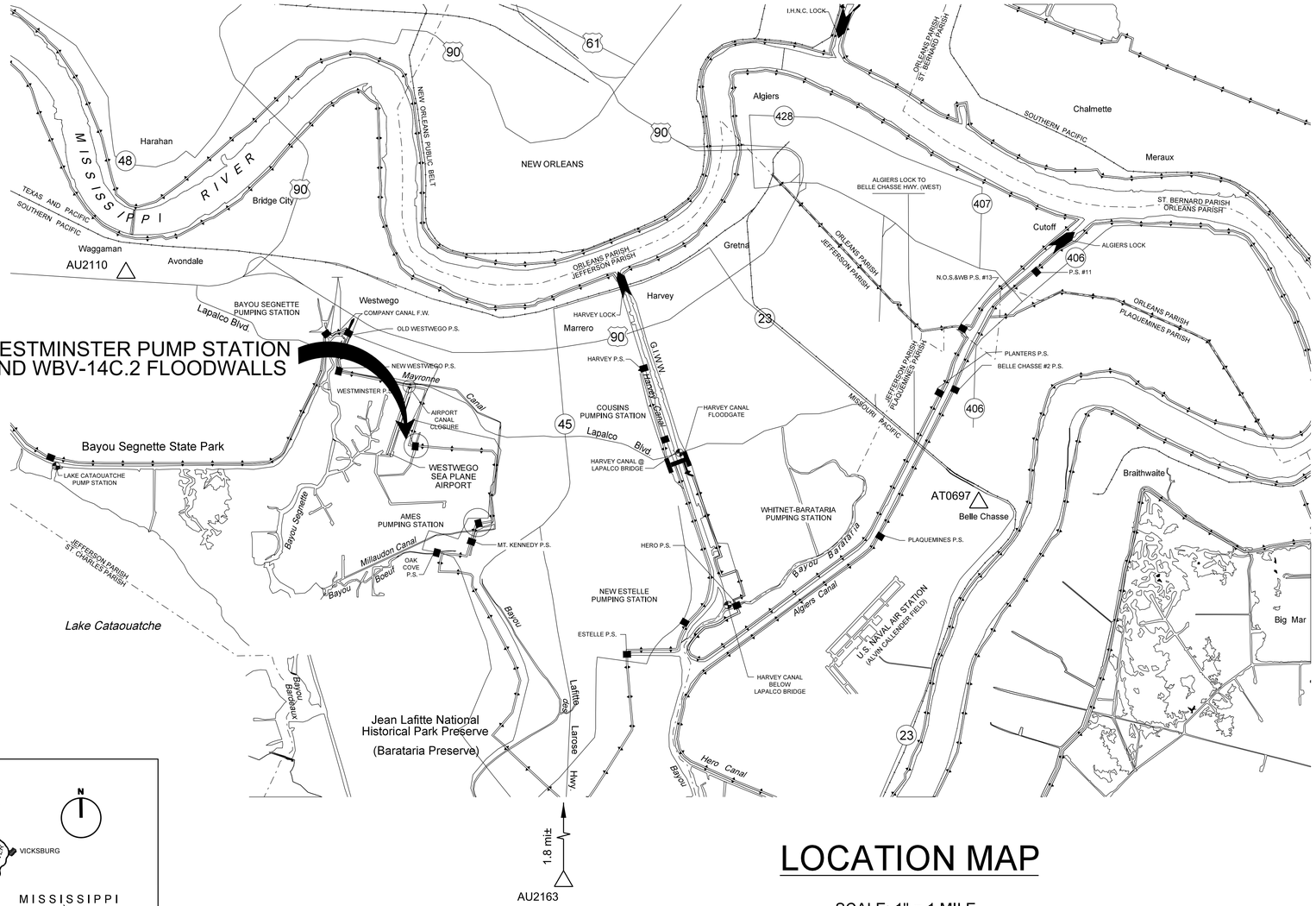
Stanley Consultants INC.
225 Baronne Street, New Orleans, LA 70112-1901
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

COVER SHEET

SHEET IDENTIFICATION
G-001

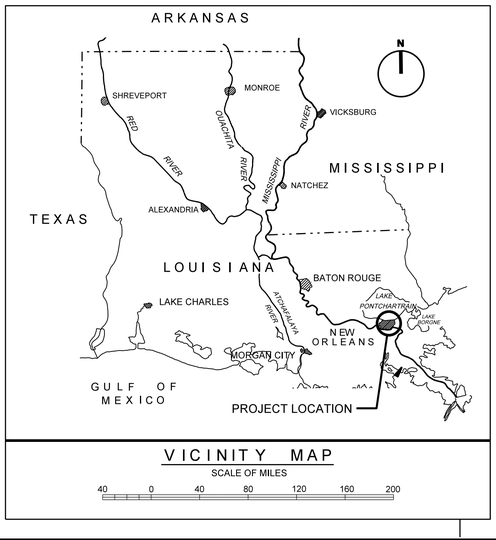
3777
22-JAN-2010 14:02 T:\wbv-14c\Engineering and Design\(01) G- General\dgns\wbv-14c01g001___g-001---.dgn



LOCATION MAP

SCALE: 1" = 1 MILE

1.0 0 1.0 2.0 3.0 4.0



VICINITY MAP

SCALE OF MILES

40 0 40 80 120 160 200

HORIZONTAL DATUM

NAD 1983
LOUISIANA STATE PLANE
SOUTH ZONE 1702

VERTICAL DATUM

NAVD 88 EPOCH 2004.65

NGS SURVEY MONUMENTS (SPC-1702 LA. S) (PROJECT GPS CONTROL)				
MONUMENT NAME	NORTHING (us ft.)	EASTING (us ft.)	ELEVATION (us ft.)	DESCRIPTION
B 369 PID - AU2163	463,295.91	3,671,973.66	6.04	STAINLESS STEEL ROD - STAMPING: B 369 1984
C 367 PID - AT0697	494,455.73	3,707,668.73	4.06	STAINLESS STEEL ROD IN SLEEVE - STAMPING: C 367 1984
G 365 PID - AU2110	514,854.25	3,635,808.79	0.79	STAINLESS STEEL ROD IN SLEEVE - STAMPING: G 365 1984

FOR LOCAL BENCHMARKS SEE SHEET C-101

THE MONUMENT DESIGNATED G 365 PID - AU2110 IS TO BE THE PROJECT'S PRIMARY BENCHMARK.

ALL PROJECT BENCHMARKS SHALL BE VERIFIED TO ENSURE LOCAL/INTERNAL CONSISTENCY.
TIES BETWEEN PROJECT CONTROL AND LOCAL SURVEY CONTROL ARE REQUIRED AT THE BEGINNING AND ENDING OF FIELD DATA COLLECTION ACTIVITIES OR EVERY 6 MONTHS (WHICHEVER IS LESS).
THIS APPLIES TO ALL SURVEYS, INCLUDING PRIOR TO ACTUAL CONSTRUCTION LAYOUT, DURING CONSTRUCTION, POST-CONSTRUCTION OR AS-BUILT SURVEYS, AND ENGINEERING SURVEYS.

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: RAJ | DATE: 01-22-2010
DWN BY: NV | CKD BY: LWS | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC. | CONTRACT NO.:
PLOT SCALE: AS NOTED | PLOT DATE: 22-JAN-2010 | FILE NUMBER: 1404-06002
SIZE: ANSI D | FILE NAME: wbv-14c01g002__g-002---.dgn

Stanley Consultants INC.
225 Baronne Avenue, Association, Iowa 52761-0764
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

LOCATION AND VICINITY MAPS

SHEET IDENTIFICATION
G-002

3777
22-JAN-2010 15:48 T:\wbv-14c\Engineering and Design\(01) G- General\dgns\wbv-14c01g002___g-002---.dgn

	SHT ID NO	DWG TITLE	REV
		GENERAL	
●	G-001	COVER SHEET	0
●	G-002	LOCATION AND VICINITY MAPS	0
●	G-003	DRAWING INDEX	0
●	G-004	GENERAL NOTES - SHEET 1	0
●	G-005	GENERAL NOTES - SHEET 2	0
●	G-006	ABBREVIATIONS	0
		GEOTECHNICAL	
●	B-620	SOIL LEGEND	0
●	B-621	SOIL BORING LOGS - SHEET 1	0
●	B-622	SOIL BORING LOGS - SHEET 2	0
●	B-623	SOIL BORING LOGS - SHEET 3	0
●	B-624	SOIL BORING LOGS - SHEET 4	0
●	B-625	SOIL BORING LOGS - SHEET 5	0
●	B-626	SOIL BORING LOGS - SHEET 6	0
		CIVIL	
●	C-100	FLOODWALL ALIGNMENT PLAN	0
●	C-101	EXISTING SITE PLAN	0
●	C-102	PROPOSED SITE AND GRADING PLAN - SOUTH WALLS	0
●	C-103	PROPOSED SITE AND GRADING PLAN - NORTH WALLS	0
●	C-104	WORK LIMIT, UTILITY DISPOSITION, AND ACCESS PLAN	0
●	C-105	ACCESS PLAN - ALTERNATE ACCESS	0
●	C-201	FLOODWALL ELEVATION	0
●	C-301	SECTIONS - SHEET 1	0
●	C-302	SECTIONS - SHEET 2	0
●	C-501	DETAIL - CONCRETE SCOUR PROTECTION - PLAN VIEW	0
●	C-502	FENCING DETAILS - SHEET 1	0
●	C-503	FENCING DETAILS - SHEET 2	0
		STRUCTURAL	
●	S-100	OVERALL MONOLITH PLAN	0
●	S-200	DISCHARGE MONOLITH PROFILE SHEET 1	0
●	S-201	DISCHARGE MONOLITH PROFILE SHEET 2	0
●	S-401	MONOLITH TYPE "B" & "C" PILE PLAN	0
●	S-402	I-WALL TO T-WALL TRANSITION DETAILS	0
●	S-403	STEPPED FOOTING TYPICAL DETAILS	0
●	S-404	T-WALL TO SHEET PILE WALL TRANSITION DETAILS	0
●	S-500	STEEL PILE DETAILS	0
●	S-501	WATERSTOP AND JOINT DETAILS SHEET 1	0
●	S-600	HP AND PIPE PILE SCHEDULES	0

LEGEND

● DRAWING INCLUDED IN SUBMITTAL

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: NV
DWN BY: NV
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC
PLOT SCALE: NONE
PLOT DATE: 01-22-2010
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FILE NAME: wbv-14c01g003___g-003---.dgn
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CONTRACT NO.:
FILE NUMBER: H-04-4022

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 Baronne Avenue, Suite 1700, New Orleans, Louisiana 70112-1764
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

DRAWING INDEX

SHEET IDENTIFICATION
G-003

GENERAL NOTES:

1. AZIMUTHS SHOWN ARE FWD. GEOD. AZ. MEASURED CLOCKWISE FROM THE NORTH. COORDINATES ARE STATE PLANE - LOUISIANA SOUTH.
2. ELEVATIONS ARE IN FEET AND REFER TO NORTH AMERICAN VERTICAL DATUM (NAVD88-2004.65).
3. DIMENSIONS AND/OR ELEVATIONS MARKED THUS (+/-) ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN THE FIELD.
4. DIMENSIONS AND/OR ELEVATIONS MARKED THUS (NTS) ARE NOT SHOWN TO SCALE.
5. DRAWINGS ARE GENERALLY TO SCALE, BUT SHOULD NOT BE SCALED. NTS IS SHOWN ONLY WHERE DRAWING IS OBVIOUSLY OUT OF SCALE.
6. ALL STRUCTURES HAVE BEEN DESIGNED ACCORDING TO THE "HURRICANE AND STORM DAMAGE RISK REDUCTION SYSTEM DESIGN GUIDELINES" DATED OCTOBER 4, 2007, PRODUCED BY THE NEW ORLEANS DISTRICT ENGINEERING DIVISION OF THE U.S. ARMY CORPS OF ENGINEERS. UPDATES DATED MAY 5, 2008 AND JUNE 12, 2008 HAVE BEEN INCORPORATED IN THE DESIGN.
7. FOR BORING LOGS, SEE CIVIL DWGS B-620 THROUGH B-626.

FIELD MEASUREMENT NOTES:

1. ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE APPROXIMATE: CONTRACTOR SHALL MAKE ALL NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURES TO VERIFY DIMENSIONS SHOWN ON DRAWINGS AND TO PROVIDE DIMENSIONS NOT SHOWN, PRIOR TO FABRICATION. COSTS FOR MODIFICATIONS OF NEW CONSTRUCTION, DUE TO LACK OF CONFIRMATION OF DIMENSIONS BY FIELD MEASUREMENTS SHALL BE BORNE BY CONTRACTOR.

CONCRETE NOTES:

1. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 4000 PSI AT 28 DAYS, 90 DAYS IF POZZOLAN IS USED, UNLESS OTHERWISE NOTED.
2. STABILIZATION SLAB CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 2500 PSI AT 28 DAYS, 90 DAYS IF POZZOLAN IS USED.
3. SCOUR PROTECTION CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 PSI AT 28 DAYS, 90 DAYS IF POZZOLAN OR SLAG IS USED.
4. REINFORCING SHALL BE SHIFTED T0 MISS RECESSES FOR GATE LATCHES OR OTHER EMBEDDED ITEMS. ADD ADDITIONAL REINFORCING WHERE DIRECTED BY CONTRACTING OFFICER.
5. CONSTRUCTION JOINTS SHALL BE PROVIDED WHERE SHOWN ON THE DRAWINGS. WHERE NOT SHOWN, CONSTRUCTION JOINTS SHALL BE PLACED AT LOCATIONS LEAST LIKELY TO IMPAIR THE INTEGRITY OF THE CONCRETE STRUCTURE. THESE ADDITIONAL CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE CONTRACTING OFFICER.
6. UNLESS OTHERWISE NOTED, PROVIDE 3/4 " CHAMFER AT ALL EXPOSED JOINTS, EDGES, EXTERNAL CORNERS, AND VERTICAL EXPANSION JOINTS.
7. ALL BENDS OF REINFORCEMENT AND ALL BAR SPACERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SP-66, AMERICAN CONCRETE INSTITUTE DETAILING MANUAL - 2004.
8. REINFORCING BAR DESIGNATION NUMBERS CONFORM TO THE NUMBERING SYSTEM OF THE CONCRETE REINFORCING STEEL INSTITUTE.
9. REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS UNLESS OTHERWISE NOTED.
10. REINFORCEMENT, WHERE NECESSARY TO AVOID OPENINGS, PIPES, EMBEDDED ITEMS AND OTHER OBSTRUCTIONS, SHALL BE BENT OR SHIFTED AS DIRECTED BY THE CONTRACTING OFFICER. ADD ADDITIONAL REINFORCING WHERE DIRECTED BY CONTRACTING OFFICER.
11. THE EMBEDMENT AND SPLICE TABLE SHALL BE USED IN DETERMINING LAP SPLICES AND EMBEDMENT LENGTHS WHERE LENGTHS ARE NOT OTHERWISE INDICATED. SPLICE LENGTHS SHALL BE BASED ON THE SMALLER BAR BEING LAPPED. THE CONTRACTOR WILL BE ALLOWED TO MAKE SPLICES IN ADDITION TO THOSE INDICATED IN THE DRAWINGS, WHERE ESSENTIAL TO CONSTRUCTIBILITY, SUBJECT TO APPROVAL BY THE CONTRACTING OFFICER. SPLICES OTHER THAN THOSE SHOWN ON THE DRAWINGS AND OTHER THAN ANY ADDITIONAL SPLICES REQUIRED BY THE CONTRACTING OFFICER, WILL BE AT THE CONTRACTOR'S EXPENSE.
12. ALL EXTERIOR FORMED SURFACES SHALL BE FINISHED AS PRESCRIBED IN THE SPECIFICATIONS.

CONCRETE NOTES:(continued)

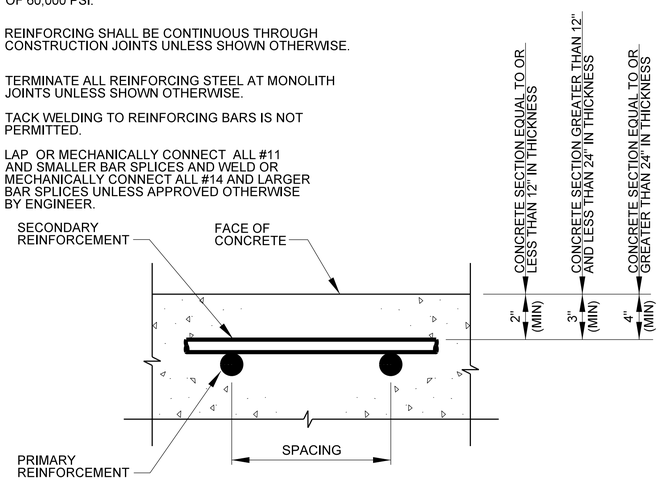
REINFORCEMENT EMBEDMENT AND SPLICE TABLES - 4000 PSI

BAR SIZE	BASIC TABLE				ALTERNATE TABLE			
	MIN. EMBED LENGTH, IN.		MIN. LAP LENGTH, IN.		MIN. EMBED LENGTH, IN.		MIN. LAP LENGTH, IN.	
	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
3	18	14	24	18	12	12	14	12
4	25	19	32	25	15	12	19	15
5	31	24	40	31	18	14	24	18
6	37	28	48	37	22	17	29	22
7	54	42	70	54	32	25	42	32
8	62	47	80	62	37	28	48	37
9	69	53	90	69	42	32	54	42
10	77	59	100	77	46	36	60	46
11	85	65	110	85	51	39	66	51

12. USE THE BASIC TABLE IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
    A) CENTER TO CENTER BAR SPACING LATERALLY IS AT LEAST 3 BAR DIAMETERS.
    B) DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2 BAR DIAMETERS.
13. THE ALTERNATE TABLE MAY BE USED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
    A) CENTER TO CENTER BAR SPACING LATERALLY IS AT LEAST 5 BAR DIAMETERS.
    B) DISTANCE FROM THE CENTER OF A BAR TO THE NEAREST CONCRETE SURFACE MUST BE AT LEAST 2.5 BAR DIAMETERS.
14. IF CONCRETE COVER OR EDGE DISTANCE IS LESS THAN 1 BAR DIAMETER OR THE CENTER-TO-CENTER BAR SPACING LATERALLY IS LESS THAN 3 BAR DIAMETERS, SEE ACI 318 FOR APPROPRIATE GUIDANCE.
15. TOP BARS ARE HORIZONTAL BARS AND BARS INCLINED LESS THAN 45 DEGREES WITH RESPECT TO A HORIZONTAL PLANE WHICH ARE PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
16. THE TABLES SHOWN ARE FOR NORMAL WEIGHT CONCRETE AND UNCOATED REINFORCING BARS. IF EPOXY COATED BARS ARE USED, SEE ACI 318 FOR ADDITIONAL CONSIDERATIONS.
17. EPOXY OR ADHESIVE ANCHOR SYSTEM FOR STEEL ANCHOR BOLTS, RODS AND REINFORCING BARS SHALL BE IN ACCORDANCE WITH LOUISIANA DEPARTMENT OF TRANSPORTATIION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES SECTION 1017.

REINFORCING STEEL NOTES:

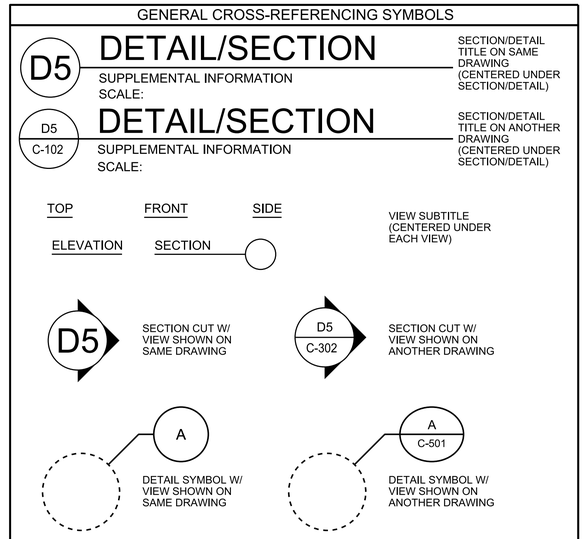
1. REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH (Fy) OF 60,000 PSI.
2. REINFORCING SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS UNLESS SHOWN OTHERWISE.
3. TERMINATE ALL REINFORCING STEEL AT MONOLITH JOINTS UNLESS SHOWN OTHERWISE.
4. TACK WELDING TO REINFORCING BARS IS NOT PERMITTED.
5. LAP OR MECHANICALLY CONNECT ALL #11 AND SMALLER BAR SPLICES AND WELD OR MECHANICALLY CONNECT ALL #14 AND LARGER BAR SPLICES UNLESS APPROVED OTHERWISE BY ENGINEER.



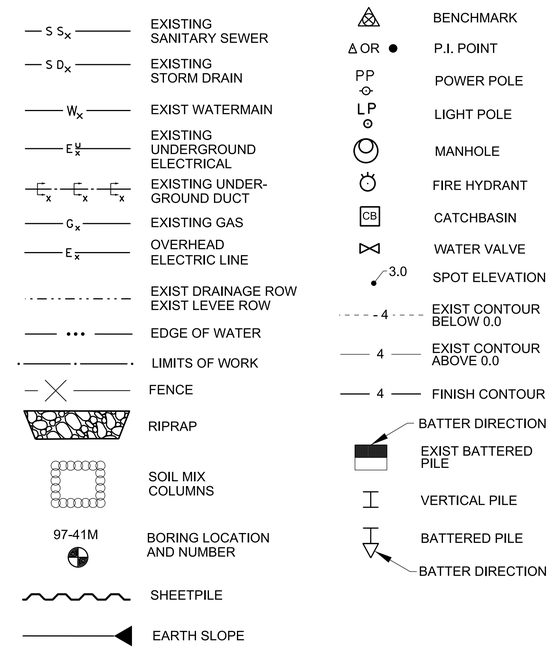
REINFORCEMENT CLEARANCE DETAIL

SCALE: NONE

GENERAL CROSS-REFERENCING SYMBOLS



GENERAL LEGEND



US Army Corps of Engineers
New Orleans District

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DESIGNED BY: CSP | DATE: 01-22-2010
DWN BY: NV | CKD BY: LWS | SOLICITATION NO.:
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U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

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HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

GENERAL NOTES
SHEET 1

SHEET IDENTIFICATION
G-004

CONCRETE DEMOLITION NOTES:

1. REMOVE CONCRETE TO LIMITS SHOWN.

2. AT LIMITS OF CONCRETE TO BE REMOVED WHERE EXISTING CONCRETE IS TO REMAIN, PERFORM REMOVAL AS FOLLOWS:

   A) WHERE LIMITS OF CONCRETE REMOVAL FORM A CORNER, CORE DRILL (3" DIA MINIMUM) CONCRETE AT CORNER PRIOR TO SAW CUTTING. OVER CUTTING BY SAW AT CORNERS IS NOT PERMITTED.
   B) INITIATE REMOVAL BY SAW CUT. SAW CUTS MAY BE MADE THROUGH ENTIRE THICKNESS OF CONCRETE UNLESS EXISTING REINFORCING IS SHOWN TO REMAIN AND EXTEND INTO SUBSEQUENT NEW CONCRETE CONSTRUCTION.
   C) WHERE SAW CUTTING THROUGH ENTIRE SECTION IS NOT POSSIBLE DUE TO SPACE LIMITATIONS FOR EQUIPMENT OR WHERE NOT PERMITTED DUE TO RETENTION OF EXISTING REINFORCING, REMOVE CONCRETE BY PRE-DRILLING SERIES OF HOLES ALONG LINE OF REMOVAL TO WEAKEN CONCRETE AND THEN REMOVE CONCRETE BY USE OF HAND HELD JACK HAMMERS.
   D) EXISTING CONCRETE TO REMAIN SHALL NOT BE DAMAGED BY CONCRETE REMOVAL PROCESS. INSPECT CONCRETE TO REMAIN AT DEMOLITION LIMITS AND REPORT TO CONTRACTING OFFICER ANY EVIDENCE OF DAMAGED CONDITIONS.
   E) EXISTING REINFORCING BARS THAT ARE TO BE RETAINED SHALL NOT BE DAMAGED BY DEMOLITION PROCESS. DAMAGED BARS OR BARS BENT EXCESSIVELY BY DEMOLITION PROCESS SHALL BE CUT AND MECHANICALLY SPLICED AT CONTRACTOR'S EXPENSE.

STEEL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE ASTM A36 AS APPLICABLE, UNLESS OTHERWISE NOTED.

2. HP PILES: ASTM A572 GRADE 50
   PIPE PILES: ASTM A252 GRADE 3 MODIFIED WITH 50 KSI; YIELD STRENGTH
   SHEET PILES: ASTM A572 GRADE 50

3. TO PREVENT CORROSION BY MOISTURE BETWEEN STEEL SURFACES IN CONTACT, ALL SUCH CONTACTS SHALL BE SEALED WATERTIGHT BY RUNNING A CONTINUOUS 1/8 " FILLET WELD ALONG ALL EDGES OF THE CONTACT, UNLESS OTHERWISE NOTED.

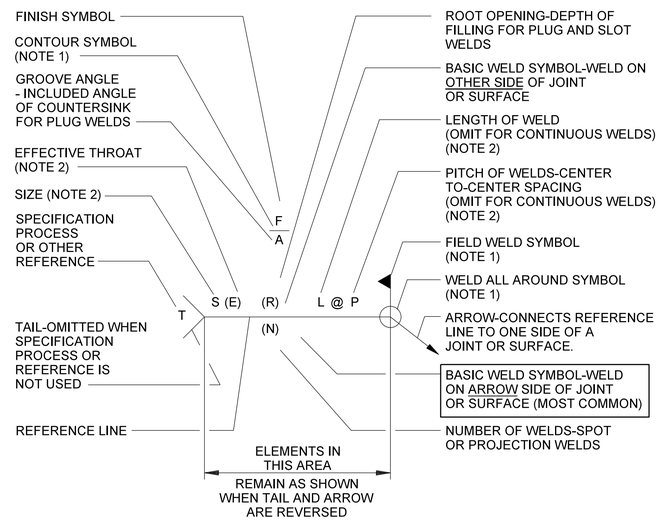
4. ALL WELDING SHALL BE ELECTRIC WELDING. WORKMANSHIP AND TECHNIQUE, WHERE APPLICABLE, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE, SEE SPECIFICATIONS.

5. WELDING SYMBOLS SHOWN ARE THOSE ADOPTED BY THE AMERICAN WELDING SOCIETY AND INDICATE ONLY SIZE AND TYPE OF WELDS REQUIRED. DETAILED INFORMATION SHALL BE SHOWN ON THE SHOP DRAWINGS AND SUBMITTED BY THE CONTRACTOR FOR APPROVAL.

6. DIMENSIONS SHOWN OR CALLED FOR ARE THE FINAL DIMENSIONS; ALLOWANCES MUST BE MADE FOR MACHINING.

7. ITEMS MARKED C.R.S. SHALL BE CORROSION RESISTANT STEEL (STAINLESS STEEL), SEE SPECIFICATIONS.

LOCATION OF ELEMENTS OF A WELDING SYMBOL

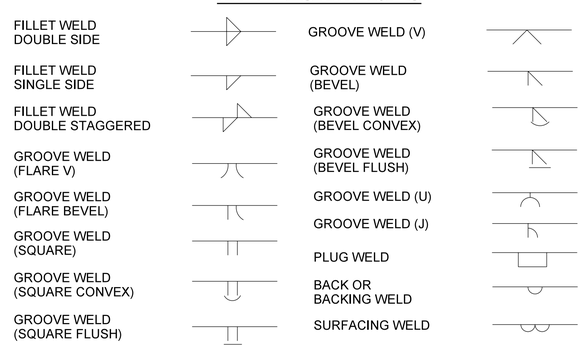


NOTES:

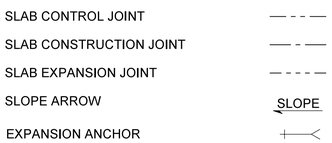
(1) SUPPLEMENTARY SYMBOL.

(2) SHOWN ON SAME SIDE OF REFERENCE LINE AS THE WELD SYMBOL. IF "WELD BOTH SIDES" DIMENSIONS ARE REQUIRED ON BOTH SYMBOLS, EVEN IF SAME DIMENSIONS.

WELD SYMBOLS



GENERAL STRUCTURAL SYMBOLS



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New Orleans District

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HURRICANE PROTECTION PROJECT
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JEFFERSON PARISH, LOUISIANA

GENERAL NOTES
SHEET 2

SHEET IDENTIFICATION
G-005

ABBREVIATIONS

AB	ANCHOR BOLT
ABV	ABOVE
ADH	ADHESIVE
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AHR	ANCHOR
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CAPACITY
ALT	ALTERNATE
ALUM	ALUMINUM
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPD	APPROVED
APPROX	APPROXIMATE
ASPH	ASPHALT
AUTO	AUTOMATIC
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
BL	BUILDING LINE OR BASELINE
BLDG	BUILDING
BLW	BELOW
BM	BENCHMARK
BOC	BACK OF CURB
BOT	BOTTOM
BRCG	BRACING
BRDG	BRIDGING
BRG	BEARING
BRKT	BRACKET
BS	BOTH SIDES
BTWN	BETWEEN
BW	BOTH WAYS
C TO C,C/C	CENTER TO CENTER
CAP	CAPACITY
CB	CATCH BASIN
CE	CONSTRUCTION EASEMENT
CFM	CUBIC FEET PER MINUTE
CHFR	CHAMFER
CI	CAST IRON
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CKT	CIRCUIT
CKT BRKR	CIRCUIT BREAKER
CL, C/L	CENTER LINE
CLG	CEILING
CLG HT	CEILING HEIGHT
CLKG	CAULKING
CLL	CONTRACT LIMIT LINE
CLOS	CLOSURE
CLR	CLEAR(ANCE)
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
CNR	CORNER
COL	COLUMN
COMP	COMPRESSOR
CONC	CONCRETE
CONSTR	CONSTRUCTION
CONT	CONTINUE
CONTR	CONTRACTOR
CRS	CORROSIVE RESISTANT STEEL
CSMT	CASEMENT
CT	CURRENT TRANSFORMER
CTR	CENTER
CTS	CENTERS
CTSK	COUNTERSUNK SCREW
CU	CONDENSING UNIT
CU FT	CUBIC FEET
CU YD	CUBIC YARDS
CW	COLD WATER
DBL	DOUBLE
DCJT	DUMMY CONTROL JOINT
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DIA, ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISC	DISCONNECT
DL	DEAD LOAD
DMPR	DAMPER
DN	DOWN
DR	DRAIN
DWG	DRAWING
DWLS	DOWELS
E	EAST
EA	EACH
EF	EACH FACE
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION - GRADE OR BUILDING
ELEC	ELECTRIC
EMBED	EMBEDMENT
EP	ELECTRIC PANELBOARD
EPY	EPOXY COATING
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXT	EXTERIOR
F	FAHRENHEIT
FBO	FURNISHED BY OTHERS
FCG	FACING
FCJ	FLOOR CONSTRUCTION JOINT
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FDTN	FOUNDATION
FF	FAR FACE
FIN	FINISH
FLEX	FLEXIBLE
FLR	FLOOR
FN	FENCE
FOC	FACE OF CONCRETE
FS	FLOOD SIDE
FTG	FOOTING
GALV	GALVANIZE(D)
GEN	GENERATOR
GRAN	GRANULAR
GRTG	GRATING
HNDRL	HANDRAIL
HORIZ	HORIZONTAL
HP	HORSEPOWER
HS	HIGH STRENGTH
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
Hz	HERTZ
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
ILK	INTERLOCK
IN.	INCH
INCL	INCLUDED
INSUL	INSULATION
INTM	INTERMEDIATE
INV	INVERT
IP	IRON PIPE
IPS	IRON PIPE SIZE
IR	IRON ROD
J-BOX	JUNCTION BOX
JCT	JUNCTION
JF	JOINT FILLER
JST	JOIST
JT	JOINT
KOP	KNOCKOUT PANEL
KPL	KICK PLATE
kV	KILOVOLTS
kVA	KILOVOLT AMPERES
kW	KILOWATT
KWY	KEYWAY
LAD	LADDER
LB	POUND
LDG	LOADING
LG	LENGTH
LIN	LINEAR
LL	LIVE LOAD
LONG	LONGITUDINAL
LP	LEVEE WORKING POINT
LVR	LOUVER
MATL	MATERIAL(S)
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MED	MEDIUM
MFG	MANUFACTURING
MFR	MANUFACTURER
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MJ	MONOLITH JOINT
ML	MONOLITHIC
MNIC	MATERIAL NOT IN CONTRACT
MOD	MODIFIED
MOT	MOTOR
MT	MOUNT
MTL	METAL
N	NORTH
NAVD-88	NORTH AMERICAN VERTICAL DATUM OF 1988
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NEAR FACE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
N'REQD	NOT REQUIRED
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
PAR	PARALLEL
PC	POINT OF CURVATURE
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOOT
PD	PAVEMENT DRAIN
PED	PEDESTAL
PERF	PERFORATE(D)
PERIM	PERIMETER
PH	PHASE
PI	POINT OF INTERSECTION
PIV	POST INDICATING VALVE
PL	PLATE
PL	PROPERTY LINE
PLAT	PLATFORM
PLBG	PLUMBING
PLF	POUNDS PER LINEAR FOOT
PLG	PILING
PNL	PANEL
PORT	PORTABLE
PP	PIPE PILE
PREFIN	PREFINISHED
PREFMD	PREFORMED
PROJ	PROJECT
PRV	PRESSURE-REGULATING VALVE
PS	PIPE SPACE, PROTECTED SIDE
PS CONC	PRESTRESSED CONCRETE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT, POINT OF TANGENTCY
PT	POST-TENSIONED CONCRETE
PV	PAVED
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
(+/-)	PLUS OR MINUS
QT	QUART
QTR	QUARTER
QTY	QUANTITY
R	RADIUS
R/W	RIGHT OF WAY
RA	RETURN AIR
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
RECPT	RECEPTACLE
REF	REFERENCE
REINF	REINFORCE
REQD	REQUIRED
RET	RETURN
REV	REVISION
RGH	ROUGH
RH	RIGHT HAND
RND	ROUND
RO	ROUGH OPENING
RSR	RISER
RVS	REVERSE
S	SOUTH
SA	SUPPLY AIR
SCR	SCREW
SCRN	SCREEN
SECT	SECTION
SEQ	SEQUENCE
SFGL	SAFETY GLASS
SHT	SHEET
SHTHG	SHEATHING
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SLNT	SEALANT
SLV	SLEEVE
SM	SHEET METAL
SOV	SHUT OFF VALVE
SPA	SPACE(S)
SPC	SPACER
SPEC	SPECIFICATION
SQ	SQUARE
SST	STAINLESS STEEL
ST PR	STATIC PRESSURE
STA	STATION
STAB	STABILIZATION
STD	STANDARD
STIFF	SIFFENER
STL	STEEL
STN	STONE
STOR	STORAGE
STRUCT	STRUCTURAL
STWY	STAIRWAY
SURF	SURFACE
SW	SWITCH
SWBD	SWITCHBOARD
SYMM	SYMMETRICAL
SYS	SYSTEM
T	TREAD
T&B	TOP AND BOTTOM
TAN	TANGENT
TEL	TELEPHONE
TEMP	TEMPERATURE
TERM	TERMINAL
THK	THICK(NESS)
THRES	THRESHOLD
TOC	TOP OF CONCRETE
TOG	TOP OF GRATING
TOL	TOLERANCE
TOPO	TOPOGRAPHY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TR	TRANSFORMER
TRANS	TRANSVERSE
TRS	TEMPORARY RETAINING STRUCTURE
TSTAT	THERMOSTAT
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UNEX	UNEXCAVATED
UNO	UNLESS NOTED OTHERWISE
UNFIN	UNFINISHED
UPS	UNINTERRUPTABLE POWER SUPPLY
UTIL	UTILITY
UV	UNIT VENTILATOR
V	VOLT
VAB	VAPOR BARRIER
VENT	VENTILATOR(TION)
VERT	VERTICAL
VS	VENT STACK
W	WEST
W/	WITH
W/L, WL	WALL LINE
W/O	WITHOUT
W/W	WALL TO WALL
WJLD	WEST JEFFERSON LEVEE DISTRICT
WM	WIRE MESH
WP	WORKING POINT
WS	WATERSTOP
WT	WEIGHT
WTH	WIDTH
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER

NOTE:

ALL ABBREVIATIONS SHOWN ON THIS SHEET MAY NOT APPEAR ON THIS SET OF DRAWINGS.

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

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DESIGNED BY: RAJ / CSP
DATE: 01-25-2010
DWN BY: NV
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U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

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HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

ABBREVIATIONS

SHEET IDENTIFICATION
G-006

UNIFIED SOIL CLASSIFICATION

MAJOR DIVISION			TYPE	LETTER SYMBOL	SYMBOL	TYPICAL NAMES
COARSE - GRAINED SOILS MORE THAN HALF OF MATERIAL IS LARGER THAN NO.200 SLEEVE SIZE	GRAVELS	MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO.4 SLEEVE SIZE	CLEAN GRAVEL (LITTLE OR NO FINES)	GW		GRAVEL, WELL GRADED, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GP		GRAVEL, POORLY GRADED, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
			GRAVEL W/ FINES (APPRECIABLE AMOUNT OF FINES)	GM		SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURES
				GC		CLAYEY GRAVEL, GRAVEL-SAND-CLAY MIXTURES
	SANDS	MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO.4 SLEEVE SIZE	CLEAN SAND (LITTLE OR NO FINES)	SW		SAND, WELL-GRADED, GRAVELLY SANDS
				SP		SAND, POORLY-GRADED, GRAVELLY SANDS
			SAND W/ FINES (APPRECIABLE AMOUNT OF FINES)	SM		SILTY SAND, SAND-SILT MIXTURES
				SC		CLAYEY SAND, SAND-CLAY MIXTURES
FINE-GRAINED SOILS MORE THAN HALF THE MATERIAL IS SMALLER THAN NO. 200 SLEEVE SIZE.			SILTS & CLAYS (LIQUID LIMIT <50)	ML		SILT & VERY FINE SAND, SILTY OR CLAYEY FINE SAND OR CLAYEY SILT WITH SLIGHT PLASTICITY
				CL		LEAN CLAYS; SANDY CLAYS; SILTY CLAYS; OF LOW TO MEDIUM PLASTICITY
				OL		ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
			SILTS & CLAYS (LIQUID LIMIT >50)	MH		SILT, FINE SANDY OR SILTY SOIL WITH HIGH PLASTICITY
				CH		FAT CLAY, INORGANIC CLAY OF HIGH PLASTICITY
				OH		ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				Pt		PEAT, AND OTHER HIGHLY ORGANIC SOIL
WOOD				Wd		WOOD
SHELL						
NO SAMPLE						

NOTE: SOILS POSSESSING CHARACTERISTICS OF TWO GROUPS ARE DESIGNATED BY COMBINATIONS OF GROUP SYMBOLS

NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN "W" OR "D_{10}"

ARE NATURAL WATER CONTENTS IN PERCENT DRY WEIGHT

WHEN UNDERLINED DENOTES D_{10} SIZE IN MM *

FIGURES TO LEFT OF BORING UNDER COLUMNS "LL" AND "PL"

ARE LIQUID AND PLASTIC LIMITS, RESPECTIVELY

SYMBOLS TO LEFT OF BORING

▽ GROUND-WATER SURFACE AND DATE OBSERVED

(C) DENOTES LOCATION OF CONSOLIDATION TEST * *

(S) DENOTES LOCATION OF CONSOLIDATED-DRAINED DIRECT SHEAR TEST * *

(R) DENOTES LOCATION OF CONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST * *

(Q) DENOTES LOCATION OF UNCONSOLIDATED-UNDRAINED TRIAXIAL COMPRESSION TEST * *

(T) DENOTES LOCATION OF SAMPLE SUBJECTED TO CONSOLIDATION TEST AND EACH OF THE ABOVE THREE TYPES OF SHEAR TESTS * *

FW DENOTES FREE WATER

FIGURES TO RIGHT OF BORING

ARE VALUES OF COHESION IN LBS./SQ. FT. FROM UNCONFINED COMPRESSION (UC) TESTS.

IN PARENTHESIS ARE DRIVING RESISTANCES IN BLOWS PER FOOT DETERMINED WITH A STANDARD SPLIT SPOON SAMPLER (1 3/8" I.D., 2" O.D.) AND A 140LB. DRIVING HAMMER WITH 30" DROP.

WHERE UNDERLINED WITH A SOLID LINE DENOTES LABORATORY PERMEABILITY IN CENTIMETERS PER SECOND OF UNDISTURBED SAMPLE

WHERE UNDERLINED WITH A DASHED LINE DENOTES LABORATORY PERMEABILITY IN CENTIMETERS PER SECOND OF SAMPLE REMOULDED TO THE ESTIMATED NATURAL VOID RATIO

* THE D_{10} SIZE OF A SOIL IS THE GRAIN DIAMETER IN MILLIMETERS OF WHICH 10% OF THE SOIL IS FINER, AND 90% COARSER THAN SIZE D_{10}.

* * RESULTS OF THESE TESTS ARE AVAILABLE FOR INSPECTION IN THE U.S. ARMY ENGINEER DISTRICT OFFICE, IF THESE SYMBOLS APPEAR BESIDE THE BORING LOGS ON THE DRAWINGS.

DATUM CONVERSIONS:

1. APPROXIMATE DATUM CONVERSIONS ARE AS FOLLOWS: NAVD 88 EL 0.0 EQUALS NGVD 1929 EL 0.5 EQUALS CAIRO DATUM EL 21.0.

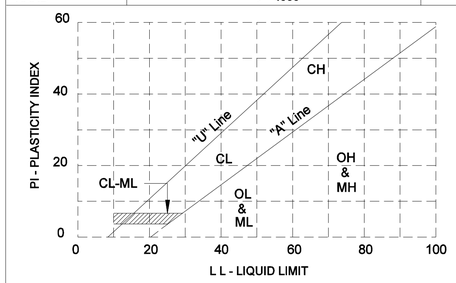
DESCRIPTIVE SYMBOLS

COLOR

COLOR	SYMBOL
TAN	T
YELLOW	Y
RED	R
BLACK	BK
GRAY	Gr
LIGHT GRAY	lGr
DARK GRAY	dGr
BROWN	Br
LIGHT BROWN	lBr
DARK BROWN	dBr
BROWNISH-GRAY	br Gr
GRAYISH-BROWN	gy Br
GREENISH-GRAY	gn Gr
GRAYISH-GREEN	gy Gn
GREEN	Gn
BLUE	Bl
BLUE-GREEN	Bl Gn
WHITE	Wh
MOTTLED	Mot
REDDISH	rd

CONSISTENCY FOR COHESIVE SOILS

CONSISTENCY	COHESION IN LBS. / SQ. FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL
VERY SOFT	< 250	vSo
SOFT	250 - 500	So
MEDIUM	500 - 1000	M
STIFF	1000 - 2000	St
VERY STIFF	2000 - 4000	vSt
HARD	> 4000	H



PLASTICITY CHART

For classification of fine - grained soils

MODIFICATIONS

MODIFICATION	SYMBOL
TRACES	Tr -
FINE	F
MEDIUM	M
COARSE	C
CONCRETIONS	cc
ROOTLETS	rt
LIGNITE FRAGMENTS	lg
SHALE FRAGMENTS	sh
SANDSTONE FRAGMENTS	sds
SHELL FRAGMENTS	slf
ORGANIC MATTER	O
CLAY STRATA OR LENSES	CS
SILT STRATA OR LENSES	SIS
SAND STRATA OR LENSES	SS
SANDY	S
GRAVELLY	G
BOULDERS	B
SLICKENSIDES	SL
WOOD	Wd
OXIDIZED	Ox
CRUMBLY	Cr
LOOSE	Lo
VEGETATION	Veg

GUIDE FOR * MOISTURE CONTENTS ADAPTED TO CEMVN-ED-F SOILS

CLASS	STIFF	MEDIUM	SOFT	V. SOFT	LIQUID LIMIT	PLASTICITY INDEX
CH-4	41-53	43-65	55-80	67-130	70-110	45-75
CH-3	32-43	34-55	44-67	55-114	55-80	30-55
CH-2	27-34	30-44	38-55	48-90	50-60	25-40
CL-6	23-30	25-39	33-48	40-79	40-50	20-35
CL-4	20-25	21-33	27-41	35-67	28-43	10-25
CH-OA	------	------	------	------	110-160	75-97
CH-OB	------	------	------	------	160-185	97-115
CH-OC	------	------	------	------	185-	115-

* FOR BROWN OR OXIDIZED SOILS, SUBTRACT 10% FROM THE ABOVE MOISTURE CONTENTS.

NOTE:

WE ARE USING THIS WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM AS A GUIDE AND SUPPLEMENTATION BREAKDOWN FOR CH'S AND CL'S. WE USE CHOA, CHOB AND CHOC FOR ORGANIC FAT CLAYS IN LIEU OF "OH" AND CLOA, CLOB AND CLOC FOR ORGANIC LEAN CLAYS IN LIEU OF OL WHEN USED FOR LEAN CLAYS. ALSO, DOUBLE CLASSES ARE NOT USED, SUCH AS SC-SM OR CL-ML. THE MAJOR CLASS GOVERNS AND THE SECONDARY IS RECORDED AS A MODIFICATION OR STRATUM AS APPROPRIATE.

UNIFIED SOIL CLASSIFICATION SYSTEM MODIFIED FOR NEW ORLEANS SOILS

(APPLICABLE TO POST-HURRICANE KATRINA SOIL BORINGS)

GENERAL NOTES:

1. SEE SHEET C-101 FOR BORING LOCATIONS.
2. WHILE THE BORINGS ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT THEIR RESPECTIVE LOCATION AND FOR RESPECTIVE VERTICAL REACHES, LOCAL VARIATIONS CHARACTERISTIC OF THE SUBSURFACE MATERIALS OF THE REGION ARE ANTICIPATED AND, IF ENCOUNTERED, SUCH VARIATIONS WILL NOT BE CONSIDERED AS DIFFERING MATERIALLY WITHIN THE PURVIEW OF CONTRACT CLAUSE, "DIFFERING SITE CONDITIONS," OF THE CONTRACT.
3. GROUND WATER ELEVATIONS SHOWN ON THE BORING LOGS REPRESENT GROUND WATER SURFACES ENCOUNTERED IN SUCH BORINGS ON THE DATES SHOWN. ABSENCE OF WATER SURFACE DATA ON CERTAIN BORINGS INDICATES THAT NO GROUND WATER DATA ARE AVAILABLE FROM THE BORING BUT DOES NOT NECESSARILY MEAN THAT GROUND WATER WILL NOT BE ENCOUNTERED AT THE LOCATIONS OF WITH THE VERTICAL REACHES OF SUCH BORINGS.
4. CONSISTENCY OF COHESIVE SOILS SHOWN ON THE BORING LOGS IS BASED ON DRILLER'S LOG AND VISUAL EXAMINATION AND IS APPROXIMATE, EXCEPT WITHIN THOSE VERTICAL REACHES OF THE BORINGS WHERE SHEAR STRENGTHS FROM UNCONFINED COMPRESSION (UC) TESTS ARE SHOWN.
5. UNLESS OTHERWISE NOTES:
   A. UNDISTURBED BORINGS, SAMPLES, ARE TAKEN WITH A 5" FIXED PISTON SAMPLER. THIS APPLIES ONLY TO POST-HURRICANE KATRINA SOIL BORINGS. PREVIOUS SOIL BORING SAMPLES MAY VARY.
   B. GENERAL SAMPLES ARE TAKEN WITH A 2" OD SPLIT SPOON SAMPLER.

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: JRJ | DWN BY: BKB | CKD BY: LDK | SUBMITTED BY: STANLEY CONSULTANTS, INC | PLOT SCALE: | PLOT DATE: 01-22-2010 | SIZE: ANSI D | FILE NAME: wbv-14c04b620__b-620---.dgn | FILE NUMBER: H-E-44082 | CONTRACT NO.: | SOLICITATION NO.: | DATE: 01-22-2010

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225 Baronne Avenue, Metairie, Iowa 70018-3784
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HURRICANE PROTECTION PROJECT
WBV-14c.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SOIL LEGEND

SHEET IDENTIFICATION
B-620

SOIL BORING NO. B-1

GROUND ELEV. 23.4 DATUM CAIRO GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11/8/88

SCALE IN FEET	PP	SPT	SYMBOL	VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	DENSITY DRY	DENSITY WET	SHEAR TEST TYPE	SHEAR TEST ø	SHEAR TEST C	ATTERBERG LIMITS LL	ATTERBERG LIMITS PL	ATTERBERG LIMITS PI	OTHER TESTS
	1.00			MEDIUM STIFF GRAY CLAY W/ SHELLS ROOTS & SAND POCKETS	CH	1	2-3	32									
5				SOFT GRAY CLAY W/ORGANIC MATTER, ROOTS AND WOOD	CH	2	5-6	139									
						3	8-9	150									
10				EXTREMELY SOFT BROWN CLAY W/ROOTS & WOOD	OH	4	11-12	209						209	57	152	
15				EXTREMELY SOFT TO VERY SOFT GRAY CLAY W/ ROOTS & ORGANIC MATTER		5	16-17	181									
20	0.15					6	21-22	57	68	106	UC	—	75				
25	0.20			VERY SOFT TO SOFT GRAY CLAY W/SILT LENSES	CH	7	25-26	52	70	106	UC	—	135				
30	0.20			W/ SILTY CLAY LENSES & POCKETS		8	30-31				UU			76	21	55	
35	0.20					9	35-36										
40	0.25			VERY SOFT GRAY CLAY W/SILTY SAND POCKETS & LENSES	CH	10	40-41	52	70	106	UC	—	205				
45	0.30			SOFT GRAY CLAY W/SANDY CLAY LAYERS	CH	11	45-46	40	81	112	UC	—	355				
50	0.25			SOFT GRAY CLAY	CH	12	50-51	68	60	101	UC	—	275				
55	0.25			W/ SILT LENSES		13	55-56				UU			91	28	63	
60						14	60-61	73	56	96							
65	0.50			MEDIUM STIFF GRAY SANDY CLAY W/ SHELL FRAGMENTS & CLAY LAYERS	CL	15	65-66	42	79	112	UC	—	555				
70	0.50			MEDIUM STIFF GRAY CLAY W/ SAND LENSES & POCKETS	CH	16	70-71	61	65	104	UC	—	610				
75	0.50			W/ SILT LENSES		17	75-76				UU			104	27	77	
80	0.50			MEDIUM STIFF GRAY CLAY W/SANDY CLAY POCKETS LENSES & SHELL FRAGMENTS	CH	18	80-81	41	80	113	UC	—	610				
85	2.75			STIFF TAN & GRAY CLAY W/ALTERNATE SILT LENSES & SHELL FRAGMENTS	CH	19	85-86	35	88	119	UC	—	1395				
90	1.25			MEDIUM STIFF GRAY SANDY CLAY W/ TRACE OF ORGANIC MATTER	CL	20	91-92	29	97	125	UC	—	965				
95	1.90			STIFF GRAY & TAN CLAY W/SILT POCKETS	CH	21	98-99	29	99	127	UC	—	1480				
100																	

SOIL BORING NO. B-2

GROUND ELEV. 20.65 DATUM CAIRO GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11/9/88

SCALE IN FEET	PP	SPT	SYMBOL	VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	DENSITY DRY	DENSITY WET	SHEAR TEST TYPE	SHEAR TEST ø	SHEAR TEST C	ATTERBERG LIMITS LL	ATTERBERG LIMITS PL	ATTERBERG LIMITS PI	OTHER TEST
				WATER													
				EXTREMELY SOFT GRAY ORGANIC CLAY (SLUSH)	OH	1	2-3	169									
5				VERY SOFT DARK GRAY ORGANIC CLAY W/ROOTS & WOOD	OH	2	5-6	167									
10	0.10			EXTREMELY SOFT TO VERY SOFT GRAY CLAY W/ROOTS & MUCH ORGANIC MATTER	CH	3	8-9	146	34	84	UC	—	100				
						4	11-12	171	30	81	UC	—	65				
15				LOOSE BROWN HUMAS W/ROOTS & ORGANIC CLAY LAYERS	PT	5	14-15										
20	0.15			EXTREMELY SOFT TO VERY SOFT GRAY CLAY W/SILT POCKETS	CH	6	18-19				UU			57	22	35	
25	0.15			W/SANDY SILT LENSES & ROOTS		7	22-23	64	61	100	UC	—	115				
	0.20					8	27-28	73	56	97	UC	—	130				
30				STIFF GRAY SILTY CLAY W/CLAYEY SILT POCKETS	CL	9	32-33	30	93	120	OB	—	1230				
35	0.25			SOFT GRAY CLAY W/SILTY CLAY LENSES	CH	10	37-38	72	57	98	UC	—	275				
40	0.25					11	42-43				UU			88	26	62	
45	0.25			W/SILT LENSES		12	47-48	71	57	98	UC	—	290				
50	0.30			SOFT GRAY CLAY W/SILT LENSES	CH	13	52-53	72	57	98	UC	—	260				
55				LOOSE GRAY CLAYEY SAND W/SHELLS & SANDY CLAY	SC	14	57-58	32	89	117	OB	—	375				
60	0.50			MEDIUM STIFF GRAY CLAY W/SAND POCKETS & SHELLS	CH	15	62-63	43	78	111	UC	—	560				
65	0.50			W/SILT LENSES		16	67-68				UU			89	29	60	
70	0.50			MEDIUM STIFF GRAY CLAY W/FISSURES	CH	17	72-73	64	62	102	UC	—	540				
75				MEDIUM DENSE GRAY FINE SAND W/CLAY LAYERS	SP	18	78-79										
80	2.25			STIFF GRAY & TAN CLAY W/SILT LENSES	CH	19	82-83	32	93	122	UC	—	1305				
85						20	88-89										
90	1.25			STIFF GREENISH-GRAY CLAY	CH	21	92-93	37	86	117	UC	—	1520				
95	0.75			MEDIUM STIFF GRAY CLAY W/SILTY SAND POCKETS & ROOTS	CH	22	98-99	32	91	121	UC	—	925	135	16	119	

SOIL BORING NO. B-3

GROUND ELEV. 16.72 DATUM CAIRO GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11/14/88

SCALE IN FEET	PP	SPT	SYMBOL	VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	DENSITY DRY	DENSITY WET	SHEAR TEST TYPE	SHEAR TEST ø	SHEAR TEST C	ATTERBERG LIMITS LL	ATTERBERG LIMITS PL	ATTERBERG LIMITS PI	OTHER TEST
				WATER													
				WATER													
5				EXTREMELY SOFT BROWN HUMUS W/ROOTS & ORGANIC CLAY LAYERS	PT	1	6-7	543	9	60	UC	—	100				
10	0.05			EXTREMELY SOFT GRAY ORGANIC CLAY W/ ROOTS	OH	2	9-10	155	32	83	UC	—	65				
						3	13-14	204									
15	0.05			EXTREMELY SOFT GRAY CLAY W/ SILTY CLAY LENSES	CH	4	17-18	77	55	97	UC	—	115				
20	0.05					5	22-23	89	50	95	UC	—	110				
25	1.00			COMPACT GRAY CLAYEY SILT	ML	6	27-28	33	89	117	OB	—	1170				
30	0.20			VERY SOFT GRAY CLAY W/ SILT LENSES	CH	7	32-33	69	59	100	UC	—	210				
35	0.25			W/SILTY CLAY LENSES		8	37-38	64	61	100	UC	—	245				
40	0.25			SOFT GRAY CLAY	CH	9	42-43										
45	0.25					10	48-49	71	57	97	UC	—	300				
50																	

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: JRJ
DWN BY: BKB
CKD BY: LDK
SUBMITTED BY: STANLEY CONSULTANTS, INC
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: HW-4082
PLOT SCALE:
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NAME: wbv-14c04b621__b-621---.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
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HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTBANK PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SOIL BORING LOGS
SHEET 1

SHEET IDENTIFICATION
B-621

3138
22-JAN-2010 16:54 T:\wbv-14c\Engineering and Design\(04) B- Geotechnical\dgns\wbv-14c04b621___b-621---.dgn

SOIL BORING NO. B-4

GROUND ELEV. 18.72 DATUM CAIRO GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11/11 & 14/88

SCALE IN FEET	PP	SPT	SYMBOL	VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	DENSITY DRY	DENSITY WET	SHEAR TEST TYPE	SHEAR TEST Ø	SHEAR TEST C	ATTERBERG LIMITS LL	ATTERBERG LIMITS PL	ATTERBERG LIMITS PI	OTHER TESTS
			WATER	WATER													
				SOFT DARK GRAY CLAY W/ORGANIC MATTER, ROOTS, & SHELLS	CH												
5						1	4-5	115									
				VERY SOFT DARK GRAY ORGANIC CLAY W/ ROOTS, & HUMUS LAYERS	OH												
						2	8-9	258									
				EXTREMELY SOFT GRAY CLAY W/SHELLS & WOOD	CH												
10						3	13-14	82									
15	0.05			EXTREMELY SOFT TO VERY SOFT GRAY CLAY W/SILTY CLAY LENSES & POCKETS	CH												
20	0.05					4	18-19				UU			73	22	51	
	0.05					5	22-23	90	49	93	UC	-	105				
25				W/CLAYEY SILT POCKETS & LENSES		6	27-28	58	66	103	UC	-	75				
30	0.10			W/SILT LENSES		7	32-33	74	57	98	UC	-	165				
35	0.25			W/SILTY CLAY LENSES POCKETS		8	37-38	65	61	100	UC	-	145				
40				SOFT GRAY CLAY	CH												
	0.25					9	42-43				UU			90	21	69	
45	0.30					10	47-48	70	58	98	UC	-	370				
50				SOFT GRAY CLAY W/SAND LENSES & LAYERS	CH												
	0.30					11	52-53	70	58	98	UC	-	450				
55				LOOSE GRAY CLAYEY SAND W/SHELLS, CLAY POCKETS & LAYERS	ML												
						12	57-58										
60				MEDIUM STIFF GRAY CLAY W/SAND POCKETS & SHELLS	CH												
	0.40					13	62-63	59	66	105	UC	-	580				
65				MEDIUM STIFF GRAY CLAY													
	0.50					14	67-68										
70																	
	0.50					15	72-73	64	62	102	UC	-	685				
75				STIFF GREENISH-GRAY SANDY CLAY W/SAND LENSES & POCKETS	CL	16	77-78	26	99	125	QB	-	1725				
80	1.25			STIFF TAN & GRAY CLAY W/SANDY SILT LENSES	CH												
	1.75					17	82-83										
85				STIFF GREENISH-GRAY SANDY CLAY W/CLAYEY SAND POCKETS & LAYERS	CL												
	1.25					18	86-87	21	106	129	QB	-	1335				
90				STIFF GRAY & TAN CLAY W/SAND POCKETS	CH												
	1.40					19	92-93										
95																	
	0.50			MEDIUM STIFF GRAY CLAY W/SAND POCKETS & ROOTS	CH												
100						20	98-99										

SOIL BORING NO. B-5

GROUND ELEV. 21.65 DATUM CAIRO GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11/9-10/88

SCALE IN FEET	PP	SPT	SYMBOL	VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	DENSITY DRY	DENSITY WET	SHEAR TEST TYPE	SHEAR TEST Ø	SHEAR TEST C	ATTERBERG LIMITS LL	ATTERBERG LIMITS PL	ATTERBERG LIMITS PI	OTHER TESTS
			WATER	WATER													
	0.75			STIFF GRAY & TAN CLAY W/ ROOTS, TRACE OF ORGANIC MATTER & SHELLS	CH	1	2-3	38	84	115	UC	-	1025				
5				VERY SOFT TO SOFT DARK GRAY ORGANIC CLAY W/ROOTS	OH	2	5-6	176									
10						3	11-12	169									
15	0.10			VERY SOFT GRAY CLAY W/ORGANIC CLAY LAYERS	CH	4	15-16	108	42	87	UC	-	135				
20	0.10			VERY SOFT GRAY CLAY W/SILTY CLAY LENSES	CH	5	20-21	61	64	102	UC	-	145				
25	0.15					6	25-26	74	57	99	UC	-	130				
30				MEDIUM COMPACT GRAY CLAYEY SILT W/CLAY LAYERS	ML	7	30-31	27									
35	0.25			VERY SOFT TO SOFT GRAY CLAY W/SILT LENSES	CH	8	35-36	60	64	103	UC	-	220				
40	0.25					9	40-41				UU						
45	0.30					10	45-46	82	53	95	UC	-	280				
50	0.25			VERY SOFT TO SOFT GRAY CLAY W/SILT LENSES	CH	11	50-51	73	57	99	UC	-	345				
55				LOOSE GRAY CLAYEY SAND W/SHELLS	SC	12	55-56										
60	0.50			MEDIUM STIFF GRAY CLAY W/SAND POCKETS & SHELL FRAGMENTS	CH	13	60-61	57	67	105	UC	-	515				
65	0.50			MEDIUM STIFF GRAY CLAY W/SILT LENSES	CH	14	65-66										
70	0.50					15	70-71	69	60	102	UC	-	755				
75				MEDIUM DENSE GREENISH-GRAY FINE SAND W/CLAY LENSES & LAYERS	SP	16	75-76										
80	2.25			STIFF GRAY & TAN CLAY W/SAND LENSES	CH	17	80-81	31	92	120	UC	-	1240				
85	2.25			W/SHELLS, SAND LENSES & LAYERS		18	85-86										
90	1.40			MEDIUM STIFF TO STIFF GRAY & TAN CLAY W/SAND POCKETS & TRACE OF ROOTS	CH	19	91-92	40	83	116	UC	-	995				
95	0.60			MEDIUM STIFF GRAY CLAY W/SAND POCKETS & ROOTS	CH	20	98-99										
100																	

SOIL BORING NO. B-6

GROUND ELEV. 23.3 DATUM CAIRO GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11/10-11/88

SCALE IN FEET	PP	SPT	SYMBOL	VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	DENSITY DRY	DENSITY WET	SHEAR TEST TYPE	SHEAR TEST Ø	SHEAR TEST C	ATTERBERG LIMITS LL	ATTERBERG LIMITS PL	ATTERBERG LIMITS PI	OTHER TESTS
	1.40			MEDIUM STIFF TO STIFF GRAY CLAY W/SHELLS & SAND POCKETS	CH	1	2-3	29									
5						2	5-6	34									
				VERY SOFT GRAY CLAY W/ORGANIC MATTER	CH	3	8-9	108									
10				LOOSE BROWN HUMUS W/ROOTS	PT	4	11-12	637									
15	0.05			EXTREMELY SOFT GRAY CLAY W/ROOTS & ORGANIC CLAY LAYERS	CH	5	14-15	144	34	83	UC	-	85				
20	0.05			EXTREMELY SOFT TO VERY SOFT GRAY CLAY W/SILTY CLAY LENSES	CH	6	20-21	62	63	102	UC	-	80				
25						7	25-26	92									
30	0.05			W/SILT LENSES		8	30-31	80	54	96	UC	-	135				
35	0.25			VERY SOFT TO SOFT GRAY CLAY W/SILT LENSES	CH	9	35-36										
40	0.25					10	40-41	59	65	103	UC	-	310				
45	0.25					11	45-46										
50	0.25			SOFT GRAY CLAY W/SILT	CH	12	50-51	77	55	97	UC	-	155				
55	0.30			W/SAND LAYERS		13	55-56										
60				SOFT GRAY SANDY CLAY W/CLAYEY SAND LAYERS & SHELL FRAGMENTS	CL	14	60-61	33	88	118	QB	-	345				
65	0.40					15	65-66	42	79	112	UC	-	450				
70	0.35			W/SAND LENSES		16	70-71										
75	0.50			MEDIUM STIFF CLAY W/FEW SHELLS	CH	17	75-76	71	59	102	UC	-	590				
80				MEDIUM DENSE GREENISH-GRAY FINE SAND W/CLAY LENSES & LAYERS	SP	18	80-81										
85	1.75			MEDIUM STIFF TAN SANDY CLAY W/MANY SAND LENSES	CL	19	85-86	33	90	120	UC	-	770				
90	1.75					20	90-91	24	101	126	UC	-	910				
95				MEDIUM STIFF TO STIFF GRAY & TAN CLAY W/TRACE OF SAND	CH	21	95-96										
100	1.40			MEDIUM STIFF TO VERY STIFF GRAY & TAN CLAY W/TRACE OF SAND	CH	22	100-101	33	90	120	UC	-	910	51	18	33	
105	2.00			STIFF GRAY & GREENISH-GRAY CLAY W/CLAYEY SILT LENSES & POCKETS	CH	23	105-106										
110	2.25					24	110-111	35	89	119	UC	-	1050				
115	2.40			STIFF GRAY & TAN CLAY W/SILT LENSES & LAYERS	CH	25	116-117										
120	1.00			STIFF GRAY CLAY W/CLAYEY SILT LENSES & LAYERS	CH	26	123-124	35	88	119	UC	-	1205	63	16	47	
125																	

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: JRJ
DWN BY: BKB
CKD BY: LDK
SUBMITTED BY: STINAKER CONSULTANTS, INC
PLOT SCALE:
PLOT DATE: 22-JAN-2010
SIZE: ANSI D
FILE NAME: wbv-14c04b622__b-622---.dgn
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: 10-4-06622
PLOT DATE: 22-JAN-2010

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 Baronne Avenue, Suite 2270
New Orleans, Louisiana 70112-9704

HURRICANE PROTECTION PROJECT
WBV-14C2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SOIL BORING LOGS
SHEET 2

SHEET IDENTIFICATION
B-622

3138
22-JAN-2010 16:54 T:\wbv-14c\Engineering and Design\(04) B- Geotechnical\dgns\wbv-14c04b622___b-622---.dgn

SUMMARY OF LABORATORY TEST RESULTS

Project: FRONTING PROTECTION- WESTMINSTER PUMPING STATION Assigned By: _____

Project Number: 60609
Boring: BCD-3-06

Current Date: 11/27/2007

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
1A	0.0	M GR CH4 W/ LNS SP, WD	CH4		54												
1B	0.8	M GR CH3 W/ LNS SP, WD	CH3		33	86	114	91	UU				86	23	43		
2	3.0	GR SP W/ WD	SP														
3J	4.5	VSO GR CHOB W/ WD	CHOB														
4A	7.0	SO GR CHOB W/ WD	CHOB		169												
4B	7.8	VSO GR & BR CHOB W/ WD	CHOB		126	35	79	90	UU								
5A	11.0	SO GR CHOC W/ WD	CHOC		260												
6A	15.0	SO BK CHOC W/ WD	CHOC		240												
6B	15.8	SO BK CHOC W/ RT	CHOC		275												
6C	16.7	SO BK CHOC W/ WD	CHOC		88	46	86						199	75	124		
7A	19.0	SO GR CH4 W/ LNS ML	CH4		67												
7B	19.8	M GR CL4 W/ LNS ML	CL4		75								40	21	19		
7C	20.7	SO GR CL4-S W/ LNS ML	CL4-S		46	69	101	87	UU				40	31	9		
8A	23.0	SO GR CH4 W/ LNS ML	CH4		69												
8B	23.8	M GR CH4	CH4		48												
8C	24.7	VSO GR CH4	CH4		68	56	94	94	UU								
9A	27.0	M GR CH4	CH4		59												
9B	27.8	M GR CH4 W/ LNS ML	CH4		61												
9C	28.7	SO GR CH2 W/ LNS ML	CH2		50	71	106	98	UU				50	21	29		
10A	31.0	VSO GR CH3	CH3		52	65	99	89	UU								
10B	31.8	VST GR CH4 W/ LNS ML	CH4		37												
10C	32.7	VST GR CH4 W/ LNS SM	CH4		40												
10D	33.6	VST GR CH4 W/ LNS ML	CH4		39												
11A	35.0	SO GR CH2	CH2		46												
11B	35.8	M GR CH4 W/ LNS ML	CH4		40	77	108	89	UU				71	24	47		
11C	36.7	M GR CH4	CH4		55												
12A	39.0	M GR CH4	CH4		60												
12B	39.8	SO GR CH4	CH4	11	58	58	92	82	UC	-	357	715					
12C	40.7	M GR CH4	CH4		58												
13A	43.0	SO GR CH4	CH4		70												
13B	43.8	SO GR CH4	CH4	5	67	60	99	99	UC	-	332	664					
13C	44.7	SO GR CH4	CH4		67												
14A	47.0	SO GR CH4	CH4		66												
14B	47.8	SO GR CH4	CH4	4	64	60	99	95	UC	-	377	754	85	29	56		
14C	48.7	SO GR CH4	CH4		69												
15A	51.0	SO GR CH4	CH4		71												
15B	51.8	SO GR CH4	CH4	5	67	57	96	93	UC	-	487	974					

774

Remarks:

BURNS COOLEY DENNIS, INC.
POST OFFICE BOX 12828
JACKSON, MS 39236

Checked By: _____
File Name: BCD-3-06.xls

SUMMARY OF LABORATORY TEST RESULTS

Project: FRONTING PROTECTION- WESTMINSTER PUMPING STATION Assigned By: _____

Project Number: 60609
Boring: BCD-3-06

Current Date: 11/27/2007

Sample Number	Depth	Visual Classification	USCS	E(f)	W%	Dry Dens (pcf)	Wet Dens (pcf)	Sat %	Shear Test Type	Angle	Cohesion (psf)	Unconf. Comp. Str.	LL	PL	PI	Torvane (tsf)	Other Tests
15C	52.7	SO GR CH4	CH4		75												
16A	55.0	SO GR CH4	CH4		63	59	96	91	UU				87	32	55		
19A	61.0	ST GR CH3 W/ ARS SM, SIF	CH3		35												
19B	61.8	M GR CH3 W/ ARS SP, SIF	CH3		38	74	102	79	UU								
19C	62.7	ST GR CH3 W/ ARS SM, SIF	CH3		41												
20A	65.0	M GR CH4 W/ SIF	CH4		55												
20B	65.8	M GR CH4 W/ LNS ML	CH4		58	63	100	93	UU				91	26	65		
20C	66.7	M GR CH4 W/ LNS ML	CH4		61												
21A	69.0	M GR CH4 W/ LNS ML	CH4		60												
21B	69.8	M GR CH4 W/ SIF	CH4		59												
21C	70.7	M GR CH4	CH4	2	65	59	97	93	UC	-	650	1300					
22A	73.0	SO GR CH4	CH4		67												
22B	73.8	ST GR CH4	CH4	2	67	57	95	91	UC	-	1073	1073	105	29	76		
22C	74.7	M GR CH4 W/ ARS ML	CH4		56												
23A	77.0	M GR CH3 W/ ARS ML	CH3		47	75	110	100	UU								
23B	77.8	M GR CL4 W/ ARS SM	CL4		33												
25A	82.5	M GR CL6 W/ ARS SP	CL6		29	94	121	100	UU				40	19	21		

775

Remarks:

BURNS COOLEY DENNIS, INC.
POST OFFICE BOX 12828
JACKSON, MS 39236

Checked By: _____
File Name: BCD-3-06.xls

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

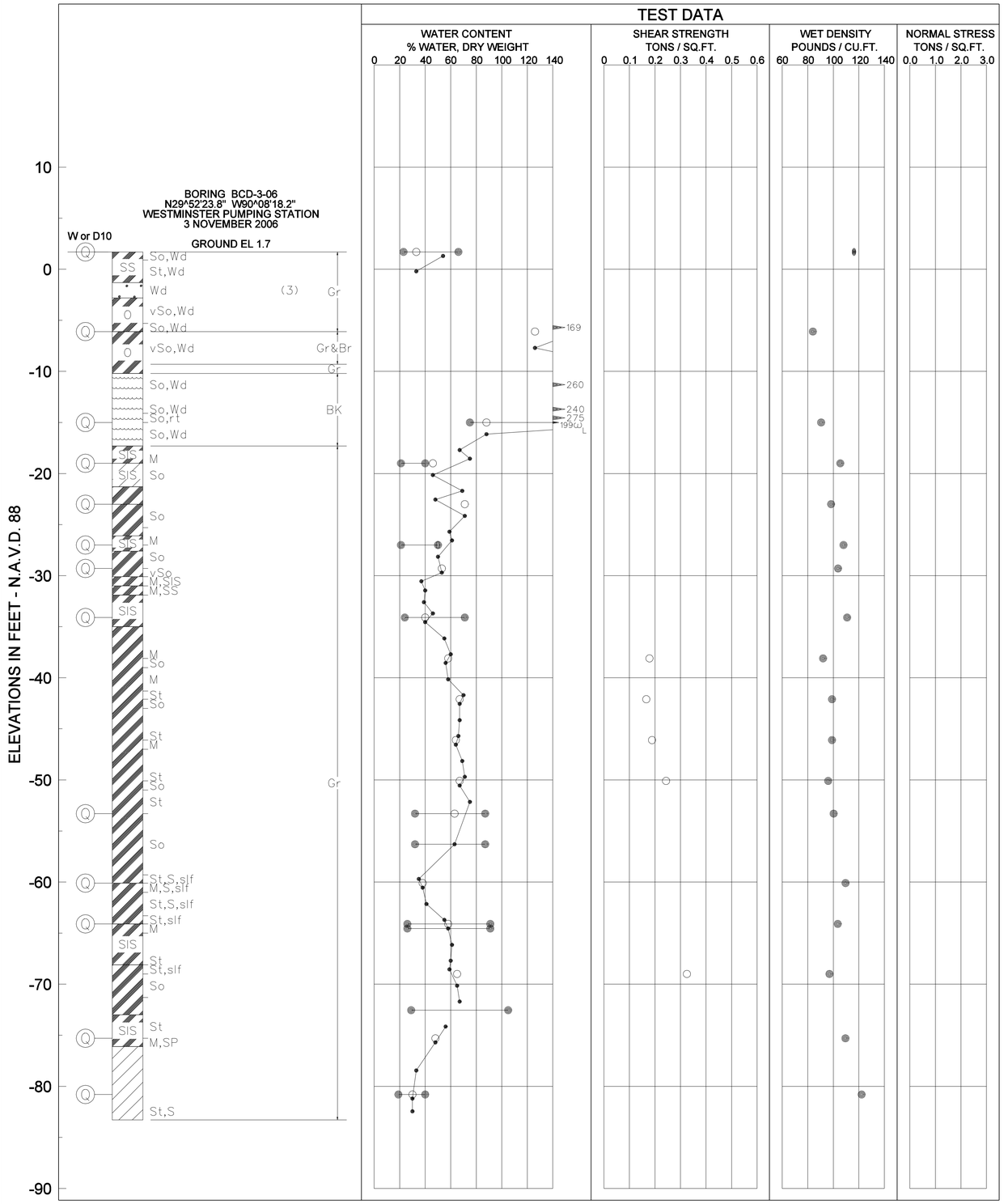
DESIGNED BY: JRJ | DATE: 01-22-2010
DWN BY: BKB | CKD BY: LDK | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC. | CONTRACT NO.:
PLOT SCALE: | PLOT DATE: 01-22-2010 | FILE NUMBER: 114-04062
SIZE: ANSI D | FILE NAME: wbv-14c04b623__b-623---.dgn

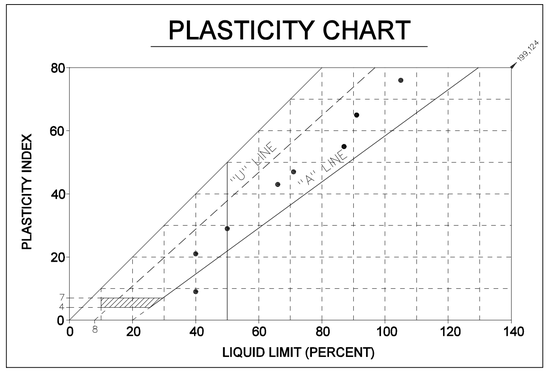
Stanley Consultants INC.
225 Baronne Avenue, Metairie, Iowa 52761-3794
Environmental Engineering

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SOIL BORING LOGS
SHEET 3

SHEET IDENTIFICATION
B-623





TABULAR TEST DATA

ENVELOPE NO.	ENVELOPE EL.	TYPE	STRENGTH Φ	STRENGTH C - TSF	CLASS
1	1.7	Q			
2	-6.1	Q			
3	-15.0	Q			
4	-19.0	Q			
5	-23.0	Q			
6	-27.0	Q			
7	-29.3	Q			
8	-34.1	Q			
9	-53.3	Q			
10	-60.1	Q			
11	-64.1	Q			
12	-75.3	Q			
13	-80.8	Q			

NOTES

○ - (UC) UNCONFINED COMPRESSION TEST
▣ - (Q) UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
◻ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST
ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.

FOR SOIL BORING LEGEND SEE B-620.

FOR LOCATION OF BORINGS SEE C-101.

FOR DETAILED TEST DATA CONTACT NEW ORLEANS DISTRICT USACE.

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 West Avenue, Muscatine, Iowa 52761-3794
www.stanleyconsultants.com

DESIGNED BY: JRJ
DATE: 01-22-2010
DWN BY: BKB
CKD BY: LDK
SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC.
CONTRACT NO.:
PLOT SCALE: 1:1
PLOT DATE: 01-22-2010
FILE NUMBER: 114-40622
SIZE: ANSI D
FILE NAME: wbv-14c04b624___b-624---.dgn

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SOIL BORING LOGS
SHEET 4

SHEET IDENTIFICATION
B-624

3138
22-JAN-2010 16:55 T:\wbv-14c\Engineering and Design\(04) B- Geotechnical\dgns\wbv-14c04b624___b-624---.dgn

1 | 2 | 3 | 4 | 5

D

SOIL BORING NO. B-7

GROUND ELEV. 24.78 DATUM CAIRO GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11 / 15 / 88

ELEVATIONS IN FEET - N.A.V.D. 88

PP	VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	DENSITY DRY	DENSITY WET	SHEAR TEST TYPE	ø	C	ATTERBERG LIMITS LL	PL	PI	OTHER TESTS
0.75	SOFT DARK GRAY CLAY W / ROOTS & PARTINGS	OH	1	2 - 3	94	44	85	UC	—	370				
0.25	VERY SOFT DARK GRAY ORGANIC CLAY W / DECAYED WOOD	OH	2	5 - 6	146	33	82	UC	—	180				
	VERY SOFT DARK GRAY ORGANIC CLAY W / ROOTS & WOOD	OH	3	8 - 9	143									
0.05	EXTREMELY SOFT TO VERY SOFT GRAY CLAY W / MUCH ORGANIC MATTER & DECAYED WOOD	CH	4	11 - 12	130	37	86	UC	—	120				
0.20	VERY SOFT DARK GRAY ORGANIC CLAY W / CLAY LAYERS	OH	5	15 - 16	255	21	73	UC	—	160				
0.05	EXTREMELY SOFT TO VERY SOFT GRAY CLAY W / SILTY CLAY LENSES	CH	6	20 - 21	68	59	100	UC	—	120				
0.10			7	25 - 26										
0.15			8	30 - 31	84	52	95	UC	—	155				
			9	36 - 37										
0.20	VERY SOFT TO SOFT GRAY CLAY W / SILT LENSES	CH	10	40 - 41	73	56	99	UC	—	200				
0.25			11	45 - 46										
0.25	VERY SOFT TO SOFT GRAY CLAY W / SILTY CLAY POCKETS	CH	12	50 - 51	74	56	98	UC	—	270				
	LOOSE GRAY CLAYEY SAND W / SHELLS	SC	13	55 - 56										
0.40	MEDIUM STIFF GRAY CLAY W / SAND POCKETS & SHELL FRAGMENTS	CH	14	60 - 61	42	79	112	UC	—	525				
0.40	W / SAND LENSES		15	65 - 66										
0.50	MEDIUM STIFF GRAY CLAY W / SILT LENSES	CH	16	70 - 71	68	61	102	UC	—	595				
0.50			17	75 - 76										
1.25	MEDIUM STIFF TAN SILTY CLAY W /ALTERNATE SANDY LENSES	CL	18	80 - 81	29	96	122	UC	—	925				
1.30			19	85 - 86										
1.30	MEDIUM STIFF GRAY SANDY CLAY	CL	20	90 - 91	23	104	128	UC	—	940				
1.50	STIFF TAN & GRAY CLAY W / SAND POCKETS	CH	21	95 - 96										
0.50	MEDIUM STIFF TAN & GRAY CLAY W / SAND LENSES	CH	22	100 - 101	34	89	119	UC	—	970				
1.25	STIFF GREENISH-GRAY CLAY W / SILT LENSES	CH	23	105 - 106										
1.50			24	110 - 111	34	90	120	UC	—	1695				
	W / CLAYEY SILT LENSES & LAYERS		25	117 - 118										
0.75	STIFF GRAY CLAY W / SILT LENSES	CH	26	123 - 124	43	80	114	UC	—	1395				

C

B

A

AUGER BORING NO. AS NOTED

GROUND ELEV. DATUM GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11 / 16 / 88

(Columns: SCALE IN FEET, PP, SPT, SYMBOL, VISUAL CLASSIFICATION, USC, SAMPLE NUMBER, DEPTH IN FEET, WATER CONTENT PERCENT, DENSITY DRY / WET, SHEAR TEST TYPE / ø / C, ATTERBERG LIMITS LL / PL / PI, OTHER TESTS)

AUGER BORING A-1

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY ORGANIC CLAY W / ROOTS & HUMUS & CLAY LAYERS	OH	1	2	249	217	49	168
		2	4				
		3	6	191			
		4	8				
VERY LOOSE BROWN HUMUS W/CLAY LAYERS	PT	5	10	205			

AUGER BORING A-2

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
SOFT GRAY CLAY W / ROOTS & ORGANIC MATTER	CH	1	2				
VERY SOFT GRAY CLAY W / ROOTS & ORGANIC MATTER	CH	2	4	116			
VERY SOFT GRAY ORGANIC CLAY W / ROOTS	OH	3	6				
		4	8	160			
VERY LOOSE BROWN HUMUS	PT	5	10				

AUGER BORING A-3

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
SOFT GRAY CLAY W / ROOTS & ORGANIC MATTER	CH	1	2	145			
VERY SOFT GRAY CLAY W/ROOTS & ORGANIC MATTER & HUMUS LAYERS	CH	2	4				
		3	6	177			
		4	10	187			

AUGER BORING A-4

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY CLAY W / ROOTS & ORGANIC MATTER	CH	1	2				
VERY SOFT BROWN HUMUS W / ROOTS	PT	2	4	233			
		3	7	180	356	107	249
VERY SOFT GRAY CLAY W/ROOTS & ORGANIC CLAY LAYERS	CH	4	10	112			

AUGER BORING A-5

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY CLAY W/ROOTS & ORGANIC MATTER	CH	1	2	145	128	36	92
VERY SOFT GRAY ORGANIC CLAY W / ROOTS	OH	2	4				
VERY LOOSE BROWN HUMUS W / ROOTS	PT	3	7	432			
VERY SOFT GRAY CLAY W/ROOTS & ORGANIC MATTER	CH	4	10	137			

AUGER BORING NO. AS NOTED

GROUND ELEV. DATUM GR. WATER DEPTH JOB NO. 10428 DATE DRILLED 11 / 16 / 88

AUGER BORING A-6

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY CLAY W/ ROOTS & ORGANIC MATTER	CH	1	2				
		2	4	106			
VERY LOOSE BROWN HUMUS W/ ROOTS & ORGANIC CLAY LAYERS	PT	3	7	288			
VERY SOFT GRAY CLAY W/ROOTS & ORGANIC MATTER	CH	4	10	114			

AUGER BORING A-7

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY CLAY W/ORGANIC MATTER & ROOTS	CH	1	2	168			
		2	4	153	168	47	139
VERY LOOSE BROWN HUMUS W/ ROOTS & ORGANIC CLAY LAYERS	PT	3	7	226			
SOFT GRAY CLAY W/ROOTS & ORGANIC MATTER	CH	4	10				

AUGER BORING A-8

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY CLAY W/ROOTS & ORGANIC MATTER	CH	1	2	140			
VERY LOOSE BROWN HUMUS W/ ROOTS & ORGANIC CLAY LAYERS	PT	2	4	166			
VERY SOFT GRAY CLAY W/ ROOTS & ORGANIC MATTER	CH	3	7				
SOFT GRAY CLAY W/ ROOTS & ORGANIC MATTER	CH	4	10	115			

AUGER BORING A-9

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY CLAY W/ ROOTS & ORGANIC MATTER	CH	1	2	162			
		2	4				
LOOSE BROWN HUMUS W/ ROOTS & WOOD	PT	3	7	371			
VERY SOFT GRAY CLAY W/ ROOTS & ORGANIC MATTER	CH	4	10	102			

AUGER BORING A-10

VISUAL CLASSIFICATION	USC	SAMPLE NUMBER	DEPTH IN FEET	WATER CONTENT PERCENT	LL	PL	PI
VERY SOFT GRAY CLAY W/ROOTS & ORGANIC MATTER	CH	1	2	148			
		2	4	110			
		3	6				
WOOD	WD						
SOFT GRAY CLAY W/ORGANIC MATTER & ROOTS	CH	4	10	104	144	38	106

LEGEND

CLAY | SILT | SAND | HUMUS

US Army Corps of Engineers® New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

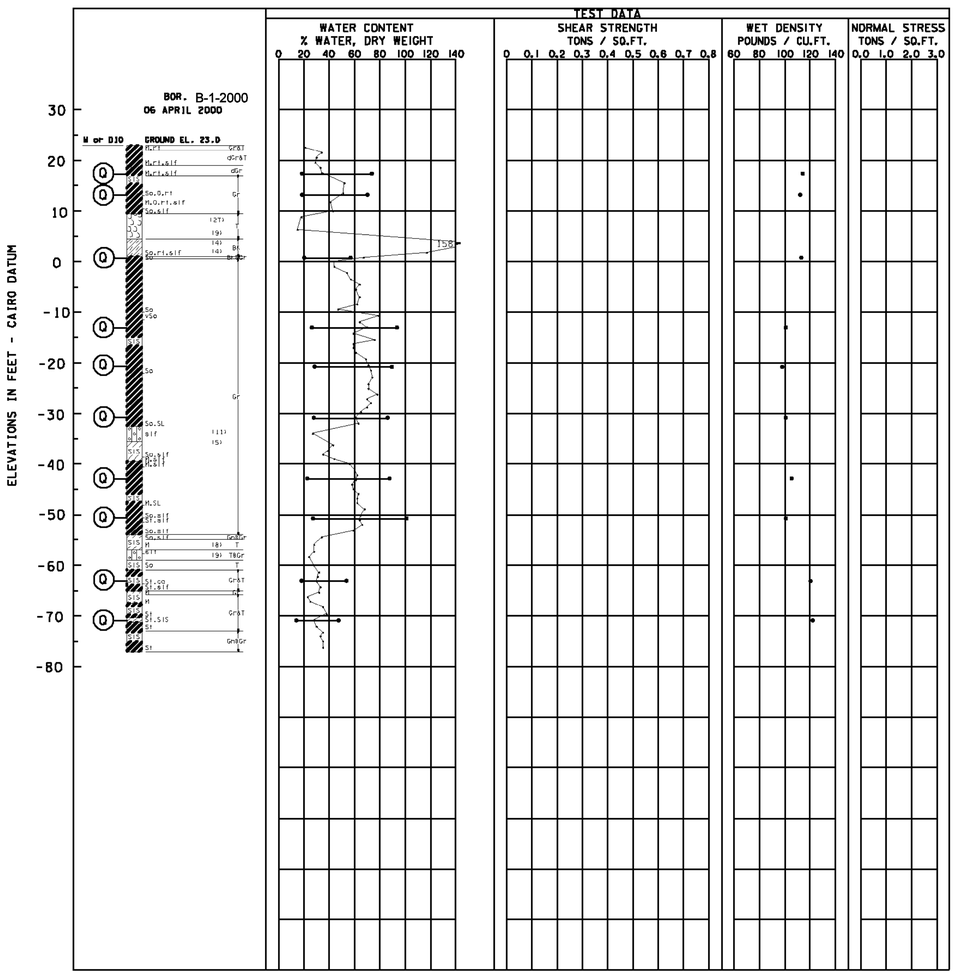
Stanley Consultants INC.
225 Iowa Avenue, Muscatine, Iowa 52761-3764
www.stanleyconsultants.com

DESIGNED BY: JRJ | DATE: 01-22-2010
DWN BY: BKB | CKD BY: LDK | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC | CONTRACT NO.:
PLOT SCALE: | PLOT DATE: 01-22-2010 | FILE NUMBER: H-8-46932
SIZE: ANSI D | FILE NAME: wbv-14c04b625___b-625---.dgn

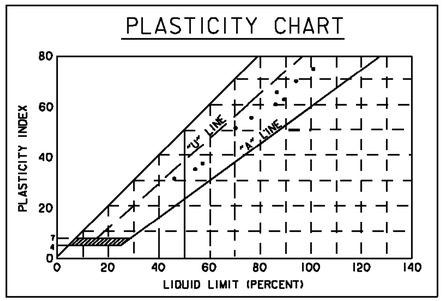
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SOIL BORING LOGS
SHEET 5

SHEET IDENTIFICATION
B-625



ELEVATIONS IN FEET - N.A.V.D. 88



TABULAR TEST DATA

ENVELOPE NO.	ENVELOPE EL.	TYPE	STRENGTH Φ	STRENGTH c - TSF	CLASS
1	17.5	Q			
2	13.0	Q			
3	-1.0	Q			
4	-13.0	Q			
5	-21.0	Q			
6	-31.0	Q			
7	-43.0	Q			
8	-51.0	Q			
9	-63.0	Q			
10	-71.0	Q			

NOTES

○ - (UC) UNCONFINED COMPRESSION TEST
■ - (Q) UNCONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
▲ - (R) CONSOLIDATED - UNDRAINED TRIAXIAL SHEAR TEST
□ - (S) CONSOLIDATED - DRAINED DIRECT SHEAR TEST
ω_P ω_N ω_L ATTERBERG LIMITS

BORING WAS TAKEN WITH A 5 INCH DIAMETER STEEL TUBE PISTON TYPE SAMPLER.

FOR SOIL BORING LEGEND SEE B-620.

FOR LOCATION OF BORINGS SEE C-101.

FOR DETAILED TEST DATA CONTACT NEW ORLEANS DISTRICT USACE.

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: JRJ
DWN BY: BKB
CKD BY: LDK
SUBMITTED BY: STANLEY CONSULTANTS, INC
PLOT SCALE: 1:1
PLOT DATE: 01/22/2010
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: H-4-0002
SIZE: ANSI D
FILE NAME: wbv-14c04b626_b-626---.dgn

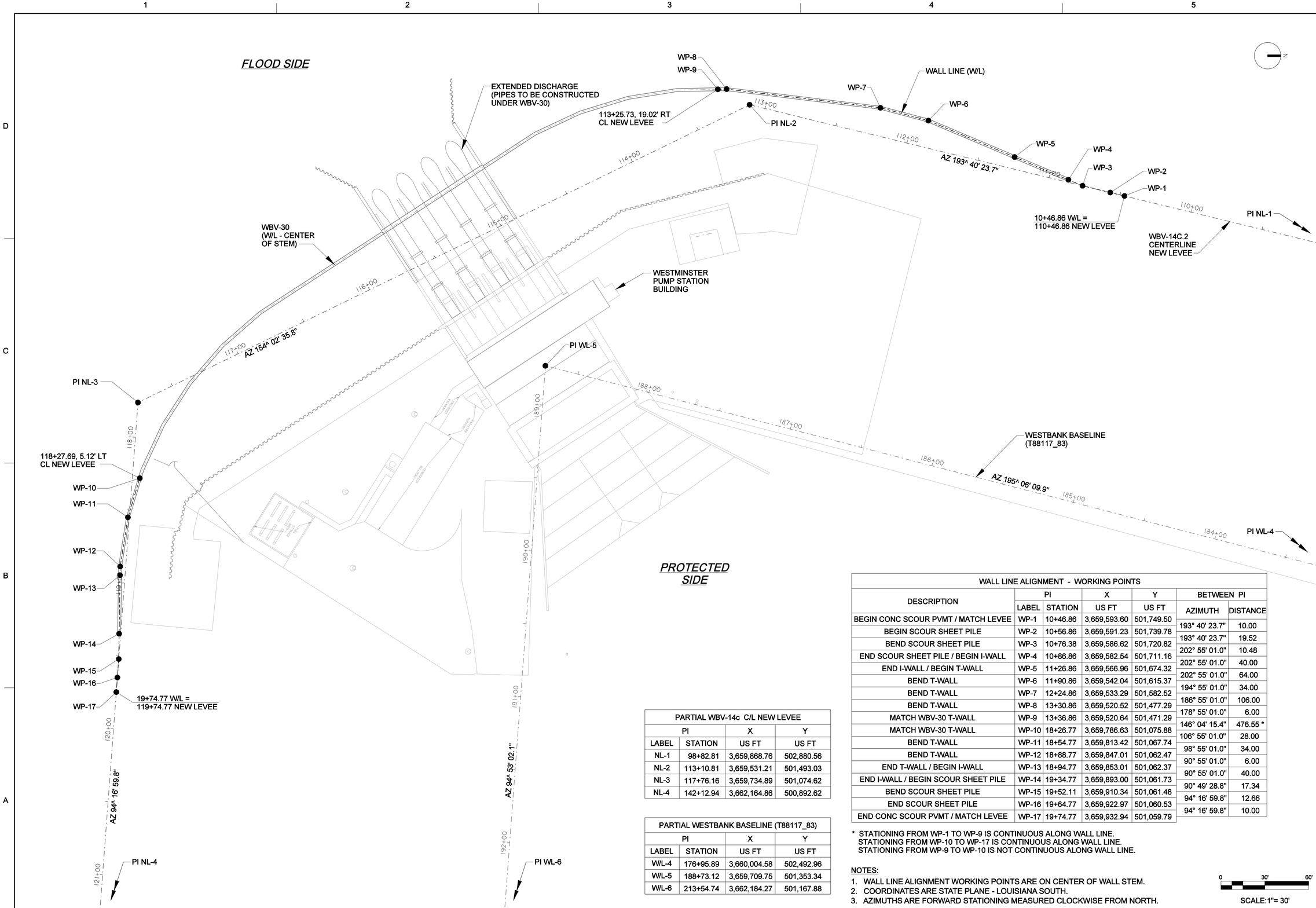
Stanley Consultants INC.
2222 Swan Avenue, Alexandria, Iowa 52761-3794
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTBANK STEEL PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SOIL BORING LOGS
SHEET 6

SHEET IDENTIFICATION
B-626

3138
22-JAN-2010 16:55 T:\wbv-14c\Engineering and Design\(04) B- Geotechnical\dgns\wbv-14c04b626___b-626---.dgn



PARTIAL WBV-14c C/L NEW LEVEE			
PI		X	Y
LABEL	STATION	US FT	US FT
NL-1	98+82.81	3,659,868.76	502,880.56
NL-2	113+10.81	3,659,531.21	501,493.03
NL-3	117+76.16	3,659,734.89	501,074.62
NL-4	142+12.94	3,662,164.86	500,892.62

PARTIAL WESTBANK BASELINE (T88117_83)			
PI		X	Y
LABEL	STATION	US FT	US FT
W/L-4	176+95.89	3,660,004.58	502,492.96
W/L-5	188+73.12	3,659,709.75	501,353.34
W/L-6	213+54.74	3,662,184.27	501,167.88

WALL LINE ALIGNMENT - WORKING POINTS						
DESCRIPTION	PI		X	Y	BETWEEN PI	
	LABEL	STATION	US FT	US FT	AZIMUTH	DISTANCE
BEGIN CONC SCOUR PVMT / MATCH LEVEE	WP-1	10+46.86	3,659,593.60	501,749.50		
BEGIN SCOUR SHEET PILE	WP-2	10+56.86	3,659,591.23	501,739.78	193° 40' 23.7"	10.00
BEND SCOUR SHEET PILE	WP-3	10+76.38	3,659,586.62	501,720.82	193° 40' 23.7"	19.52
END SCOUR SHEET PILE / BEGIN I-WALL	WP-4	10+86.86	3,659,582.54	501,711.16	202° 55' 01.0"	10.48
END I-WALL / BEGIN T-WALL	WP-5	11+26.86	3,659,566.96	501,674.32	202° 55' 01.0"	40.00
BEND T-WALL	WP-6	11+90.86	3,659,542.04	501,615.37	202° 55' 01.0"	64.00
BEND T-WALL	WP-7	12+24.86	3,659,533.29	501,582.52	194° 55' 01.0"	34.00
BEND T-WALL	WP-8	13+30.86	3,659,520.52	501,477.29	186° 55' 01.0"	106.00
MATCH WBV-30 T-WALL	WP-9	13+36.86	3,659,520.64	501,471.29	178° 55' 01.0"	6.00
MATCH WBV-30 T-WALL	WP-10	18+26.77	3,659,786.63	501,075.88	146° 04' 15.4"	476.55 *
BEND T-WALL	WP-11	18+54.77	3,659,813.42	501,067.74	106° 55' 01.0"	28.00
BEND T-WALL	WP-12	18+88.77	3,659,847.01	501,062.47	98° 55' 01.0"	34.00
END T-WALL / BEGIN I-WALL	WP-13	18+94.77	3,659,853.01	501,062.37	90° 55' 01.0"	6.00
END I-WALL / BEGIN SCOUR SHEET PILE	WP-14	19+34.77	3,659,893.00	501,061.73	90° 55' 01.0"	40.00
BEND SCOUR SHEET PILE	WP-15	19+52.11	3,659,910.34	501,061.48	90° 49' 28.8"	17.34
END SCOUR SHEET PILE	WP-16	19+64.77	3,659,922.97	501,060.53	94° 16' 59.8"	12.66
END CONC SCOUR PVMT / MATCH LEVEE	WP-17	19+74.77	3,659,932.94	501,059.79	94° 16' 59.8"	10.00

* STATIONING FROM WP-1 TO WP-9 IS CONTINUOUS ALONG WALL LINE.
STATIONING FROM WP-10 TO WP-17 IS CONTINUOUS ALONG WALL LINE.
STATIONING FROM WP-9 TO WP-10 IS NOT CONTINUOUS ALONG WALL LINE.

NOTES:

1. WALL LINE ALIGNMENT WORKING POINTS ARE ON CENTER OF WALL STEM.
2. COORDINATES ARE STATE PLANE - LOUISIANA SOUTH.
3. AZIMUTHS ARE FORWARD STATIONING MEASURED CLOCKWISE FROM NORTH.

0 30' 60'

SCALE:1"= 30'

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: RAJ
DWN BY: BKB
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
PLOT SCALE: 1:1
PLOT DATE: 01-22-2010
FILE NUMBER: H&A-49902
SIZE: ANSI D
FILE NAME: wbv-14c05c100___c-100---.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 Iron Horse Association, Iowa 52791-3794
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

FLOODWALL ALIGNMENT PLAN

SHEET IDENTIFICATION
C-100

3138
22-JAN-2010 17:09 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c100___c-100---.dgn

BENCHMARKS

WM01 N= 501,769.57 E= 3,659,795.58 EL= -2.20

A 5/8" IR WITH PLASTIC CAP SET FLUSH WITH THE GROUND. 20.2' NW OF THE C/L OF A LIMESTONE RD. LEADING TO WESTMINISTER PUMP STATION. 31.4' NE OF THE NW CORNER OF A CONCRETE SLAB. 2.2' SE OF A CORRIGATED POST. APPROX. 200' NORTH OF THE GATE LEADING INTO THE PUMP STATION.

WM02 N= 502,651.53 E= 3,660,085.48 EL= -1.36

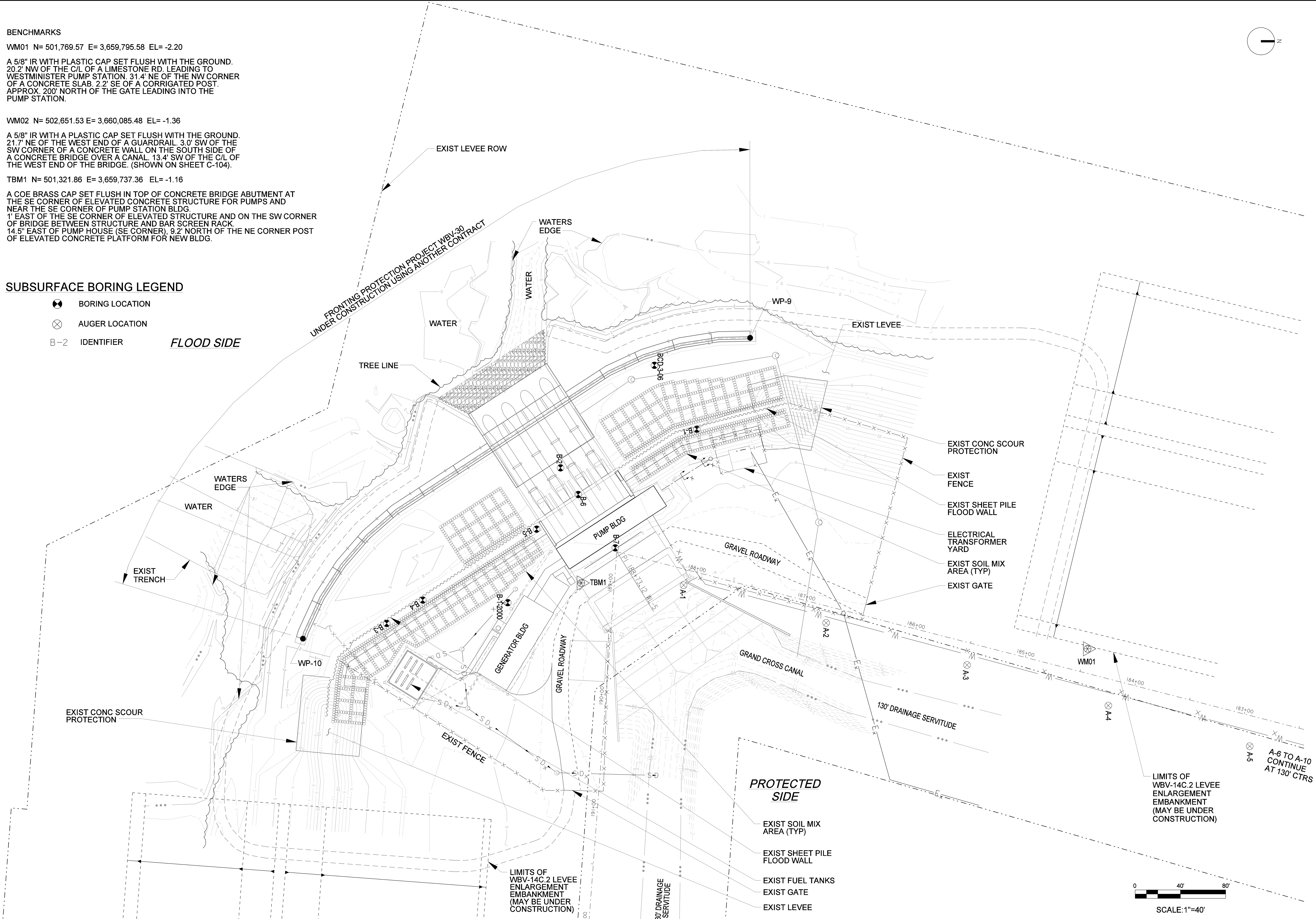
A 5/8" IR WITH A PLASTIC CAP SET FLUSH WITH THE GROUND. 21.7' NE OF THE WEST END OF A GUARDRAIL. 3.0' SW OF THE SW CORNER OF A CONCRETE WALL ON THE SOUTH SIDE OF A CONCRETE BRIDGE OVER A CANAL. 13.4' SW OF THE C/L OF THE WEST END OF THE BRIDGE. (SHOWN ON SHEET C-104).

TBM1 N= 501,321.86 E= 3,659,737.36 EL= -1.16

A COE BRASS CAP SET FLUSH IN TOP OF CONCRETE BRIDGE ABUTMENT AT THE SE CORNER OF ELEVATED CONCRETE STRUCTURE FOR PUMPS AND NEAR THE SE CORNER OF PUMP STATION BLDG.
1' EAST OF THE SE CORNER OF ELEVATED STRUCTURE AND ON THE SW CORNER OF BRIDGE BETWEEN STRUCTURE AND BAR SCREEN RACK.
14.5" EAST OF PUMP HOUSE (SE CORNER), 9.2' NORTH OF THE NE CORNER POST OF ELEVATED CONCRETE PLATFORM FOR NEW BLDG.

SUBSURFACE BORING LEGEND

- BORING LOCATION
- AUGER LOCATION
- B-2 IDENTIFIER



US Army Corps of Engineers® New Orleans District

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MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 Iowa Avenue, Muscatine, Iowa 52761-3764
www.stanleyconsultants.com

DESIGNED BY: RAJ
DWN BY: BKB
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NAME: wbv-14c05c101___c-101---.dgn
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: H-8-46932

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

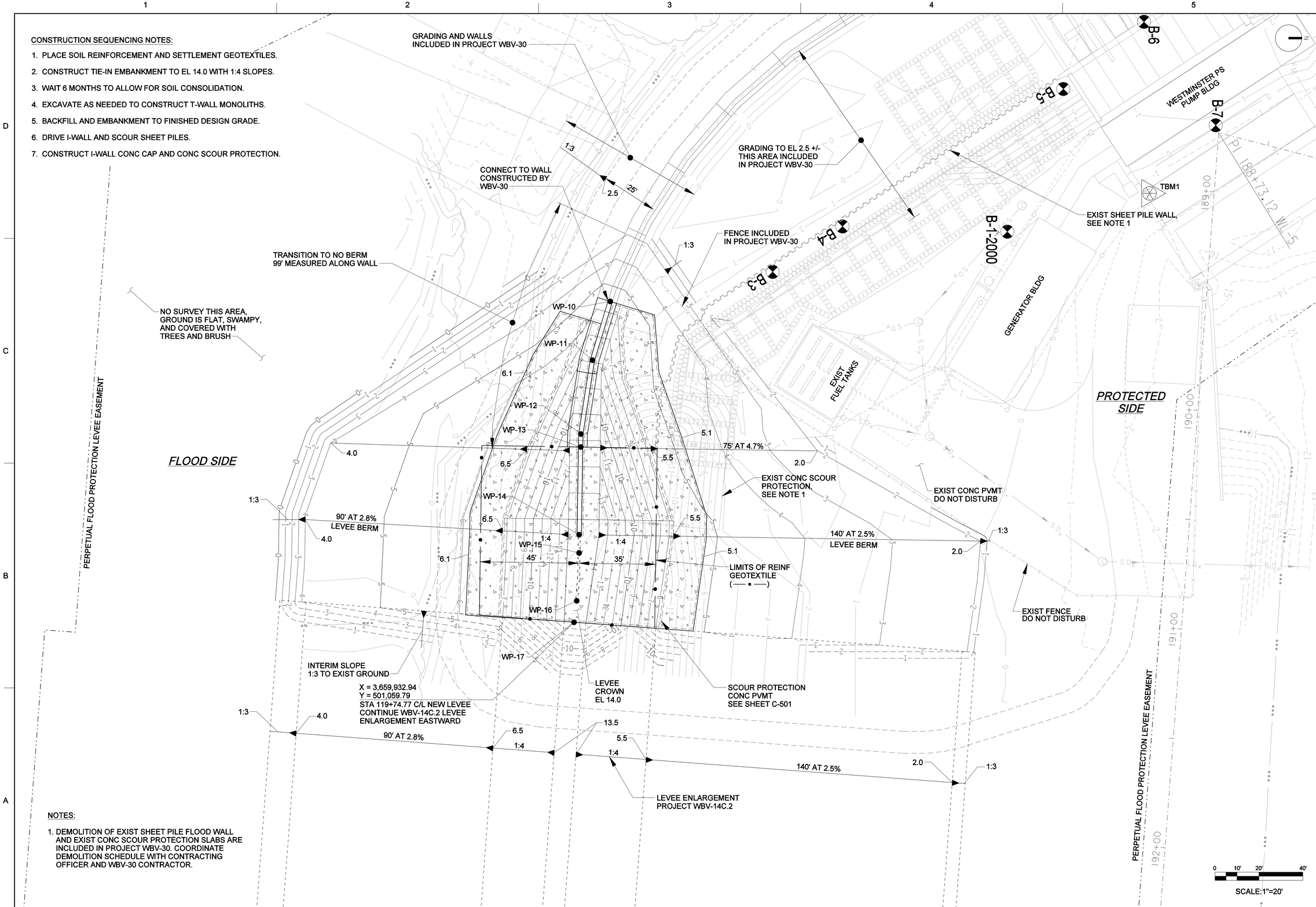
EXISTING SITE PLAN

SHEET IDENTIFICATION
C-101

3138
22-JAN-2010 16:55 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c101___c-101---.dgn

CONSTRUCTION SEQUENCING NOTES:

1. PLACE SOIL REINFORCEMENT AND SETTLEMENT GEOTEXTILES.
2. CONSTRUCT TIE-IN EMBANKMENT TO EL 14.0 WITH 1:4 SLOPES.
3. WAIT 6 MONTHS TO ALLOW FOR SOIL CONSOLIDATION.
4. EXCAVATE AS NEEDED TO CONSTRUCT T-WALL MONOLITHS.
5. BACKFILL AND EMBANKMENT TO FINISHED DESIGN GRADE.
6. DRIVE I-WALL AND SCOUR SHEET PILES.
7. CONSTRUCT I-WALL CONC CAP AND CONC SCOUR PROTECTION.



NOTES:

1. DEMOLITION OF EXIST SHEET PILE FLOOD WALL AND EXIST CONC SCOUR PROTECTION SLABS ARE INCLUDED IN PROJECT WBV-30. COORDINATE DEMOLITION SCHEDULE WITH CONTRACTING OFFICER AND WBV-30 CONTRACTOR.

US Army Corps of Engineers®
New Orleans District

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MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

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DWN BY: BKB
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NAME: wbv-14c05c102___c-102---.dgn
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: H-N-40202

Stanley Consultants INC.
225 Baronne Avenue, Suite 1700, New Orleans, Louisiana 70112-1704
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

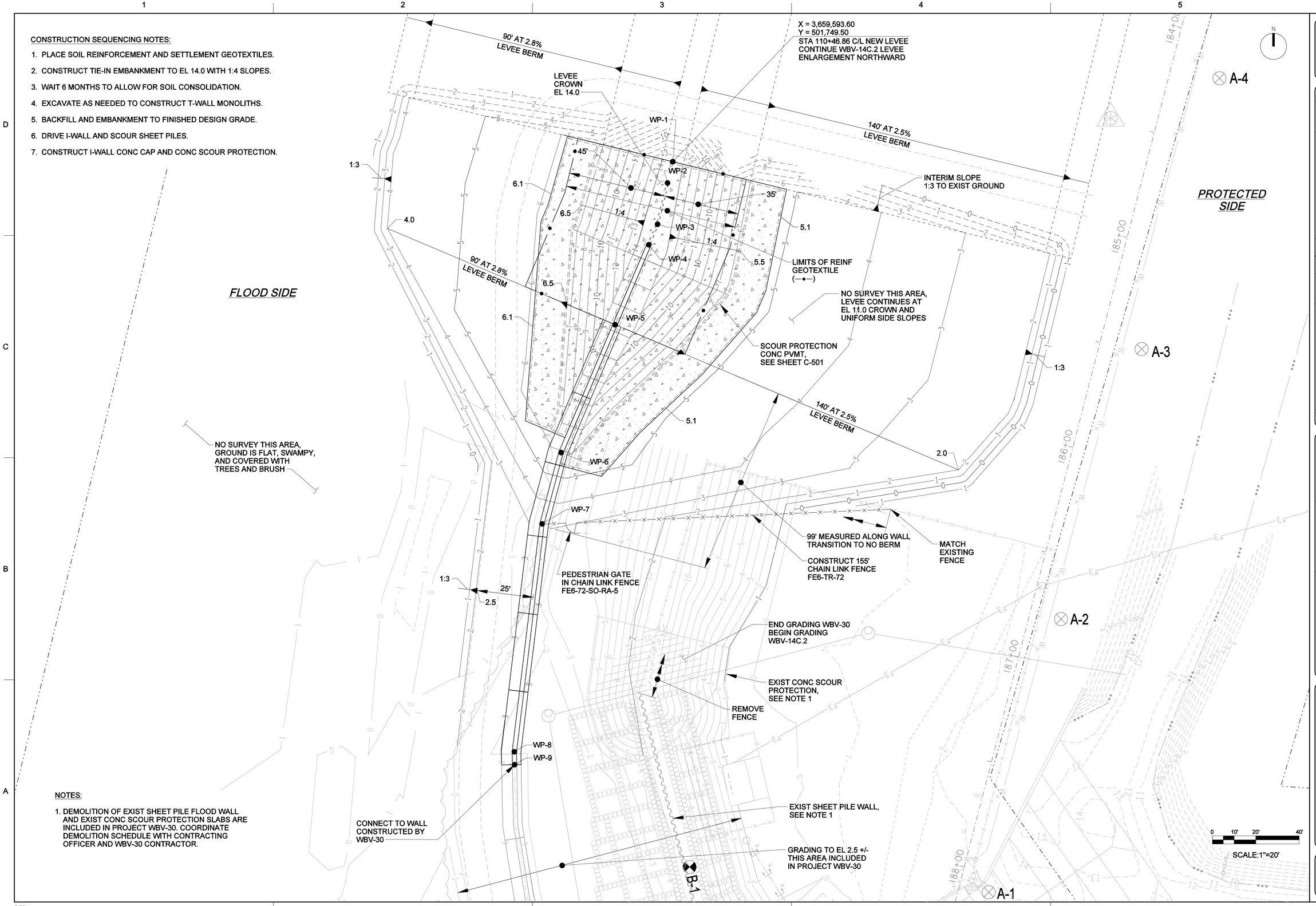
PROPOSED SITE AND GRADING PLAN
SOUTH WALLS

SHEET IDENTIFICATION
C-102

3138
22-JAN-2010 16:55 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c102___c-102---.dgn

CONSTRUCTION SEQUENCING NOTES:

1. PLACE SOIL REINFORCEMENT AND SETTLEMENT GEOTEXTILES.
2. CONSTRUCT TIE-IN EMBANKMENT TO EL 14.0 WITH 1:4 SLOPES.
3. WAIT 6 MONTHS TO ALLOW FOR SOIL CONSOLIDATION.
4. EXCAVATE AS NEEDED TO CONSTRUCT T-WALL MONOLITHS.
5. BACKFILL AND EMBANKMENT TO FINISHED DESIGN GRADE.
6. DRIVE I-WALL AND SCOUR SHEET PILES.
7. CONSTRUCT I-WALL CONC CAP AND CONC SCOUR PROTECTION.



NOTES:

1. DEMOLITION OF EXIST SHEET PILE FLOOD WALL AND EXIST CONC SCOUR PROTECTION SLABS ARE INCLUDED IN PROJECT WBV-30. COORDINATE DEMOLITION SCHEDULE WITH CONTRACTING OFFICER AND WBV-30 CONTRACTOR.

US Army Corps of Engineers®
New Orleans District

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MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 Iberville Avenue, Metairie, Louisiana 70005-3784
www.stanleyconsultants.com

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DWN BY: BKB
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
FILE NAME: wbv-14c05c103___c-103---.dgn
SIZE: ANSI D
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: H-W-N-0202

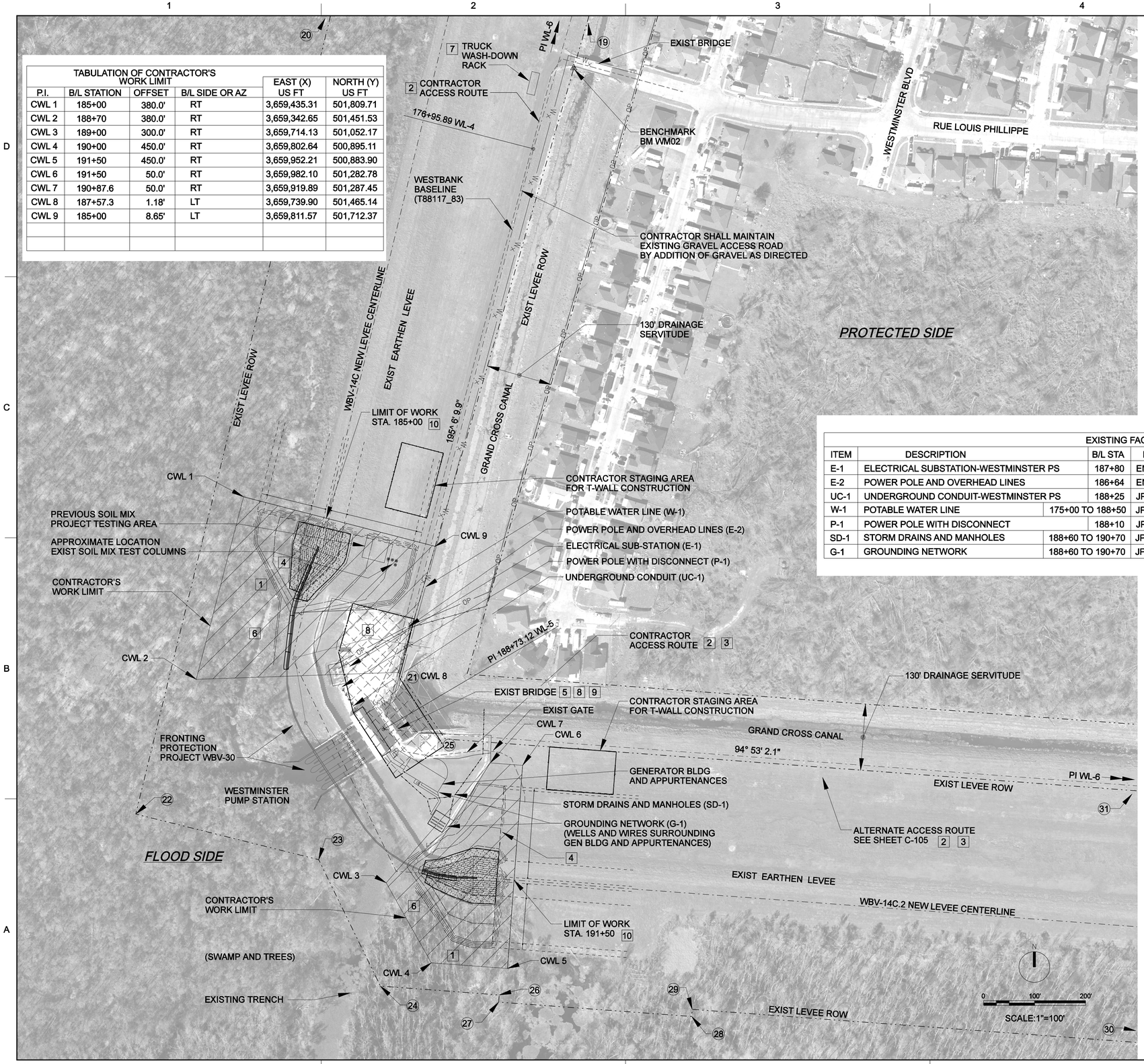
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

PROPOSED SITE AND GRADING PLAN
NORTH WALLS

SHEET IDENTIFICATION
C-103

3138
22-JAN-2010 16:55 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c103___c-103---.dgn

TABULATION OF CONTRACTOR'S WORK LIMIT					
P.I.	B/L STATION	OFFSET	B/L SIDE OR AZ	EAST (X) US FT	NORTH (Y) US FT
CWL 1	185+00	380.0'	RT	3,659,435.31	501,809.71
CWL 2	188+70	380.0'	RT	3,659,342.65	501,451.53
CWL 3	189+00	300.0'	RT	3,659,714.13	501,052.17
CWL 4	190+00	450.0'	RT	3,659,802.64	500,895.11
CWL 5	191+50	450.0'	RT	3,659,952.21	500,883.90
CWL 6	191+50	50.0'	RT	3,659,982.10	501,282.78
CWL 7	190+87.6	50.0'	RT	3,659,919.89	501,287.45
CWL 8	187+57.3	1.18'	LT	3,659,739.90	501,465.14
CWL 9	185+00	8.65'	LT	3,659,811.57	501,712.37



PARTIAL WESTBANK BASELINE (T88117_83)			
PI		NORTHING	EASTING
LABEL	STATION	US FT	US FT
WL-4	176+95.89	502,492.96	3,660,004.58
WL-5	188+73.12	501,353.34	3,659,709.75
WL-6	213+54.74	501,167.88	3,662,184.27

FOR TABULATION OF LEVEE RIGHT-OF-WAY OFFSETS SEE WBV-14C.2 REAL ESTATE DRAWINGS.

FOR TABULATION OF LEVEE RIGHT-OF-WAY POINTS (19) THRU (31) SEE WBV-14C.2 REAL ESTATE DRAWINGS.

DISPOSITION LEGEND	
▲	DO NOT DISTURB
▭	PIPELINE PROTECTION
(1)	BY CONTRACTOR
Ø	DE-ENERGIZE
(4)	BY ENTERGY

EXISTING FACILITIES - DISPOSITION WORK IS THROUGHOUT CONSTRUCTION SCHEDULE						
ITEM	DESCRIPTION	B/L STA	FACILITY OWNER	ADDRESS	PHONE NO.	DISPOSITION
E-1	ELECTRICAL SUBSTATION-WESTMINSTER PS	187+80	ENTERGY	3734 TULANE AVE. N.O., LA. 70119	(504)593-3458	▲
E-2	POWER POLE AND OVERHEAD LINES	186+64	ENTERGY			▲
UC-1	UNDERGROUND CONDUIT-WESTMINSTER PS	188+25	JP DEPT DRAINAGE	1221 ELMWOOD PARK BLVD., SUITE 909 JEFFERSON, LA. 70123	(504)736-6753	▲ ▭ (1) (NIC)
W-1	POTABLE WATER LINE	175+00 TO 188+50	JP DEPT DRAINAGE			▲ (1)
P-1	POWER POLE WITH DISCONNECT	188+10	JP DEPT DRAINAGE			▲ (1)
SD-1	STORM DRAINS AND MANHOLES	188+60 TO 190+70	JP DEPT DRAINAGE			▲ (1)
G-1	GROUNDING NETWORK	188+60 TO 190+70	JP DEPT DRAINAGE			▲

NOTES:

1. ALL WORK SHALL BE ACCOMPLISHED WITHIN EXISTING LEVEE RIGHT OF WAY.
2. THE CONTRACTOR SHALL ACCESS THE WORK AREA BY USING EXISTING LEVEE ACCESS ROUTES FROM PUBLIC ROADS. THE LEVEE ACCESS ROUTES SHALL BE MAINTAINED TO PRE-CONSTRUCTION CONDITION AT ALL TIMES AND SHALL BE LIMITED TO A 50' CORRIDOR CENTERED ON EXISTING ROUTES. ACCESS ROUTES THROUGH GRASSY AREAS SHALL BE REGRADED AND RESEEDED TO PRE-CONSTRUCTION CONDITION BEFORE COMPLETION OF PROJECT.
3. CONTRACTOR SHALL COORDINATE WORK AND ACCESS WITH OTHER CONTRACTORS ON-SITE.
4. ACCESS TO FLOODSIDE WORK ZONES SHALL BE OVER THE LEVEE. DEGRADING OF LEVEE SHALL NOT BE ALLOWED FOR T-WALL CONSTRUCTION.
5. CONTRACTOR TO COORDINATE BRIDGE USAGE WITH PUMP STATION OPERATOR SO AS NOT TO DISRUPT SCREEN CLEANING OPERATIONS.
6. CLEARING AND GRUBBING OF TREES SHALL BE LIMITED TO THE MINIMUM AREA REQUIRED FOR PROPOSED OR TEMPORARY WORKS.
7. THE CONTRACTOR SHALL CLEAR VEHICLES OF MUD AND DEBRIS PRIOR TO ENTERING PUBLIC ROADS. PUBLIC ROADS SHALL BE KEPT CLEAN DURING CONSTRUCTION.
8. THIS WORK AREA RESERVED FOR THE INSTALLATION OF CLIMBER SCREENS BY A USACE CONTRACTOR. ANY CONSTRUCTION RELATED ACTIVITIES WITH RESPECT TO THIS AREA SHALL BE COORDINATED WITH THE CONTRACTING OFFICER.
9. THE BRIDGE HAS A RATING OF HS20-44. BRIDGE USAGE WILL BE LIMITED BY SCREEN CLEANING OPERATIONS AND INSTALLATION OF CLIMBER SCREENS.
10. CONTRACTOR'S WORK LIMIT AS DEPICTED HEREIN IS FOR T-WALL AND LEVEE TIE-IN WORK ONLY. WORK LIMIT SHALL BE COMBINED WITH LIMITS SHOWN ELSEWHERE FOR LEVEE ENLARGEMENT WORK.

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 Baronne Avenue, Suite 1700, New Orleans, Louisiana 70112-9704

DESIGNED BY: RAJ | DATE: 01-22-2010
DWN BY: BKB | CKD BY: LWS
SOLICITATION NO.:
CONTRACT NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC.
FILE NUMBER: 114-00002
PLOT SCALE: 1:1
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NAME: wbv-14c05c104___c-104---.dgn

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

WORK LIMIT, UTILITY DISPOSITION, AND ACCESS PLAN

SHEET IDENTIFICATION
C-104

3138
22-JAN-2010 16:55 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c104___c-104---.dgn

US Army Corps of Engineers®
New Orleans District

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DESIGNED BY: RAJ
DATE: 01-22-2010
DWN BY: BKB
CKD BY: LWS
SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC.
CONTRACT NO.:
PLOT SCALE:
PLOT DATE: JAN 22, 2010
FILE NUMBER: FNA-49902
SIZE: ANSI D
FILE NAME: wbv-3005c105___c-105---.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

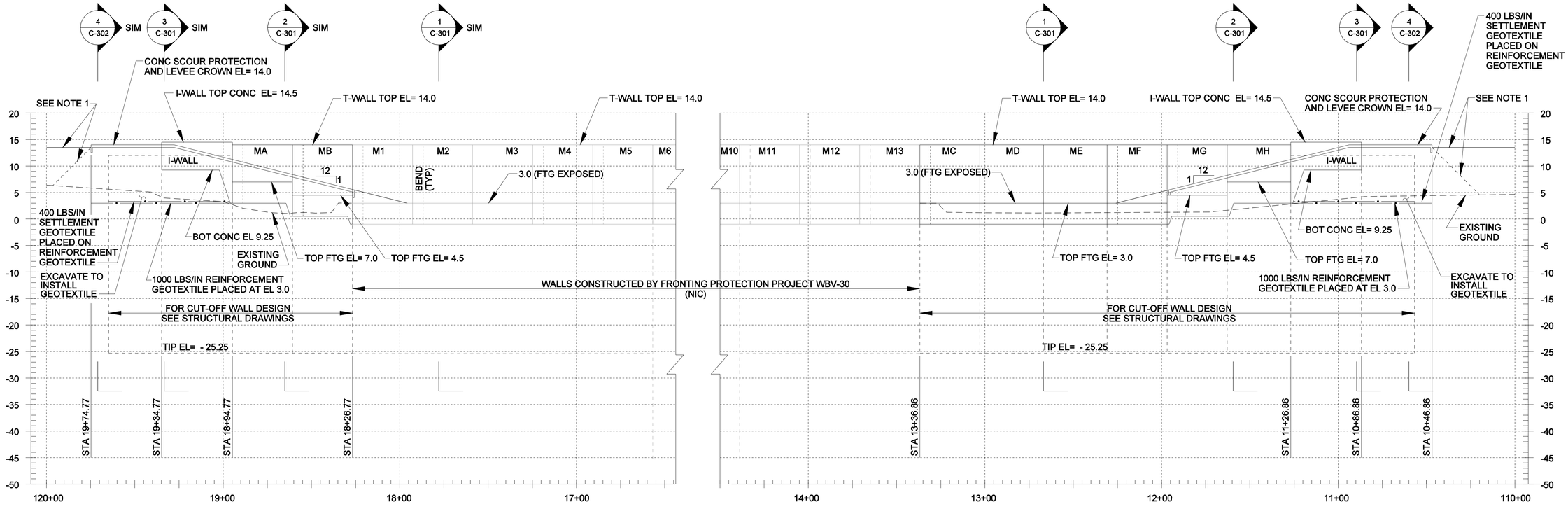
Stanley Consultants INC.
225 Baronne Avenue, Suite 1700, New Orleans, Louisiana 70112-3794
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

ACCESS PLAN
ALTERNATE ACCESS

SHEET IDENTIFICATION
C-105

3138
22-JAN-2010 16:56 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c105___c-105---.dgn



FLOODWALL ELEVATION LOOKING AT PROTECTED SIDE FACE

SCALE: 1" = 30' HORIZ } AT FULL SIZE
1' = 10' VERT

NOTES:

1. MATCH WBV-14C.2 NEW LEVEE EL 13.5 OR 1:3 SLOPE TO EXISTING GROUND IN THE INTERIM.
2. REMOVAL OF EXISTING SHEET PILE FLOODWALLS, SCOUR PROTECTION, AND LEVEE IS INCLUDED IN PROJECT WBV-30 BUT IS TO BE DELAYED UNTIL COMPLETION OF NEW FLOODWALLS AND LEVEE CONNECTIONS IN THIS CONTRACT. COORDINATE SCHEDULE WITH CONTRACTING OFFICER.

0 10' 20'
SCALE: 1"= 10'

0 30' 60'
SCALE:1"= 30'

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New Orleans District

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U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: RAJ
DATE: 01-22-2010
DWN BY: BKB
CKD BY: LWS
SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC
CONTRACT NO.:
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
FILE NUMBER: H-H-4002
SIZE: ANSI D
FILE NAME: wbv-14c05c201___c-201---.dgn

Stanley Consultants INC.
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HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

FLOODWALL ELEVATION

SHEET IDENTIFICATION
C-201

3138
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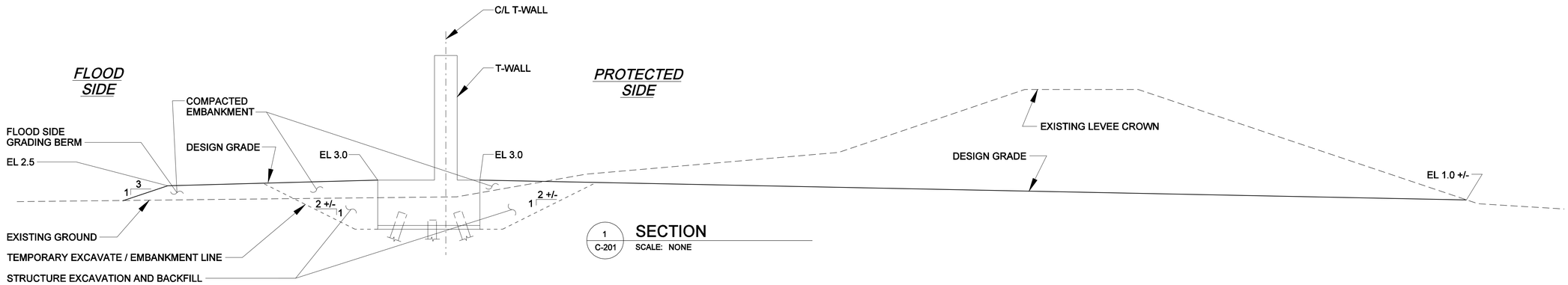
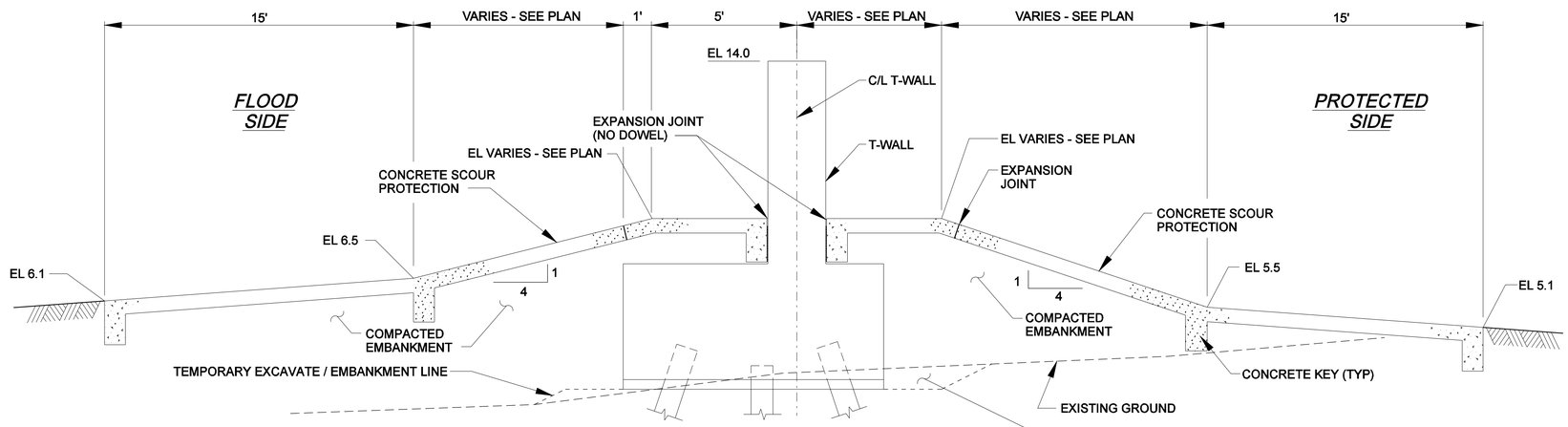


1 C-201 SECTION
SCALE: NONE



2 C-201 SECTION
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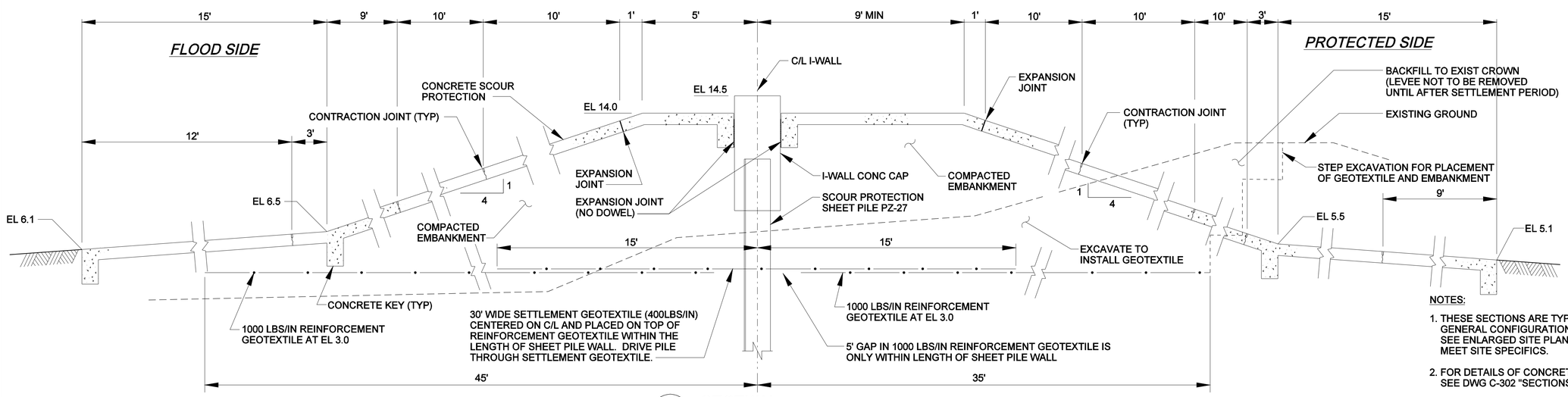


3 C-201 SECTION
SCALE: NONE

NOTES:

1. THESE SECTIONS ARE TYPICAL ONLY. THEY SHOW GENERAL CONFIGURATION OF SCOUR PROTECTION. SEE ENLARGED SITE PLANS FOR VARIATIONS TO MEET SITE SPECIFICS.
2. FOR DETAILS OF CONCRETE KEY AND JOINTS, SEE DWG C-302 "SECTIONS SHEET 2".

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: LWS | DATE: 01-22-2010 | SOLICITATION NO.:
DWN BY: BKB | CKD BY: RAJ | CONTRACT NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC. | FILE NUMBER: H-14-06502
PLOT SCALE: AS NOTED | PLOT DATE: 01-22-2010
SIZE: ANSI D | FILE NAME: wbv-14c05c301___c-301---.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

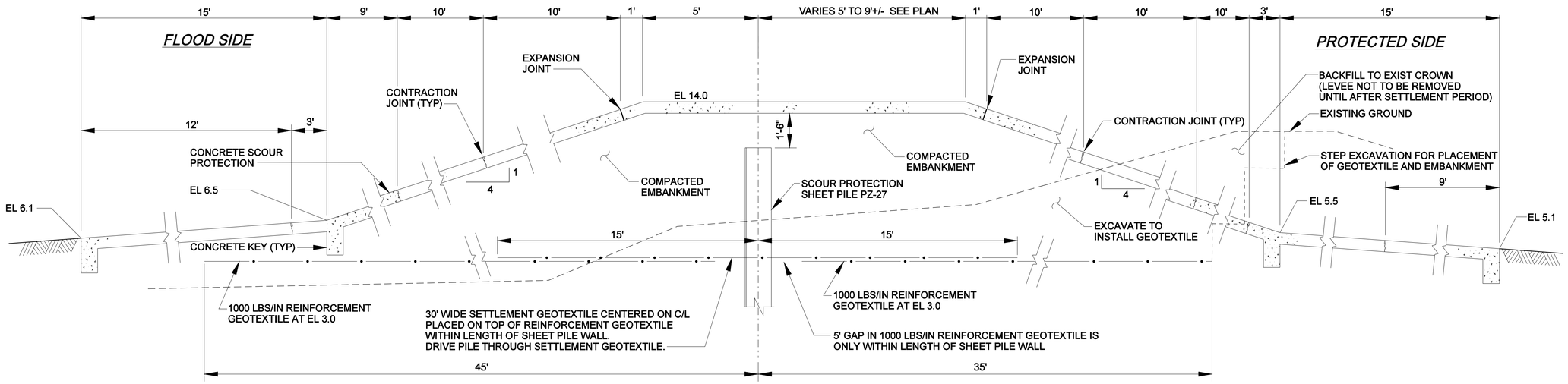
Stanley Consultants INC.
225 Baronne Avenue, Association, Iowa 52215-3194
Architects/Engineers/Consultants

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SECTIONS
SHEET 1

SHEET IDENTIFICATION
C-301

3138
22-JAN-2010 16:57 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c301___c-301---.dgn

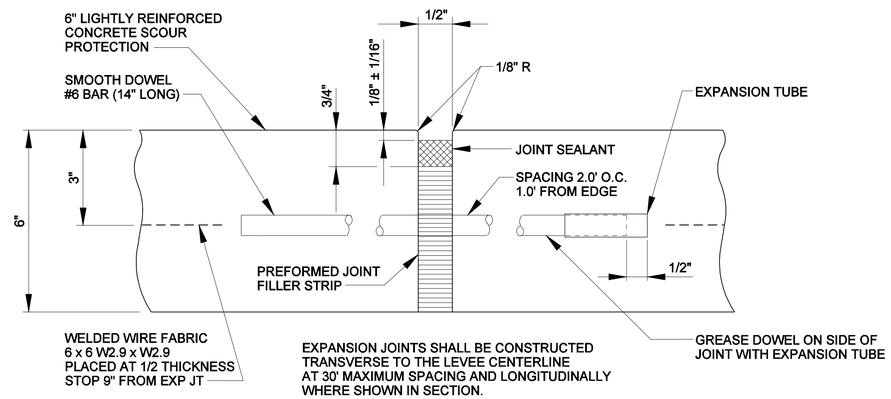


NOTE:

THESE SECTIONS ARE TYPICAL ONLY. THEY SHOW GENERAL CONFIGURATION OF SCOUR PROTECTION. SEE ENLARGED SITE PLANS FOR VARIATIONS TO MEET SITE SPECIFICS.

4 / C-201 **SECTION**

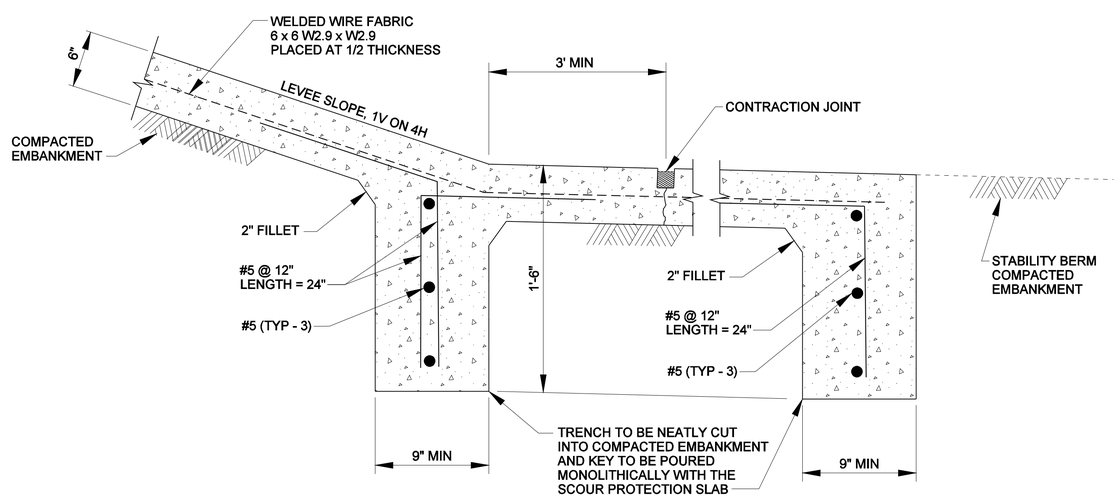
SCALE: NONE



EXPANSION JOINTS SHALL BE CONSTRUCTED TRANSVERSE TO THE LEVEE CENTERLINE AT 30' MAXIMUM SPACING AND LONGITUDINALLY WHERE SHOWN IN SECTION.

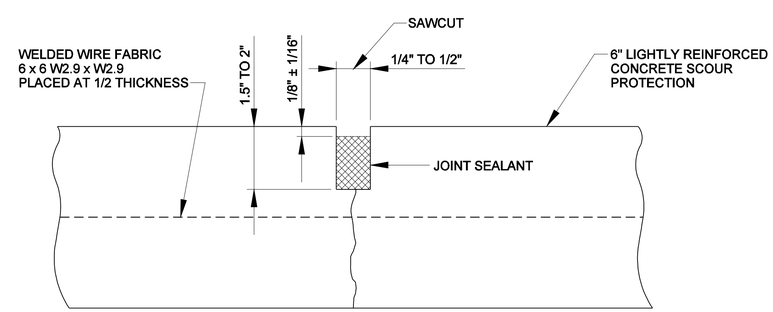
TYPICAL EXPANSION JOINT

SCALE: NONE



TYPICAL CONCRETE KEYS FOR 6" SCOUR PROTECTION

SCALE: NONE



MAXIMUM SPACING 10' EACH WAY UNLESS NOTED OTHERWISE

TYPICAL CONTRACTION JOINT

SCALE: NONE

US Army Corps of Engineers® New Orleans District

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MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

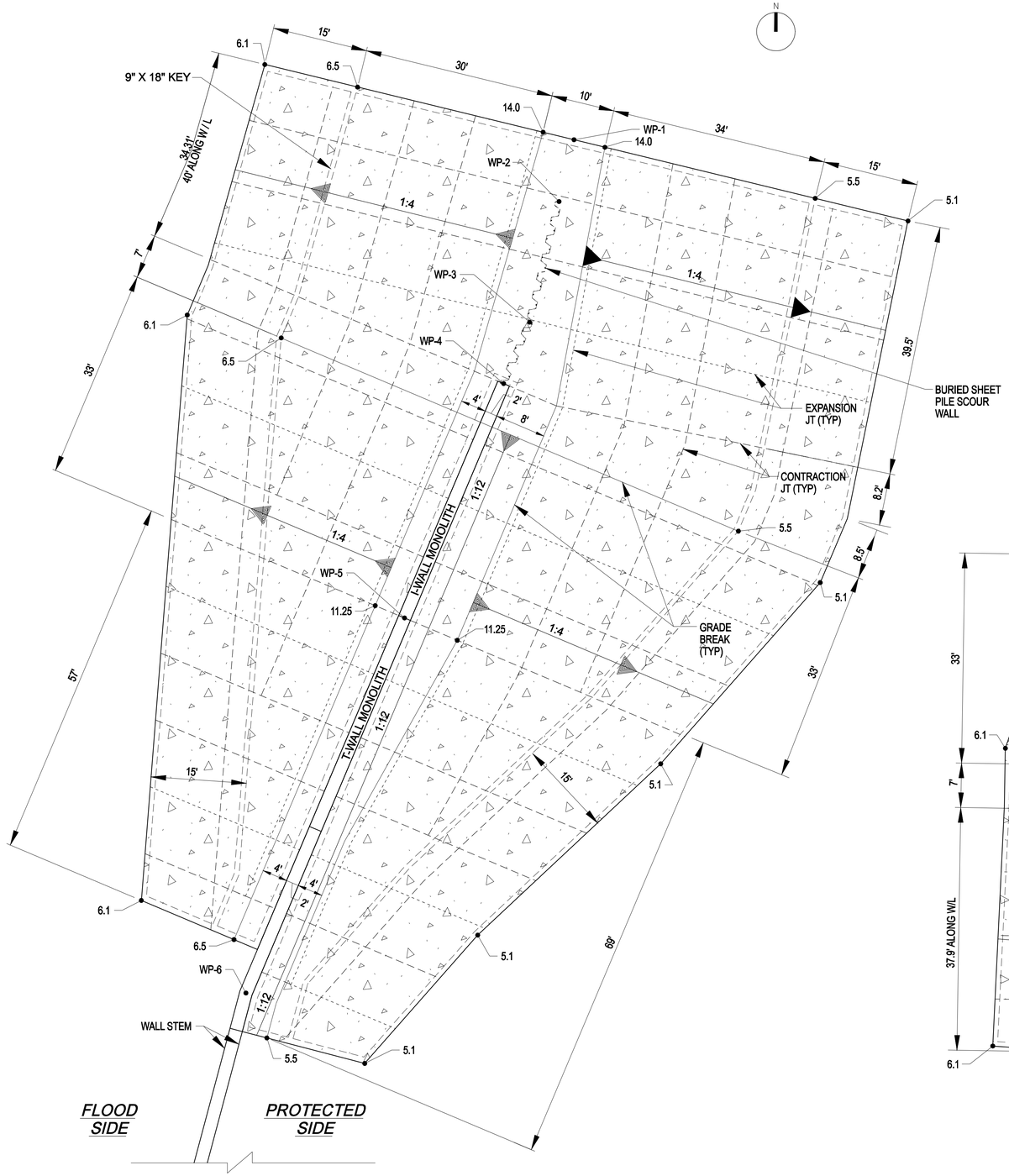
DESIGNED BY: LWS | DATE: 01-22-2010
DWN BY: BKB | CKD BY: RAJ | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC | CONTRACT NO.:
PLOT SCALE: AS NOTED | PLOT DATE: 01-22-2010 | FILE NUMBER: H-5-440802
SIZE: ANSI D | FILE NAME: wbv-14c05c302___c-302---.dgn

Stanley Consultants INC.
225 Baronne Avenue, Suite 1700, New Orleans, Louisiana 70112-1704
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINGER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

SECTIONS
SHEET 2

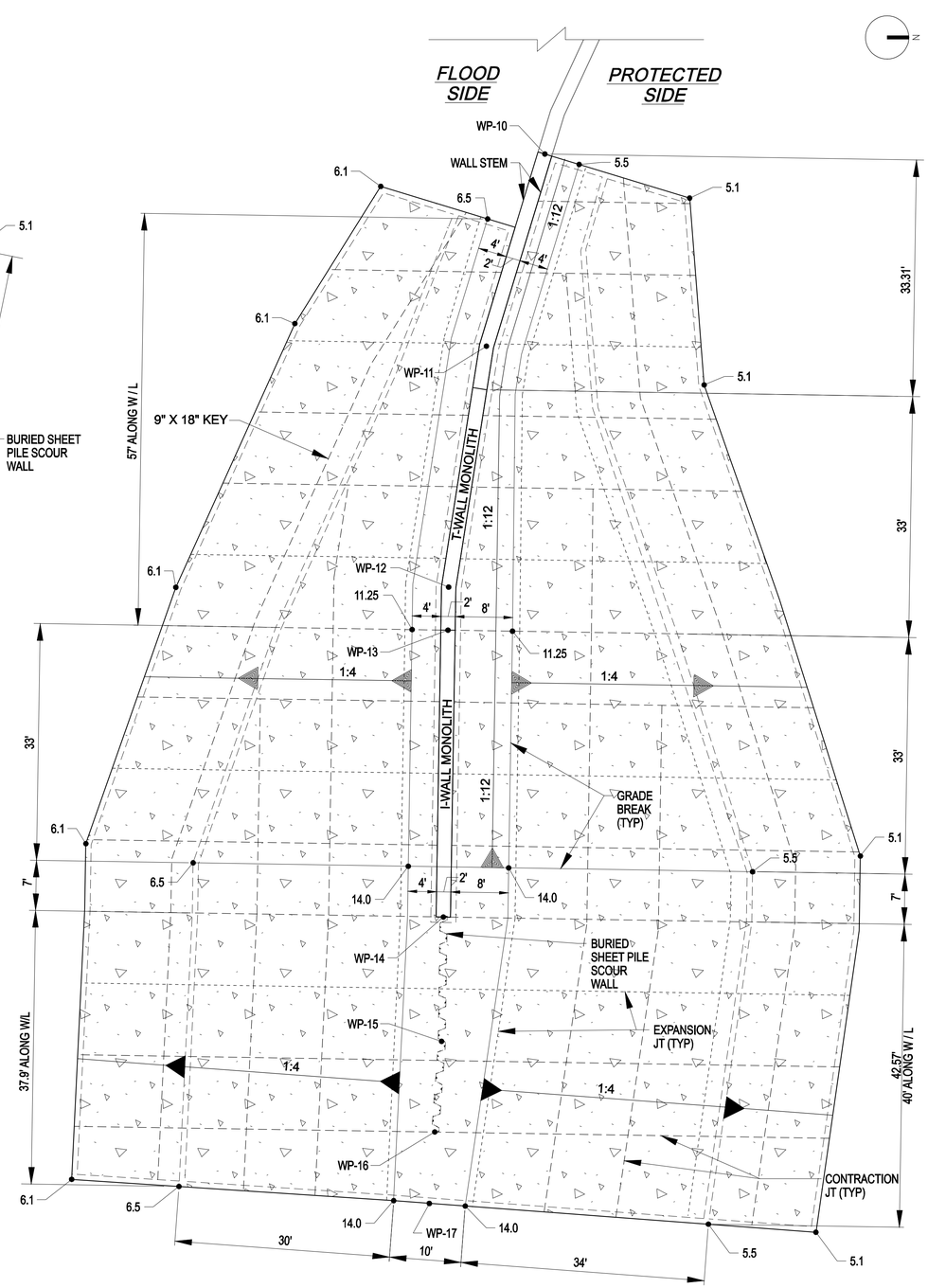
SHEET IDENTIFICATION
C-302



DETAIL - CONCRETE SCOUR PROTECTION - NORTH TIE-IN

SCALE: 1" = 10'

ALL DIMENSIONS ARE MEASURED HORIZONTAL



DETAIL - CONCRETE SCOUR PROTECTION - SOUTH TIE-IN

SCALE: 1" = 10'

ALL DIMENSIONS ARE MEASURED HORIZONTAL

0 10' 20'

SCALE:1"=10'

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

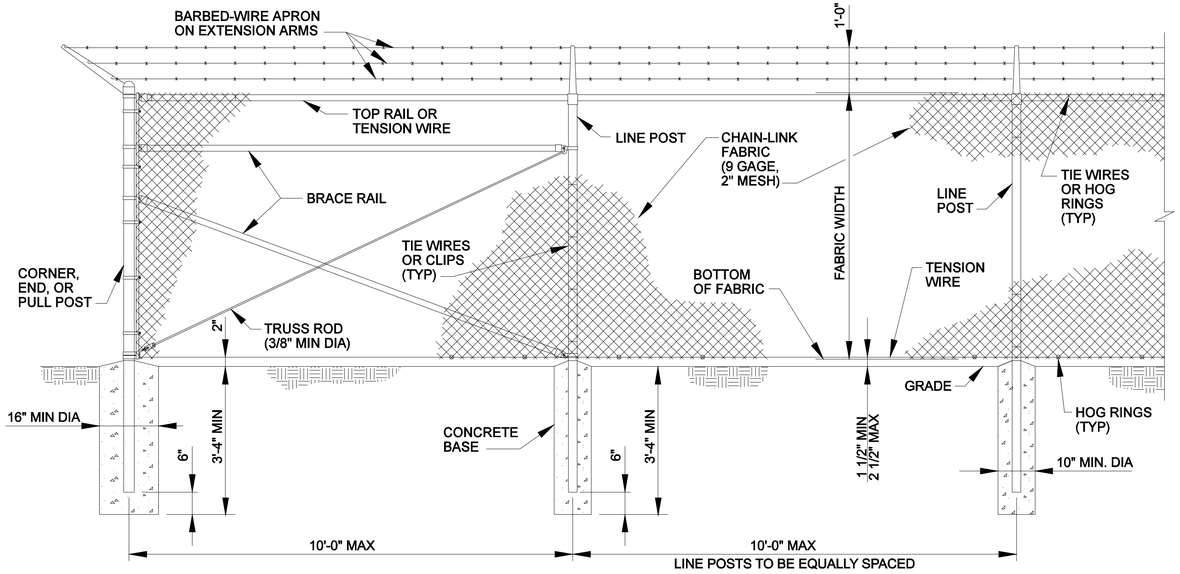
Stanley Consultants INC.
225 Iberville Avenue, Metairie, Iowa 50315-3794
Iowa Registration Number 1

DESIGNED BY: RAJ	DATE: 01-22-2010
DWN BY: BKB	CKD BY: LWS
SOLICITATION NO.:	
SUBMITTED BY: STANLEY CONSULTANTS, INC.	CONTRACT NO.:
PLOT SCALE: AS NOTED	PLOT DATE: 01-22-2010
FILE NUMBER: H-N-00002	
SIZE: ANSI D	FILE NAME: wbv-14c05c501__c-501---.dgn

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

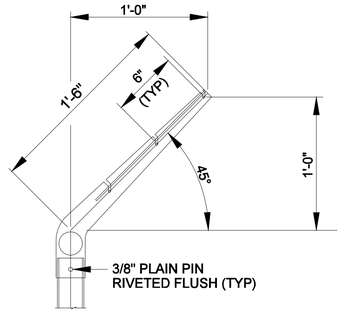
DETAIL
CONCRETE SCOUR PROTECTION
PLAN VIEW

SHEET IDENTIFICATION
C-501

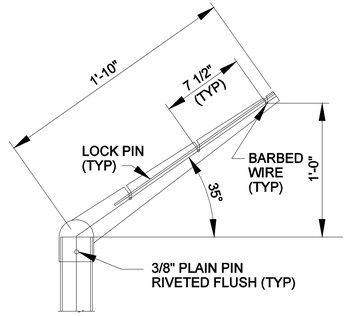


CHAIN-LINK SECURITY FENCE DETAIL

SCALE: NONE



LINE POST



CORNER POST

EXTENSION ARM DETAILS

SCALE: NONE

STEEL POST SCHEDULE			
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NORMAL)		
	FABRIC WIDTH 72" INCHES OR LESS	FABRIC WIDTH 84" TO 96"	FABRIC WIDTH 108" AND OVER
CORNER, END & PULL POSTS TUBULAR - ROUND TUBULAR - SQUARE C-SECTION (ROLL-FORMED)	2.375" OD 2.00" SQ 3.50" X 3.50"	2.875" OD 2.50" SQ 3.50" X 3.50"	4.00" OD 3.00" SQ --------
LINE POSTS TUBULAR - ROUND H-SECTION C-SECTION (ROLL-FORMED)	1.90" OD 2.25" X 1.70" 1.875" X 1.625"	2.375" OD 2.25" X 1.70" 2.25" X 1.70"	2.875" OD 2.25" X 1.70" --------
TOP, BOTTOM & BRACE RAILS TUBULAR - ROUND TUBULAR - SQUARE H-SECTION C-SECTION (ROLL-FORMED)	1.66" OD 1.50" SQ 1.625" X 1.50" 1.625" X 1.25"		

NOTES:

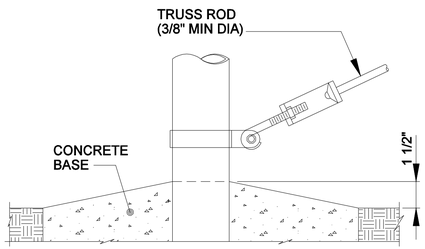
1. DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.
2. WIRE TIES, RAILS, POSTS AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE SIDE OPPOSITE THE SECURE AREA.
3. UNLESS SPECIFICALLY SHOWN OR SPECIFIED, ALL FE6 FENCE SHALL HAVE APRON EXTENDED OUTWARD FROM THE AREA BEING PROTECTED.
4. C-SECTION POSTS SHALL BE INSTALLED SO THAT THE VOID INSIDE THE POST IS COMPLETELY FILLED WITH CONCRETE UP TO THE TOP OF THE FOUNDATION.

FENCE LEGEND:

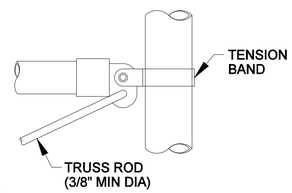
TYPE FE5 -	CHAIN-LINK FENCE WITHOUT BARBED-WIRE APRON
TYPE FE6 -	CHAIN-LINK FENCE W/BARBED-WIRE ON SINGLE OUTRIGGER
TYPE FE7 -	CHAIN-LINK FENCE W/BARBED-WIRE ON DOUBLE OUTRIGGER
TYPE FE8 -	CHAIN-LINK FENCE W/BARBED-WIRE AND BARBED-TAPE ON DOUBLE OUTRIGGER
TR -	FENCE WITH TOP RAIL AND TENSION WIRE AT BOTTOM
TBR -	FENCE WITH TOP AND BOTTOM RAILS
TWB -	TENSION WIRE TOP AND BOTTOM
TWBR -	FENCE WITH TOP TENSION WIRE AND BOTTOM RAIL FINAL NUMBER IS FABRIC WIDTH IN INCHES.

EXAMPLES:

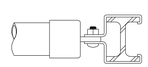
FE6-TR-72 -	CHAIN-LINK SECURITY FENCE W/BARBED-WIRE ON SINGLE OUTRIGGER, TOP RAIL, AND 72 INCH FABRIC WIDTH.
FE5-TWB-84 -	CHAIN-LINK SECURITY FENCE WITH NO APRON, TOP AND BOTTOM TENSION WIRE, AND 84 INCH FABRIC WIDTH.



TRUSS ROD AND BAND

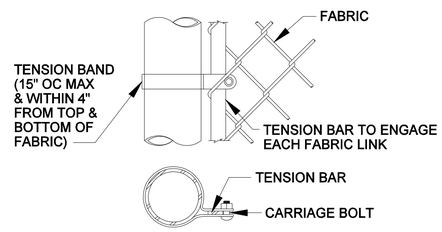


ROUND POST

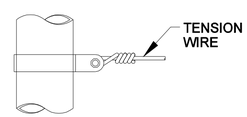


H-BEAM

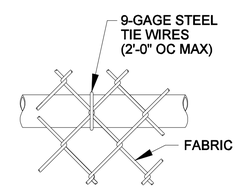
BRACE RAIL CLAMP DETAILS



END OR GATE POST DETAIL



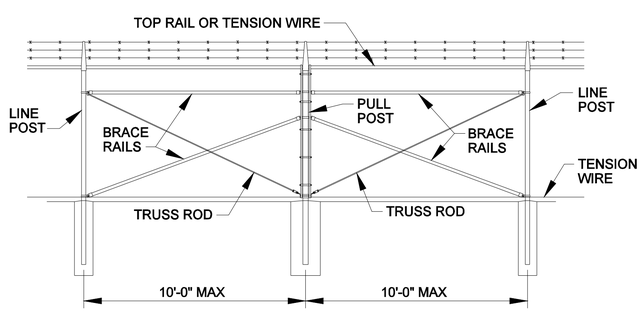
TENSION BAND DETAIL



TOP OR BRACE RAIL ATTACHMENT

FASTENING DETAILS

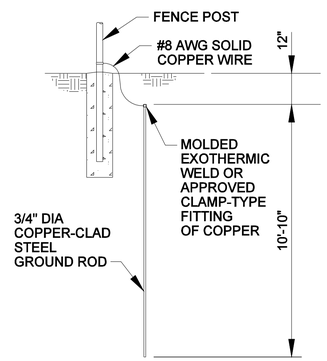
SCALE: NONE



NOTE:
PROVIDE BRACE PANEL WHENEVER STRAIGHT RUNS EXCEED 500 FEET.

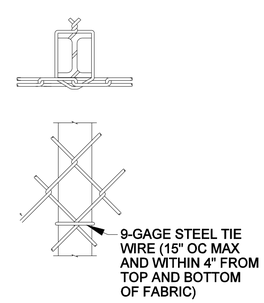
BRACE PANEL DETAIL

SCALE: NONE

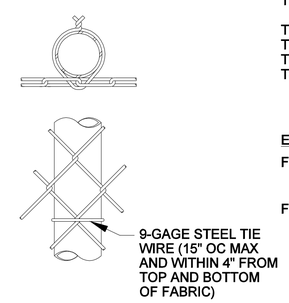


GROUNDING DETAIL

SCALE: NONE



H-BEAM



ROUND POST

LINE POST ATTACHMENTS

SCALE: NONE

US Army Corps of Engineers®
New Orleans District

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U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

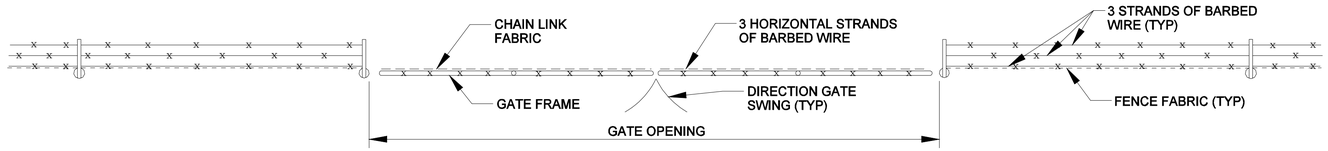
Stanley Consultants INC.
225 Iberville Street, Metairie, Iowa 52715-3794
Engineers Architects Planners

DESIGNED BY: RAJ | DATE: 01-22-2010 | SOLICITATION NO.:
DWN BY: BKG | CKD BY: AMM | CONTRACT NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC | PLOT DATE: 01-22-2010 | FILE NUMBER: H14-0502
PLOT SCALE: AS NOTED | PLOT STYLE: CTB | FILE NAME: wbv-14c05c502___c-502---.dgn
SIZE: ANSI D

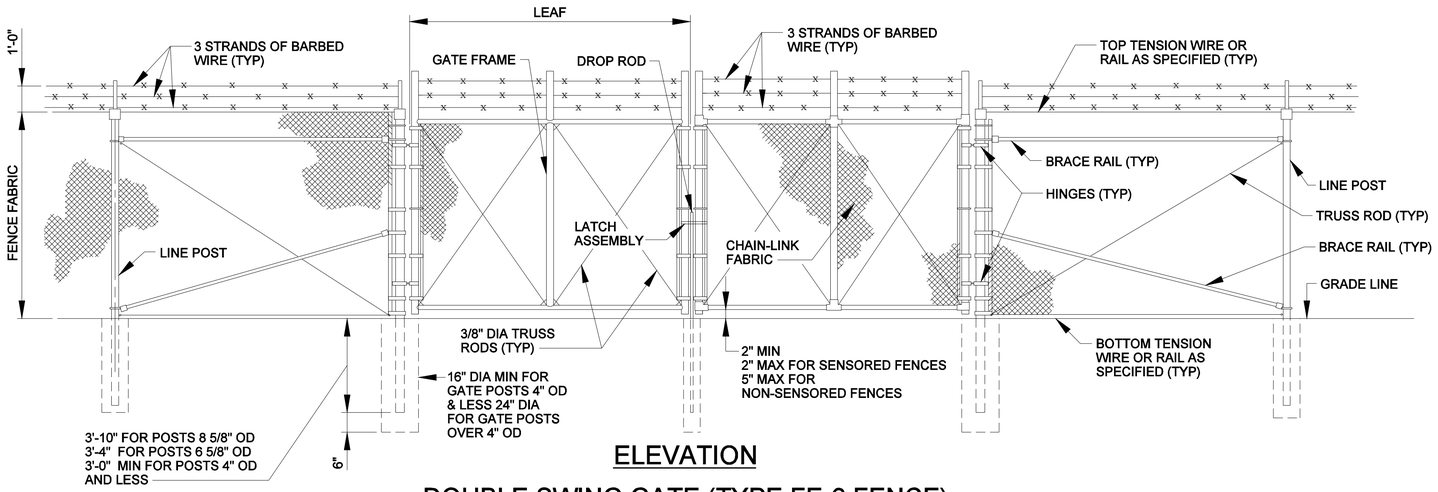
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTBANK STEAM PUMPING STATION
JEFFERSON PARISH, LOUISIANA

FENCING DETAILS
SHEET 1

SHEET IDENTIFICATION
C-502



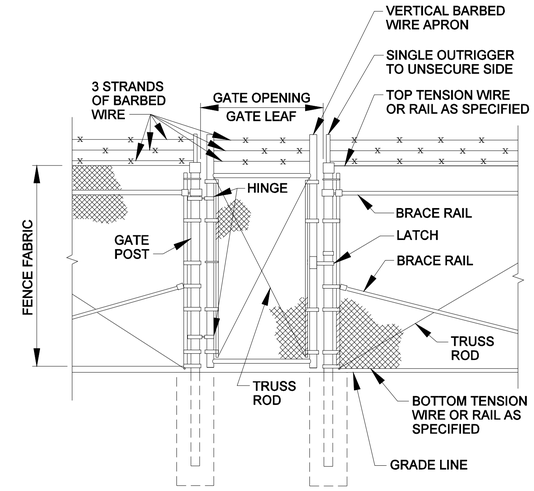
PLAN



ELEVATION

DOUBLE SWING GATE (TYPE FE-6 FENCE)

SCALE: NONE



PERSONNEL GATE TYPE FE-6 FENCE

SCALE: NONE

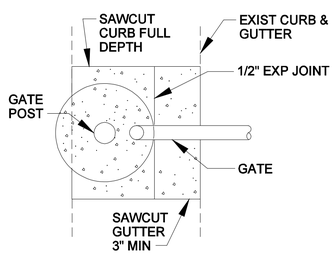
NOTES:

1. FOR NON-SENSORED FENCES, DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPE OF FENCE SECTIONS AND METHODS OF INSTALLATION WHICH COMPLY WITH THE SPECIFICATIONS.
2. SWING GATES SHALL BE CONSTRUCTED WITH DROP RODS, PADLOCKS, LATCH ASSEMBLY AND GATE KEEPERS EXCEPT AS NOTED.
3. ALL GATE FRAMES SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM F900 1.90" NOMINAL (ROUND) OR 2.00" NOMINAL (SQUARE). GATE FRAMES SHALL BE OF WELDED CONSTRUCTION OR SHALL BE ASSEMBLED USING HEAVY FITTINGS. AT CONTRACTOR'S OPTION A WELDED HORIZONTAL BRACE MAY BE USED IN LIEU OF TRUSS RODS TO BRACE ALL-WELDED GATE FRAMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER RIGID CONSTRUCTION OF ALL GATES SUPPLIED.
4. GATES SHALL BE DESIGNATED AS FOLLOWS:
   FENCE TYPE - FE5, FE6, ETC
   FENCE HEIGHT - INCHES
   TYPE OPENING - SO (SINGLE)
   - DO (DOUBLE)
   HINGE - RA (STANDARD)
   - HO (OFFSET)
   OPENING - FEET (CLEAR OPENING BETWEEN GATE POSTS)

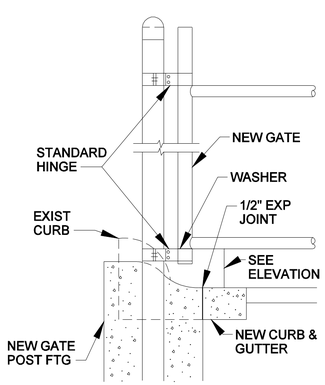
EXAMPLES

FE6-84-DO-RA-24
FE5-48-SO-HO-6

GATE POST SCHEDULE	
GATE LEAF WIDTH (NORMAL)	OUTSIDE DIMENSION (NORMAL)
6' OR LESS	2.875" OD 2.5" SQ
GREATER THAN 6' TO 12'	4.0" OD
GREATER THAN 12' TO 18'	6.625" OD
MORE THAN 18'	8.625" OD

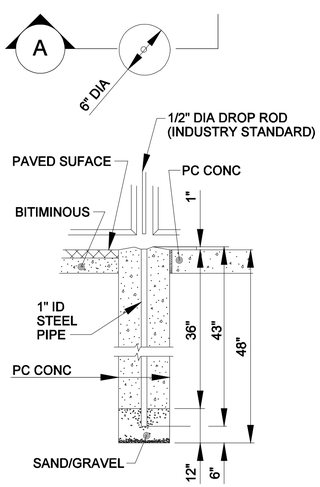


PLAN



GATE POST SECTION AT CURB AND GUTTER

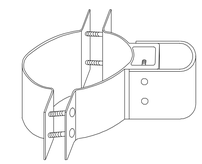
SCALE: NONE



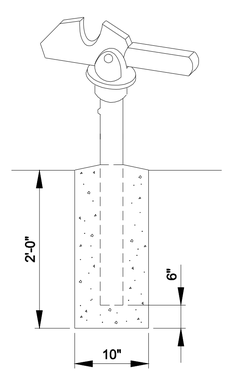
DROP ROD FOUNDATION

A SECTION

OFFSET HINGE

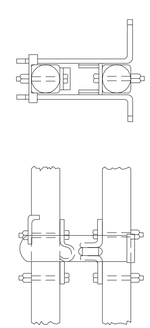


STANDARD HINGE

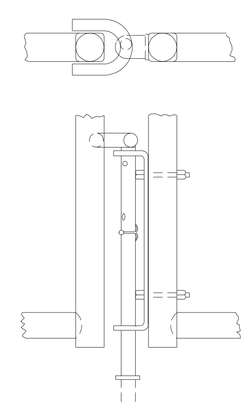


GATE KEEPER

(TO HOLD GATE OPEN)



LATCH ASSEMBLY



DROP ROD ASSEMBLY

SWING GATE DETAILS

SCALE: NONE

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: RAJ | DATE: 01-22-2010
DWN BY: BKB | CKD BY: AMM | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC | CONTRACT NO.:
PLOT SCALE: | PLOT DATE: 01-22-2010 | FILE NUMBER: FH-A-9002
PLOT ASSIGNED: | SIZE: ANSI D | FILE NAME: wbv-14c05c503___c-503---.dgn

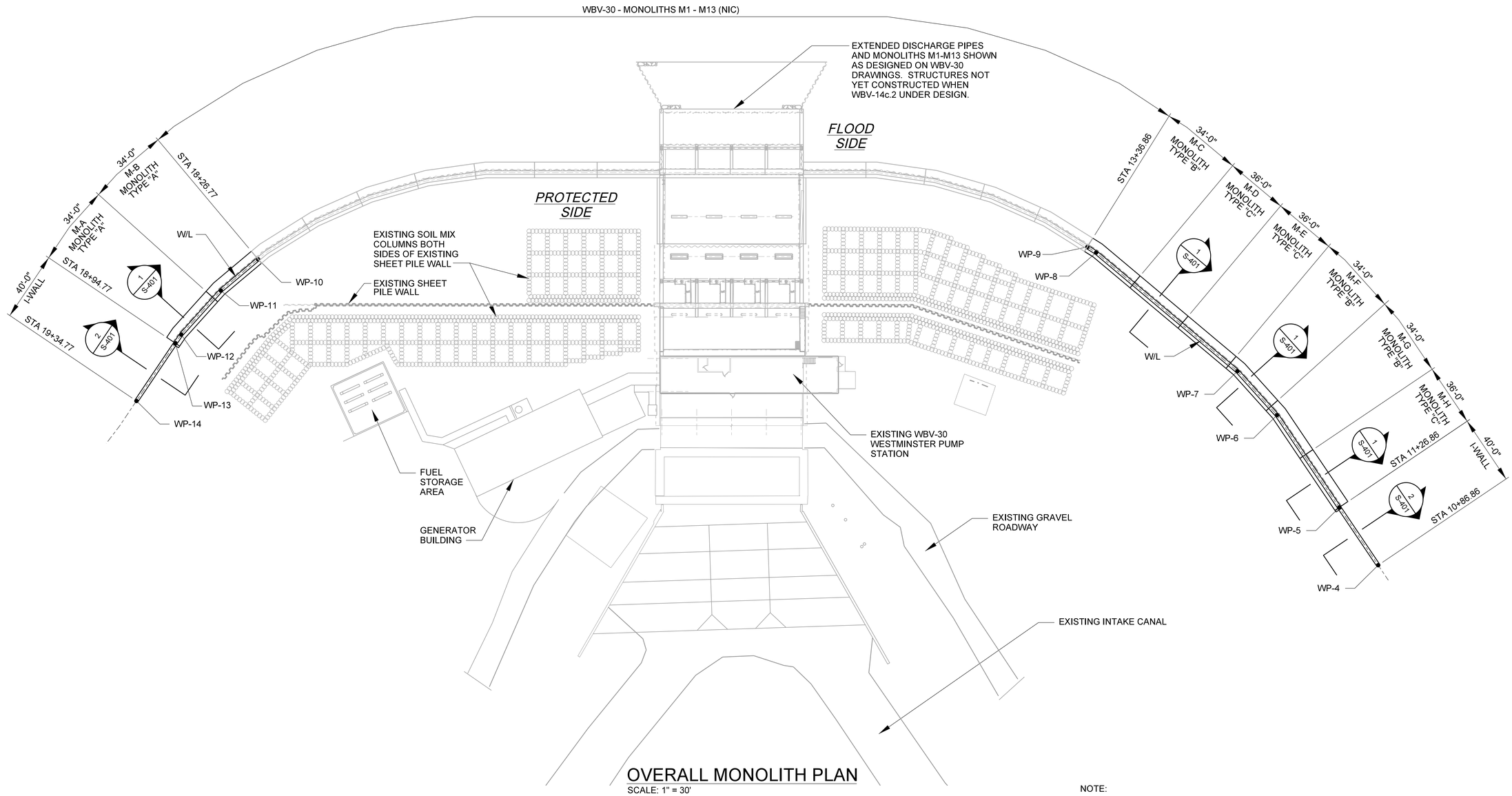
Stanley Consultants INC.
225 Iberville Avenue, Suite 500
New Orleans, Louisiana 70112-1704

HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTBANK PUMPING STATION
JEFFERSON PARISH, LOUISIANA

FENCING DETAILS
SHEET 2

SHEET IDENTIFICATION
C-503

3138
22-JAN-2010 16:57 T:\wbv-14c\Engineering and Design\(05) C- Civil\dgns\wbv-14c05c503___c-503---.dgn



OVERALL MONOLITH PLAN

SCALE: 1" = 30'

NOTE:

1. DIMENSIONS ARE MEASURED ALONG WALL LINE (W/L).
2. COORDINATES ARE LOCATED ON WALL LINE (W/L).
3. FOR WORKING POINT COORDINATES SEE SHEET C-100.
4. M-A INDICATES MONOLITH NUMBER.
5. FOR MONOLITH PILE LAYOUTS, SEE SHEET S-401.

0 30' 60'

SCALE:1"= 30'

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CSP
DWN BY: NV
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC.
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NAME: wbv-14c07s100___s100---.dgn
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: H-4-8062

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

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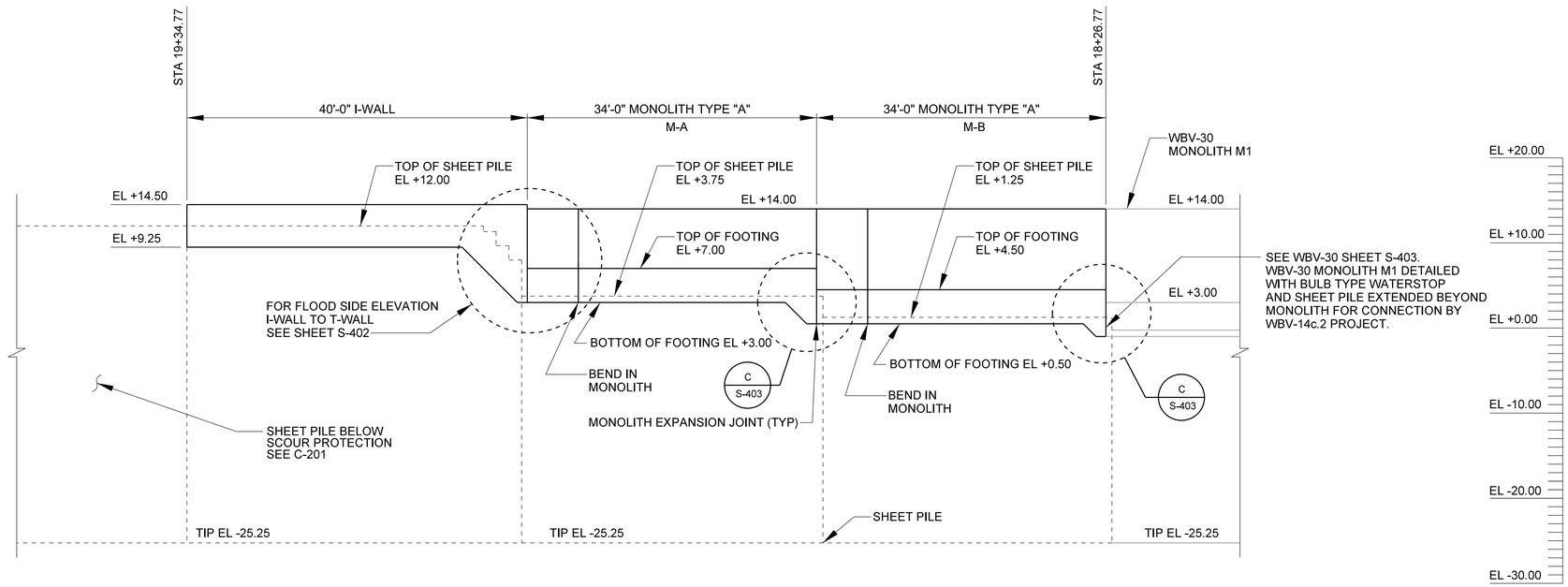
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTMINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

OVERALL MONOLITH PLAN

SHEET IDENTIFICATION
S-100

3777
22-JAN-2010 15:48 T:\wbv-14c\Engineering and Design\(07) S- Structural\wbv-14c07s100___s100---.dgn



PROTECTED SIDE MONOLITH PROFILE - SOUTH END

NOTES:

1. PILES NOT SHOWN. SEE WALL SECTION AND MONOLITH PLANS FOR LOCATIONS AND TYPES.
2. LENGTHS OF MONOLITHS ARE ALONG WALL LINE

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: CSP | DATE: 01-22-2010
DWN BY: NV | CKD BY: LWS | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC | CONTRACT NO.:
PLOT SCALE: AS NOTED | PLOT DATE: 01-22-2010 | FILE NUMBER: H-H-40002
SIZE: ANSI D | FILE NAME: wbv-14c07s200___s-200---.dgn

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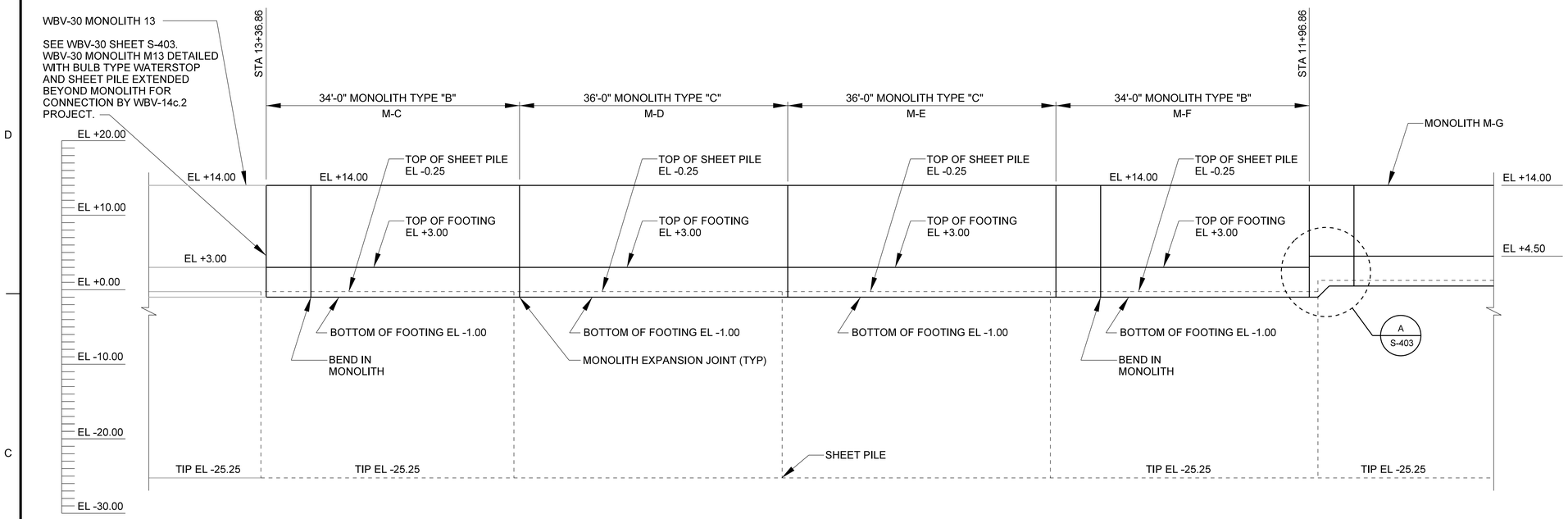
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

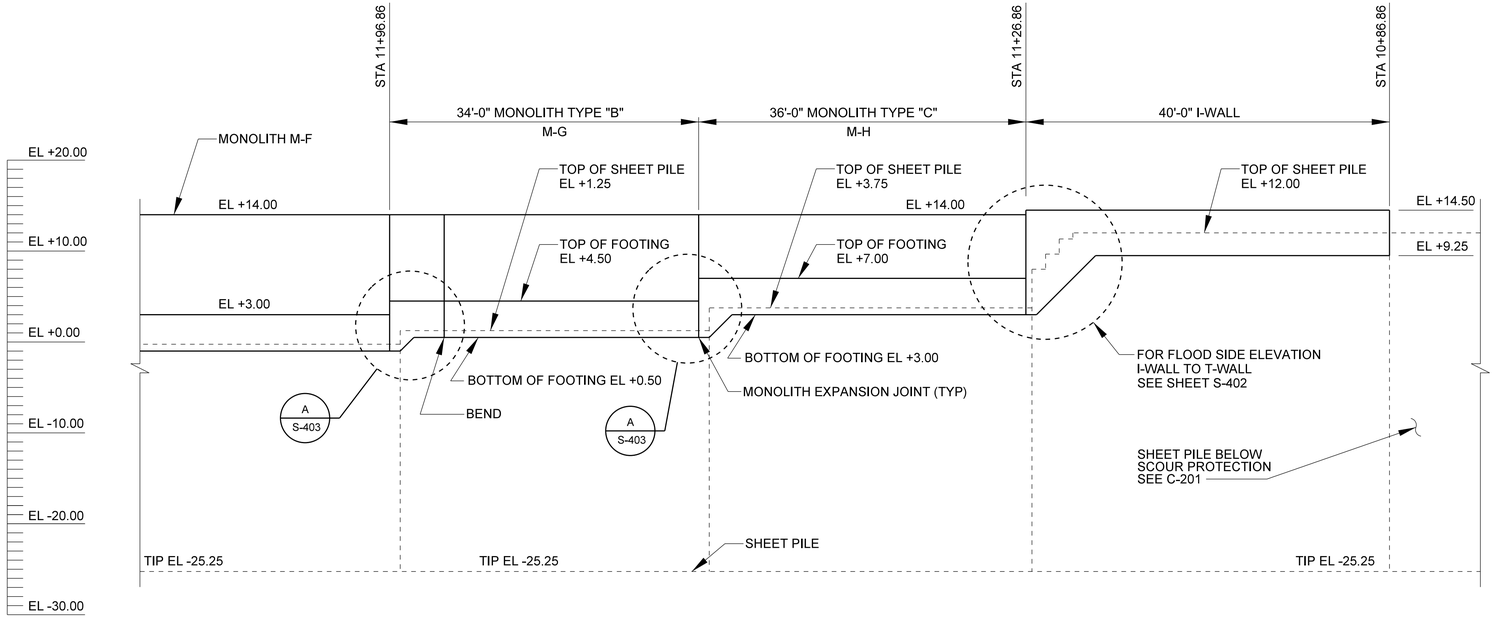
MONOLITH PROFILE
SHEET 1

SHEET IDENTIFICATION
S-200

3777
22-JAN-2010 15:48 T:\wbv-14c\Engineering and Design\(07) S- Structural\wbv-14c07s200___s-200---.dgn



PROTECTED SIDE MONOLITH PROFILE - NORTH END



PROTECTED SIDE MONOLITH PROFILE - NORTH END

NOTES:

1. PILES NOT SHOWN. SEE WALL SECTION AND MONOLITH PLANS FOR LOCATIONS AND TYPES.
2. LENGTHS OF MONOLITHS ARE ALONG WALL LINE

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CSP | DATE: 01-22-2010
DWN BY: NV | CKD BY: LWS | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC | CONTRACT NO.:
PLOT SCALE: AS NOTED | PLOT DATE: 01-22-2010 | FILE NUMBER: HVF46262
SIZE: ANSI D | FILE NAME: wbv-14c07s201___s-201---.dgn

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NEW ORLEANS, LOUISIANA

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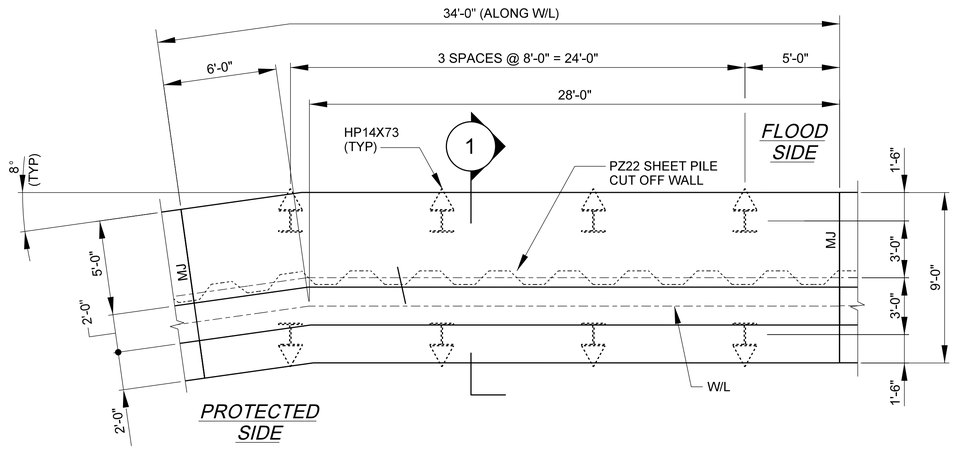
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

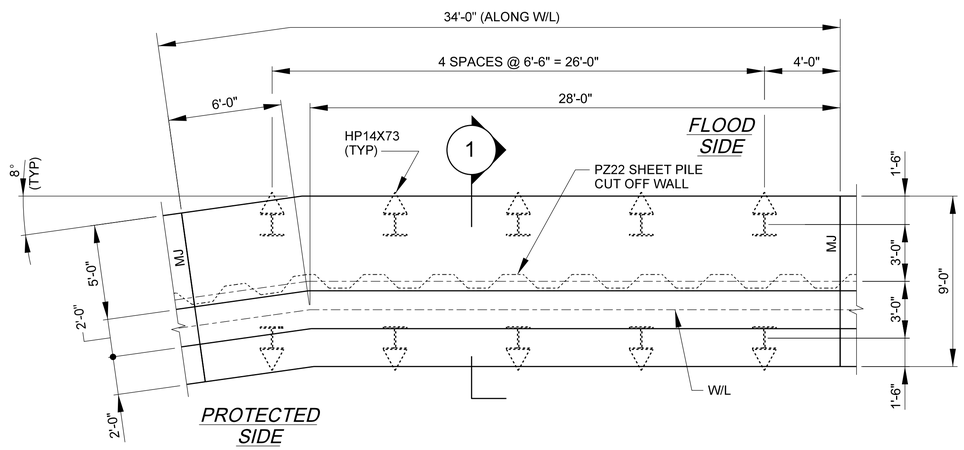
MONOLITH PROFILE
SHEET 2

SHEET IDENTIFICATION
S-201



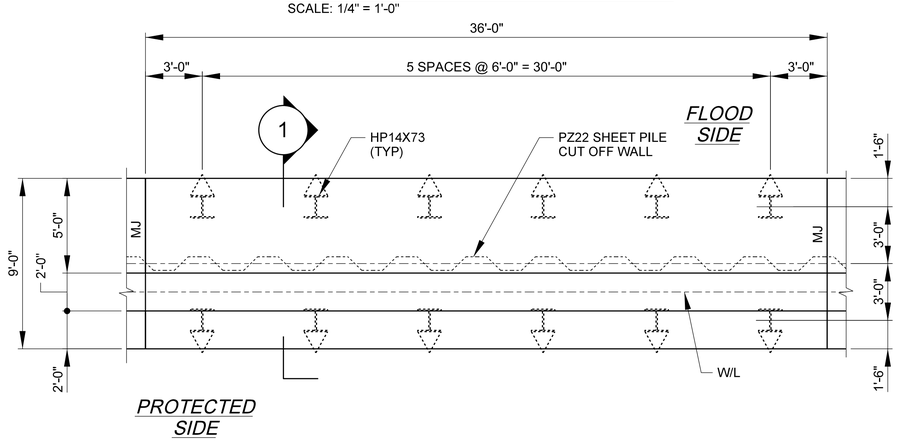
MONOLITH TYPE "A" PILE PLAN

SCALE: 1/4" = 1'-0"



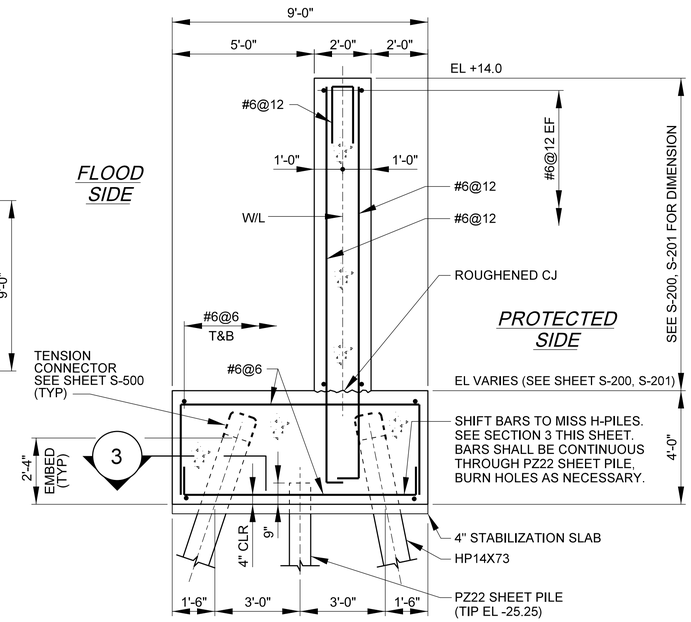
MONOLITH TYPE "B" PILE PLAN

SCALE: 1/4" = 1'-0"



MONOLITH TYPE "C" PILE PLAN

SCALE: 1/4" = 1'-0"

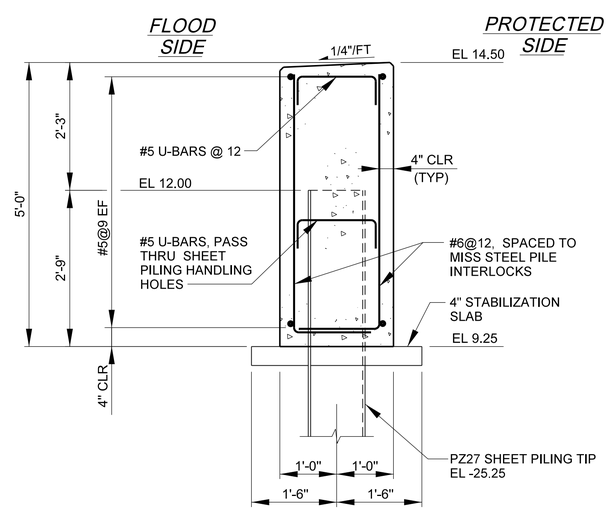


MONOLITH TYPE "A", "B" AND "C"

1 / 1 S-100 SECTION

SCALE: 3/8" = 1'-0"

NOTE: SEE TABLE ON SHEET FOR PILE BATTER.



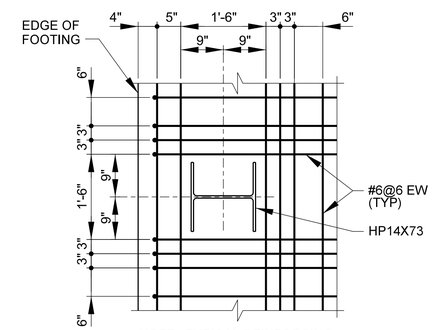
TYPICAL I-WALL SECTION

2 / S-100 SECTION

SCALE: 3/4"=1'-0"

LEGEND

DIRECTION OF BATTER	
	NEW BATTERED H-PILE
	SHEET PILE WALL
MJ	DENOTES MONOLITH EXPANSION JOINT



NOTE: TYPICAL REINFORCING AT FLOOD SIDE. MIRROR FOR PROTECTED SIDE.

3 SECTION

SCALE: 3/4" = 1'-0"

HP14X73 PILE BATTER

MONOLITH	HORIZONTAL : VERTICAL	
	FLOOD SIDE	PROTECTED SIDE
M-A, M-B	1 : 3	1 : 5
M-C, M-F, M-G	1 : 2.5	1 : 3.5
M-D, M-E, M-H	1 : 3	1 : 3

HP14X73 PILE LENGTH

MONOLITH	PILE LENGTH (FT)	
	FLOOD SIDE	PROTECTED SIDE
M-A	84	119
M-B	82	117
M-C, M-F	98	131
M-D, M-E	86	116
M-G	100	133
M-H	91	120

0 1' 2' 3' SCALE: 3/4" = 1'-0"

0 1' 2' 3' 5' SCALE: 3/8" = 1'-0"

0 2' 4' 8' SCALE: 1/4" = 1'-0"

US Army Corps of Engineers New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CSP | DWN BY: NV | CKD BY: LWS | SUBMITTED BY: STANLEY CONSULTANTS, INC | PLOT SCALE: AS NOTED | PLOT DATE: 01-22-2010 | SIZE: ANSI D | FILE NAME: wbv-14c07s401___s-401---.dgn | DATE: 01-22-2010 | SOLICITATION NO.: | CONTRACT NO.: | FILE NUMBER: W912P8-09-B-0262

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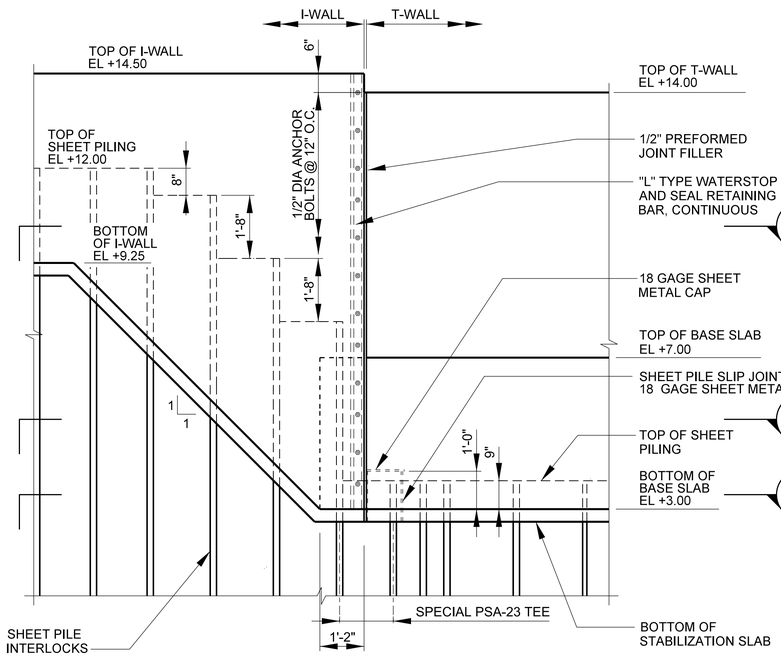
HURRICANE PROTECTION PROJECT WBV-14C.2 FLOODWALLS WESTWINSTER PUMPING STATION JEFFERSON PARISH, LOUISIANA

MONOLITH TYPE "B" & "C" PILE PLAN

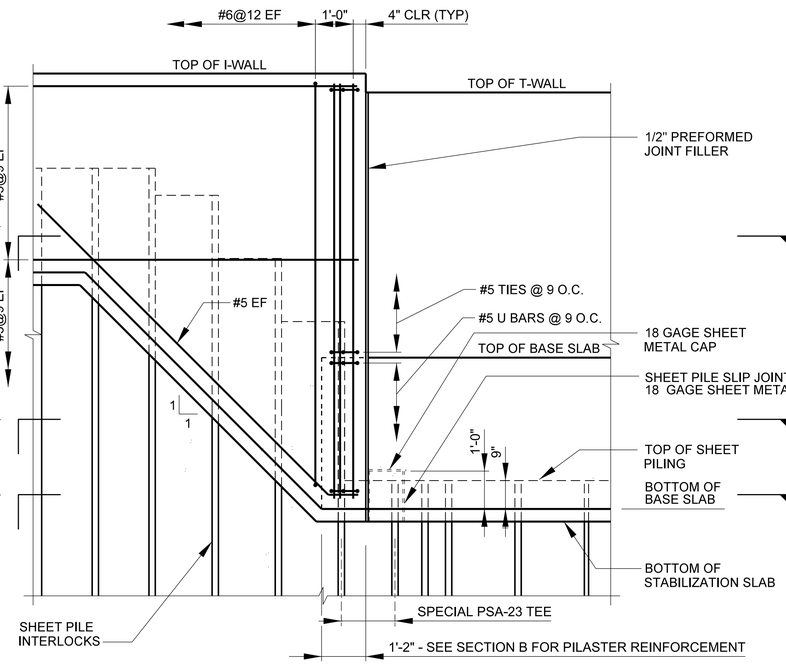
SHEET IDENTIFICATION S-401

3777
22-JAN-2010 15:48 T:\wbv-14c\Engineering and Design\(07) S- Structural\wbv-14c07s401___s-401---.dgn



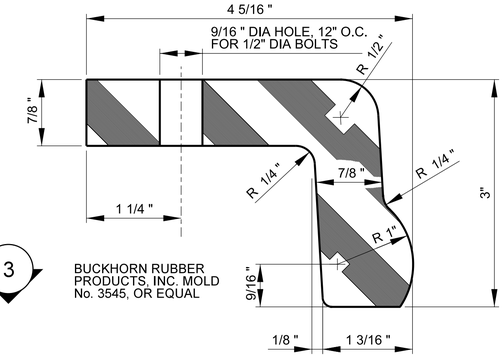
FLOOD SIDE ELEVATION I-WALL TO T-WALL

SCALE: 1/2"=1'-0"



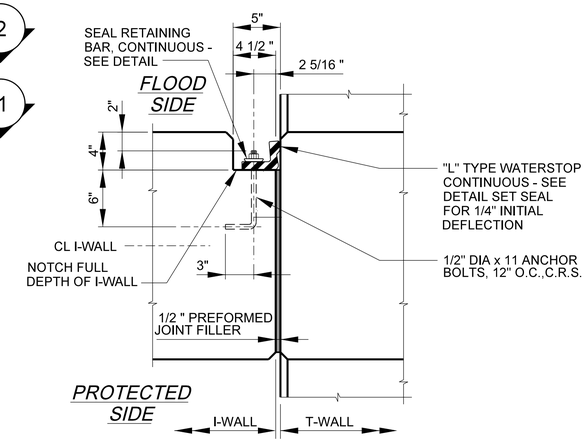
FLOOD SIDE ELEVATION REINFORCEMENT I-WALL TO T-WALL

SCALE: 1/2"=1'-0"



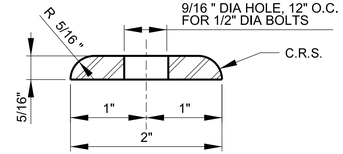
"L" TYPE WATERSTOP

SCALE: FULL



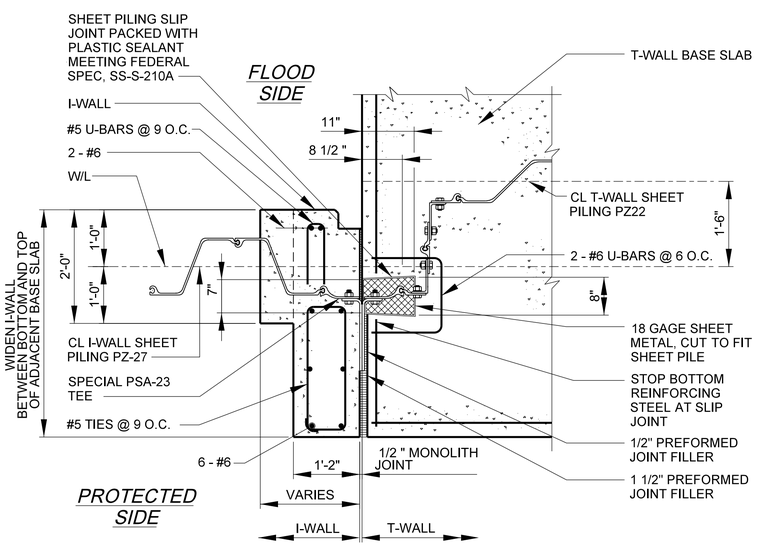
PLAN I-WALL TO T-WALL

SCALE: 1 1/2"=1'-0"



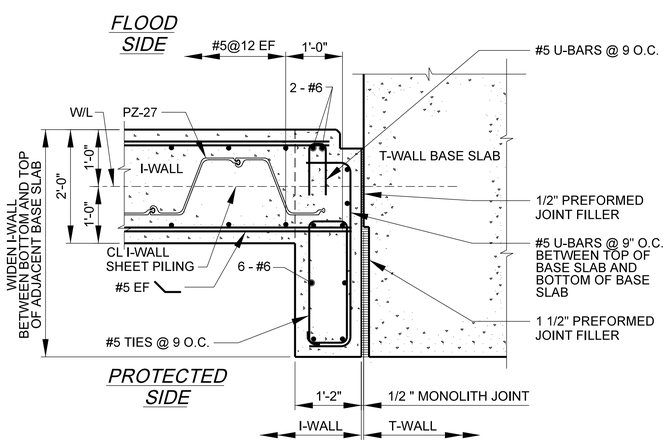
SEAL RETAINING BAR

SCALE: FULL



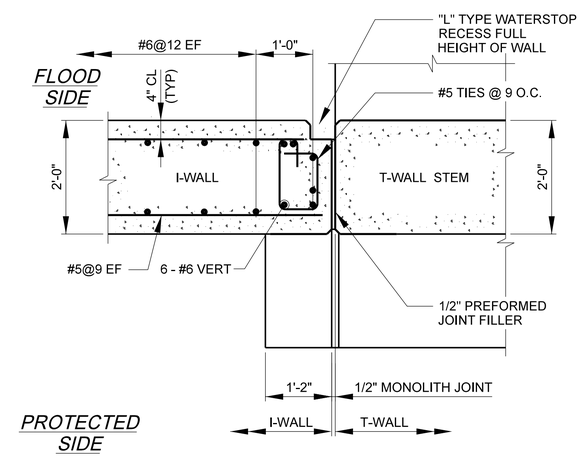
1 SECTION

SCALE: 3/4" = 1'-0"



2 SECTION

SCALE: 3/4" = 1'-0"



3 SECTION

SCALE: 3/4" = 1'-0"

0 1' 2' 3' SCALE: 3/4" = 1'-0"

0 1' 2' 4' SCALE:1/2" = 1'-0"

0 6" 1' 2' SCALE:1-1/2" = 1'-0"

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CEP
DWN BY: LJO
CKD BY: JCK
SUBMITTED BY: STANLEY CONSULTANTS, INC
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
FILE NUMBER: H&H-46262
SIZE: ANSI D
FILE NAME: wbv-14c07s402___s-402---.dgn

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NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

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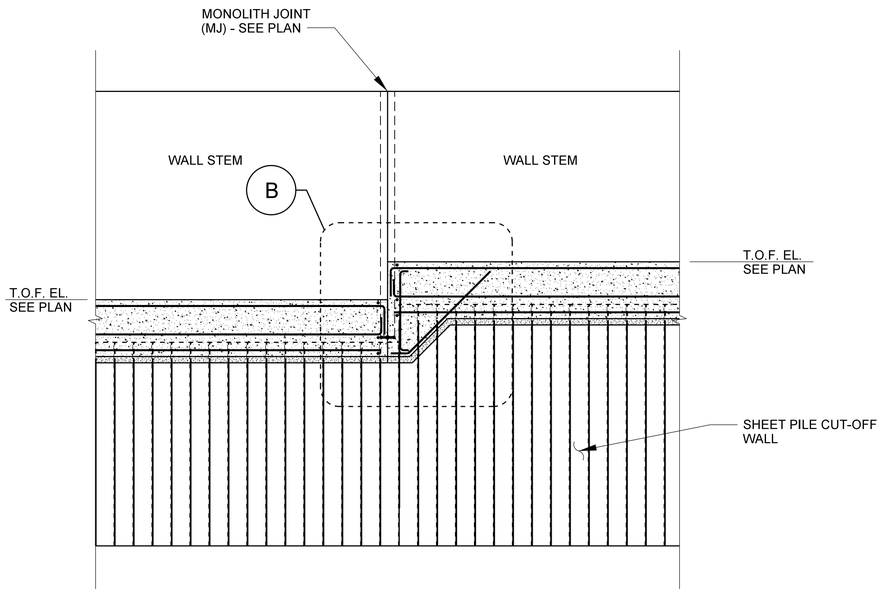
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

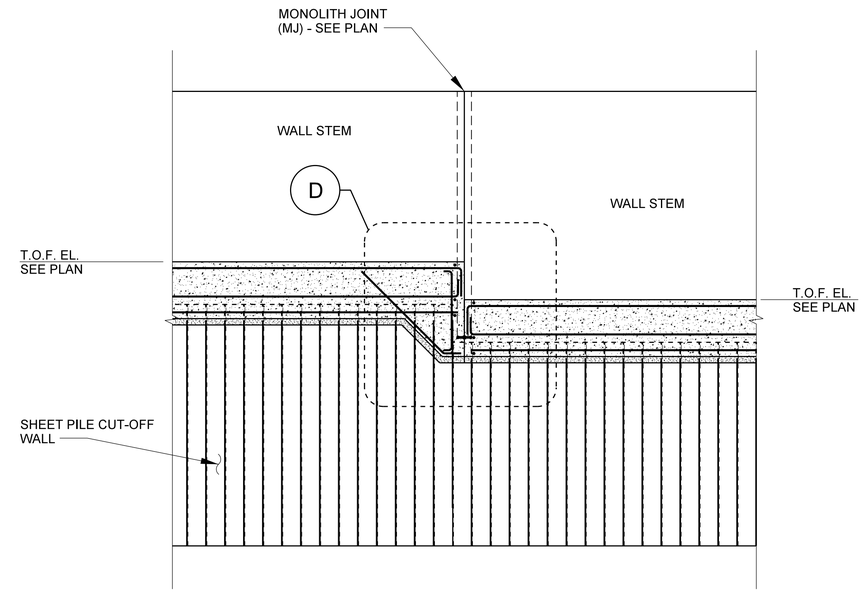
I-WALL TO T-WALL
TRANSITION DETAILS

SHEET IDENTIFICATION
S-402



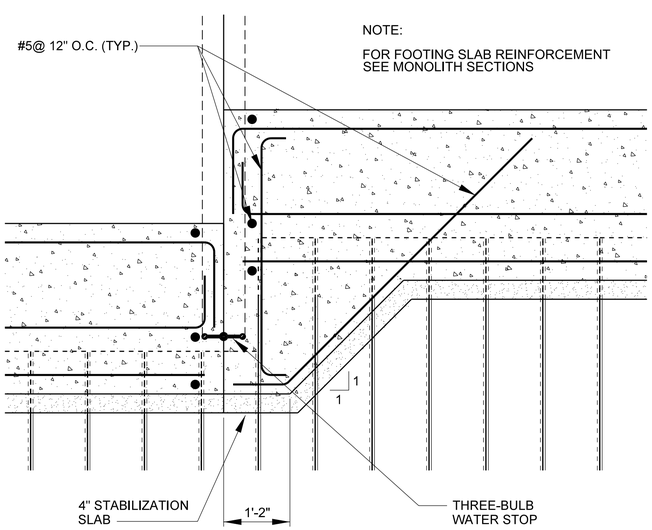
TYPICAL FOOTING STEP

A / S-201 DETAIL
SCALE: 1/4" = 1'-0"

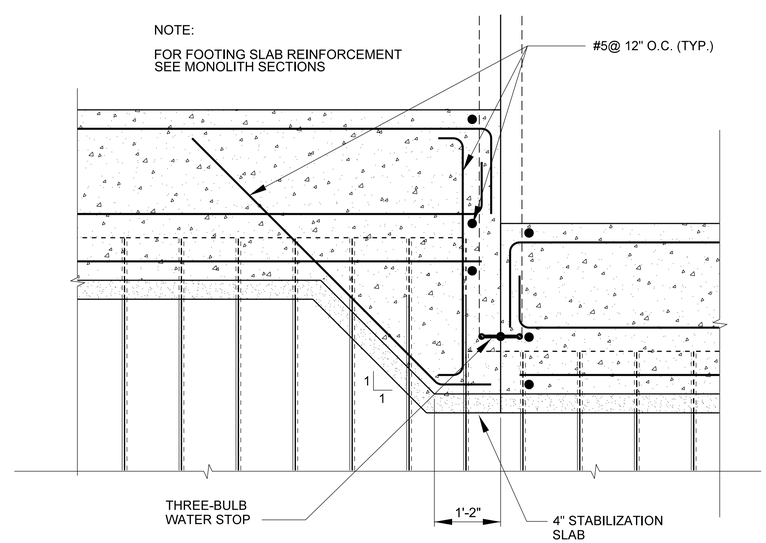


TYPICAL FOOTING STEP

C / S-200 DETAIL
SCALE: 1/4" = 1'-0"



B DETAIL
SCALE: 3/4" = 1'-0"



D DETAIL
SCALE: 3/4" = 1'-0"

0 2' 4' 8'
SCALE: 1/4" = 1'-0"

0 1' 2' 3'
SCALE: 3/4" = 1'-0"

US Army Corps of Engineers®
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CEP
DWN BY: LJO
CKD BY: JCK
SUBMITTED BY: STANLEY CONSULTANTS, INC
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NUMBER: H&R-46282
FILE NAME: wbv-14c07s403___s-403---.dgn

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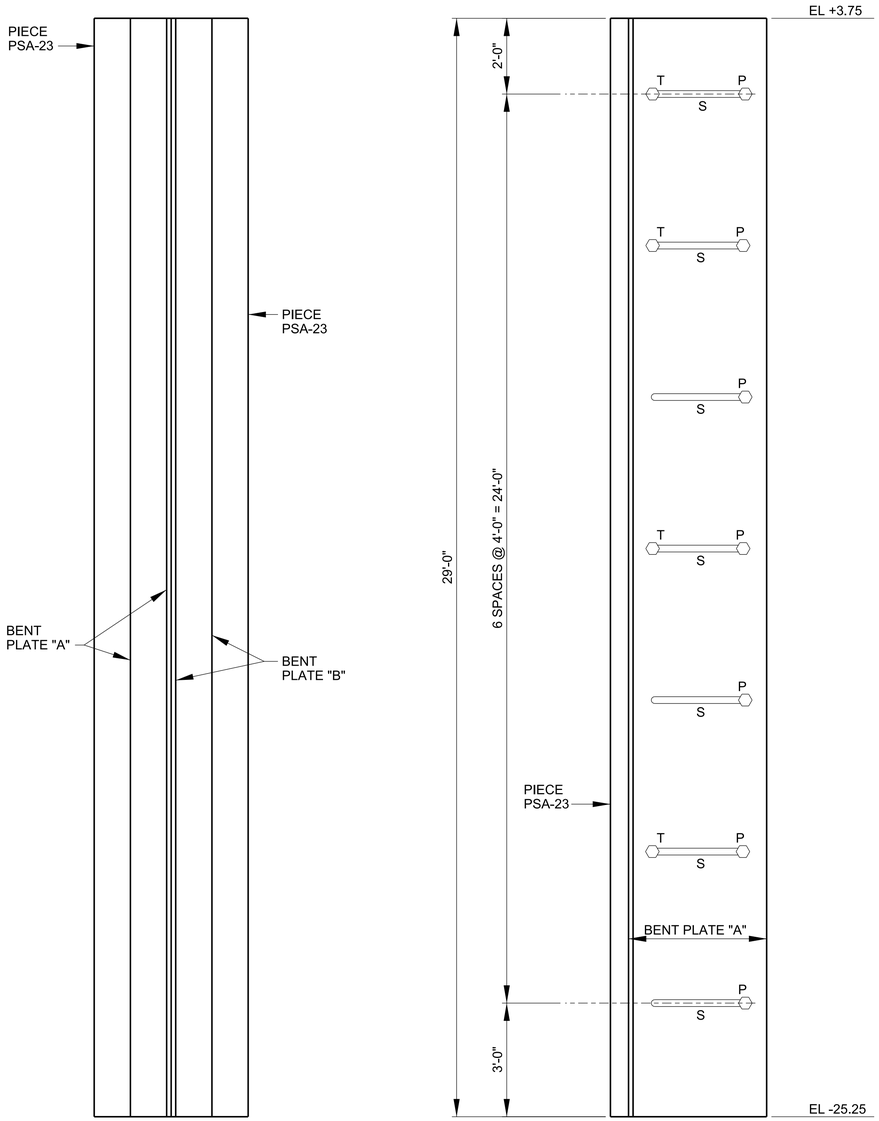
HURRICANE PROTECTION PROJECT
WBV-14c.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

STEPPED FOOTING
TYPICAL DETAILS

SHEET IDENTIFICATION
S-403

3777
22-JAN-2010 15:48 T:\wbv-14c\Engineering and Design\(07) S- Structural\wbv-14c07s403___s-403---.dgn



PROTECTED SIDE

I-WALL SIDE ELEVATION

STA 18+94.77 W/L - SHOWN
STA 11+26.86 - OPPOSITE HAND

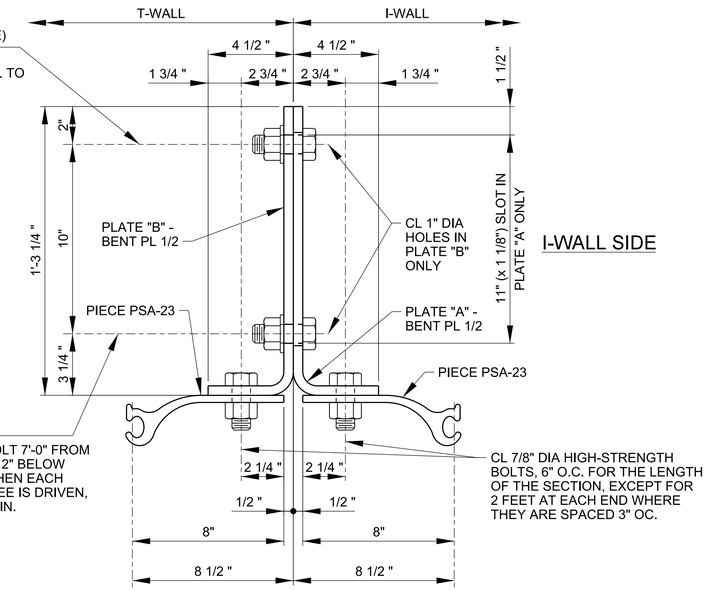
ELEVATION OF SPECIAL PSA-23 TEE SHOWING BENT PLATES BOLT SPACING

SCALE: 1/2" = 1'-0"

PROTECTED SIDE

PERMANENT BOLTS (TIGHTEN TO ALLOW FOR PLATE "A" SLIPPAGE)

CL 7/8" DIA HIGH-STRENGTH BOLTS W/FLAT WASHERS, SPACE FIRST BOLT 2'-0" FROM TIP ELEVATION OF SPECIAL PSA-23 TEE, REST SPACED 4'-0" O.C. TO WITHIN 12" BELOW BOTTOM OF T-WALL BASE SLAB



I-WALL SIDE

TEMPORARY DRIVING BOLTS

CL 7/8" DIA HIGH-STRENGTH BOLTS W/ FLAT WASHERS, SPACE FIRST BOLT 7'-0" FROM TIP ELEVATION OF SPECIAL PSA-23 TEE, REST SPACED 8'-0" TO WITHIN 12" BELOW BOTTOM OF T-WALL BASE SLAB. THESE BOLTS ARE TO BE REMOVED WHEN EACH BOLT IS APPROXIMATELY 6" ABOVE GROUND LINE AS SPECIAL PSA-23 TEE IS DRIVEN, SO THAT UPON COMPLETION OF DRIVING NO TEMPORARY BOLTS REMAIN.

CL 7/8" DIA HIGH-STRENGTH BOLTS, 6" O.C. FOR THE LENGTH OF THE SECTION, EXCEPT FOR 2 FEET AT EACH END WHERE THEY ARE SPACED 3" OC.

FLOOD SIDE

DETAIL 1 - SPECIAL PSA-23 TEE

SCALE: 3" = 1'-0"

NOTE:

7/8" DIA HIGH-STRENTGH BOLTS SHALL BE HEAVY HEX BOLTS, ASTM A325M, TYPE 3 W/ HEAVY HEX NUTS, ASTM A563, GRADE C3, PLAIN, WEATHERING STEEL AND HARDENED STEEL WASHERS (WHERE REQUIRED), ASTM F436, PLAIN, TYPE 3 (WEATHERING STEEL).

LEGEND

P = PERMANENT BOLT
T = TEMPORARY BOLT
S = SLOTTED HOLE
(PLATE "A" ONLY)

NOTE:

DETAILS SHOWN ON THIS SHEET ARE FOR SPECIAL PSA-23 TEE AT STATION 18+94.77. SPECIAL PSA-23 TEE AT STATION 11+26.86 IS SIMILAR BUT OPPOSITE HAND.

0 1' 2' 4' SCALE:1/2" = 1'-0"

0 1' 2' SCALE:1" = 1'-0"

0 3" 6" 9" 12" SCALE: 3" = 1'-0"

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CSP
DWN BY: LJO
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC
PLOT SCALE: AS NOTED
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NAME: wbv-14c07s404___s-404---.dgn
DATE: 01-22-2010
SOLICITATION NO.:
CONTRACT NO.:
FILE NUMBER: W4F4G02

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NEW ORLEANS, LOUISIANA

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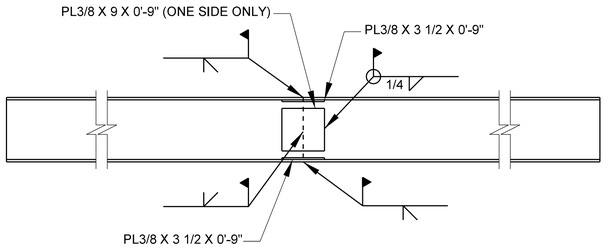
HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

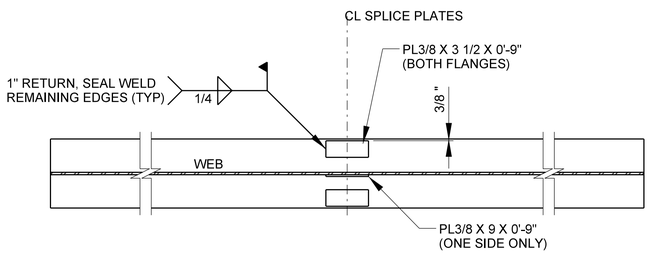
T-WALL TO SHEET PILE WALL TRANSITION DETAILS

SHEET IDENTIFICATION
S-404

3777
22-JAN-2010 15:48 T:\wbv-14c\Engineering and Design\(07) S- Structural\wbv-14c07s404___s-404---.dgn



WEB ELEVATION



SECTION THRU WEB

NOTE:

1. THE FOUR FLANGE SPLICE PLATES SHALL BE IN PLACE BEFORE THE GROOVE WELDS ARE MADE.
2. GROOVE WELDS SHALL BE GROUND SMOOTH FOR FLUSH FIT OF OVERLAPPING SPLICE PLATES AS REQUIRED.

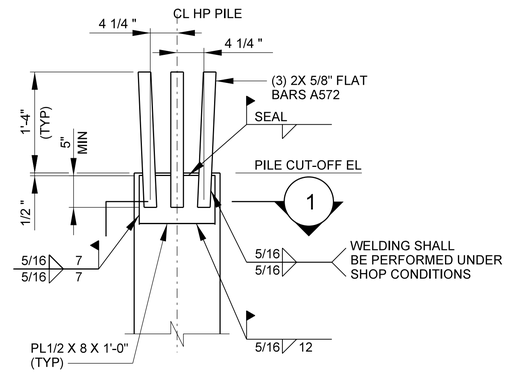
HP14 X 73 SPLICE

SCALE: NONE

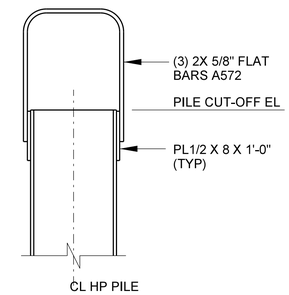
COAL TAR EPOXY PAINTING:

1. STEEL SHEET PILES AND H-PILES SHALL BE COATED WITH COAL TAR EPOXY PAINT SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS AND THE FOLLOWING SCHEDULE.

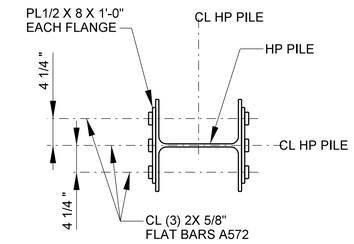
LOCATION	TOP ELEVATION	PAINT LENGTH (FROM TOP)
SOUTH I-WALL	+12.25	20'-0"
M-A	+3.75	15'-0"
M-B	+1.25	15'-0"
M-C TO M-F	-0.25	10'-0"
M-G	+1.25	15'-0"
M-H	+3.75	15'-0"
NORTH I-WALL	+12.25	20'-0"



FLANGE ELEVATION



WEB ELEVATION

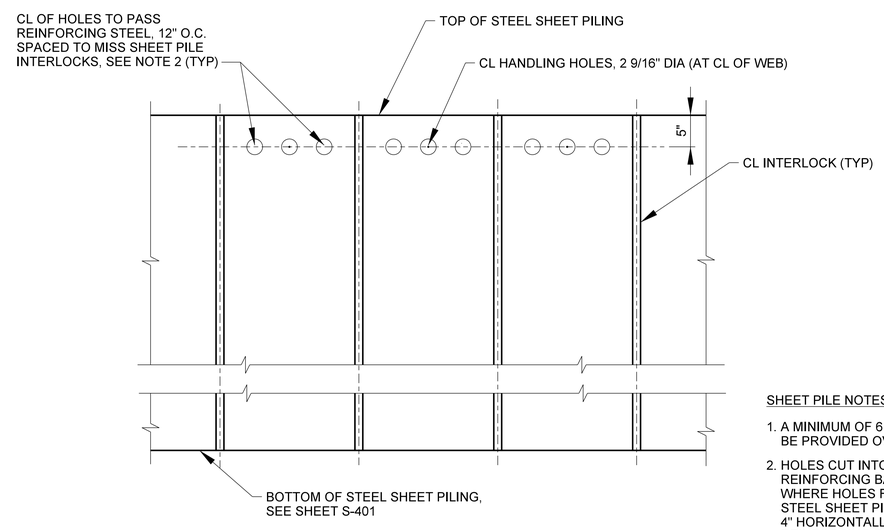


1 SECTION

SCALE: 1" = 1"-0"

TENSION PILE CONNECTION DETAIL

SCALE: 1" = 1"-0"



ELEVATION

DETAILS OF HOLES IN SHEET PILING

SCALE: 1" = 1'-0'

SHEET PILE NOTES:

1. A MINIMUM OF 6 INCHES OF CONCRETE COVER SHALL BE PROVIDED OVER SHEET PILING AT ALL POINTS.
2. HOLES CUT INTO STEEL PILING FOR PASSING REINFORCING BARS SHALL NOT EXCEED 2" DIA. WHERE HOLES FALL WITHIN THE WEB OF THE STEEL SHEET PILE, THE HOLE SHALL BE SLOTTED 4" HORIZONTALLY TO ACCOMMODATE PASSING THE REINFORCING BARS. REINFORCING BARS SHALL BE MOVED TO MISS SHEET PILE INTERLOCKS.
3. ANY SUBSTITUTIONS SHALL BE SUBMITTED TO THE CONTRACTING OFFICER REPRESENTATIVE FOR APPROVAL.
4. STEEL SHEET PILE SURFACE PREPARATION AND PAINTING SHALL BE IN ACCORDANCE WITH SECTION 09 97 13.26 OF THE SPECIFICATIONS.

0 1' 2'

SCALE:1" = 1'-0"

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CSP | DATE: 01-22-2010 | SOLICITATION NO.: | CONTRACT NO.: | FILE NUMBER: H-04-0202

DWN BY: NV | CKD BY: LWS | SUBMITTED BY: STANLEY CONSULTANTS, INC | PLOT DATE: 01-22-2010 | PLOT SCALE | SIZE: ANSI D | FILE NAME: wbv-14c07s500___s-500---.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

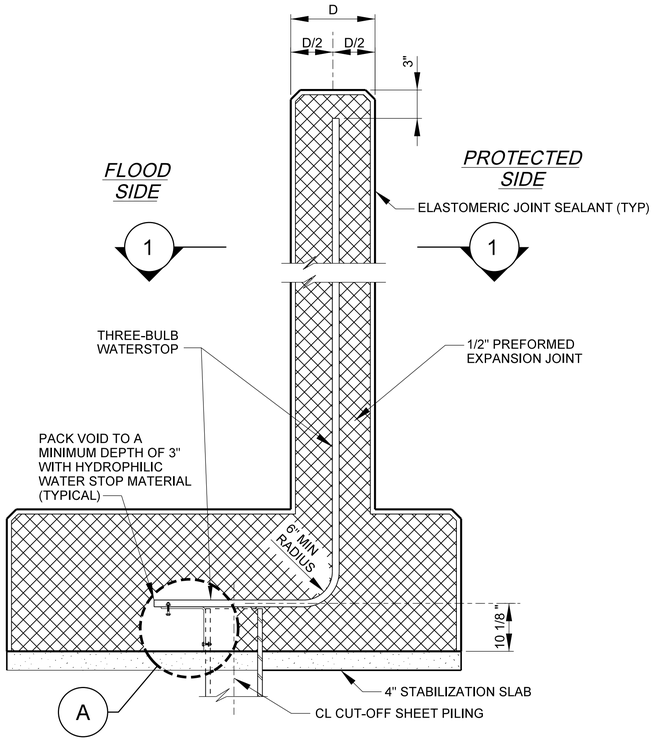
Stanley Consultants INC.
225 Baronne Avenue, Muscatine, Iowa 52761-5764
www.stanleyconsultants.com

HURRICANE PROTECTION PROJECT
WBV-14c.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

STEEL PILE DETAILS

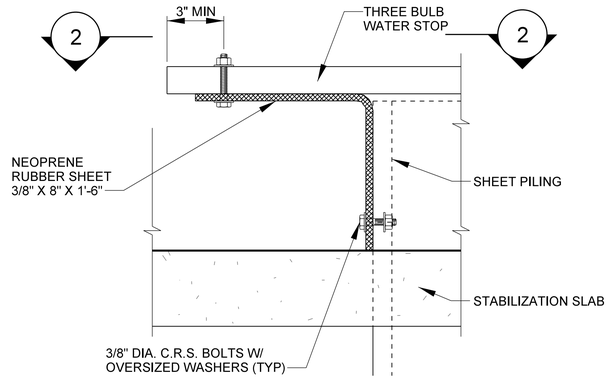
SHEET IDENTIFICATION
S-500

3777
22-JAN-2010 15:49 T:\wbv-14c\Engineering and Design\(07) S- Structural\wbv-14c07s500___s-500---.dgn

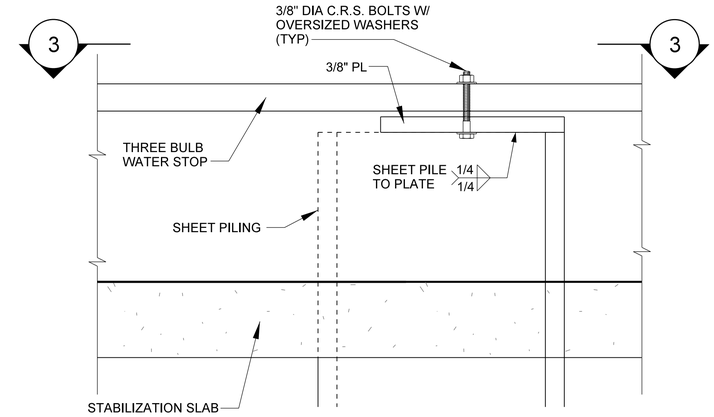


TYPICAL T-WALL JOINT

SCALE: 3/4" = 1'-0"

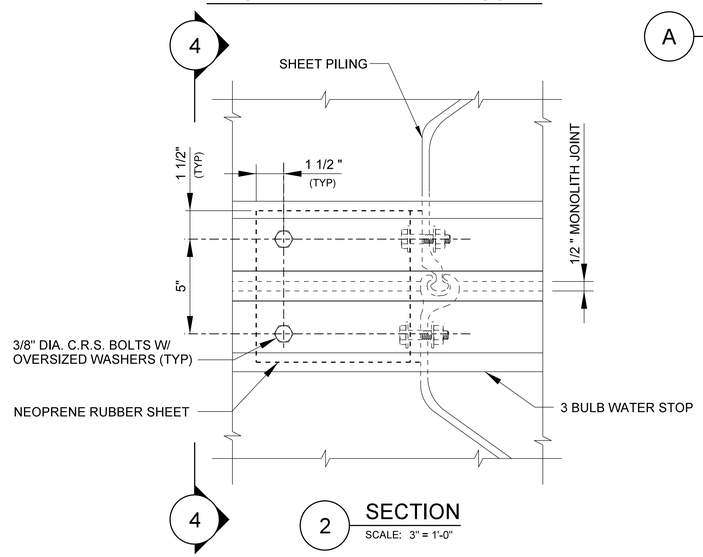


SHEETPILE INTERLOCK
ALIGNED WITH THE WALL JOINT

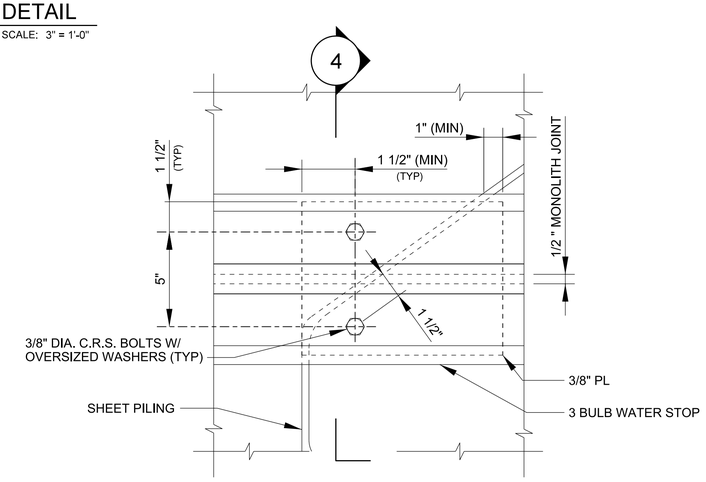


SHEETPILE INTERLOCK
UNALIGNED WITH THE WALL JOINT

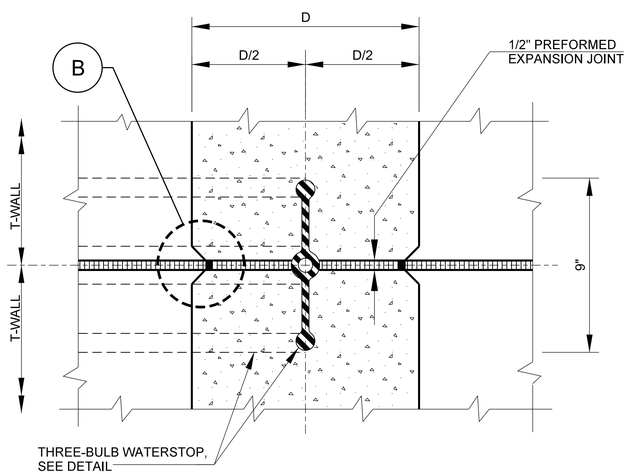
A DETAIL
SCALE: 3" = 1'-0"



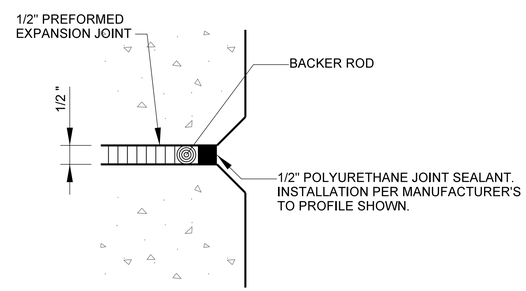
2 SECTION
SCALE: 3" = 1'-0"



3 SECTION
SCALE: 3" = 1'-0"

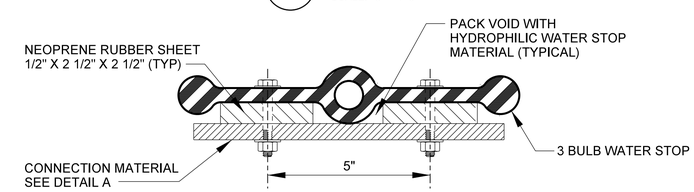


1 SECTION
SCALE: 3" = 1'-0"

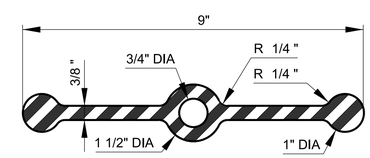


DRY CONDITION

B DETAIL
SCALE: 3" = 1'-0"



4 SECTION
SCALE: NONE



THREE-BULB WATERSTOP
SCALE: 1" = 1' - 0"

0 3" 6" 9" 12" SCALE: 3"=1'
2' 1' 0 2' SCALE: 3/4 " = 1'-0"
0 1" 2" SCALE:1"=1"

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.	MARK	DESCRIPTION	DATE	APPR.

DESIGNED BY: CSP | DATE: 01-22-2010
DWN BY: NV | CKD BY: LWS | SOLICITATION NO.:
SUBMITTED BY: STANLEY CONSULTANTS, INC. | CONTRACT NO.:
PLOT SCALE: AS NOTED | PLOT DATE: 01-22-2010 | FILE NUMBER: H&A-40826
SIZE: ANSI D | FILE NAME: wbv-14c07s501___s-501---.dgn

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

Stanley Consultants INC.
225 Baronne Avenue, Associates Area 52761-3764
Architects Engineers Planners

HURRICANE PROTECTION PROJECT
WBV-14C2 FLOODWALLS
WESTBANK STEEL PUMPING STATION
JEFFERSON PARISH, LOUISIANA

WATERSTOP AND JOINT DETAILS
SHEET 1

SHEET IDENTIFICATION
S-501

3777
22-JAN-2010 15:49 T:\wbv-14c\Engineering and Design\(07) S- Structural\wbv-14c07s501___s-501---.dgn

PILE SCHEDULE (MONOLITHS)									
MONOLITH NUMBER	PILE ROW NUMBER (TO FLOODSIDE)	PILE SIZE	NUMBER OF PILES	NUMBER OF TENSION CONNECTORS	PILE BATTER	PILE TOP ELEVATION	PILE TIP ELEVATION	PAYMENT LENGTH (PER PILE)	TOTAL LENGTH (PER MONOLITH)
M-A	1	HP14x73	4	4	1H:5V	5.33	-111.36	119'	476'
	2	HP14x73	4	4	1H:3V	5.33	-74.36	84'	336'
M-B	1	HP14x73	4	4	1H:5V	2.83	-111.89	117'	468'
	2	HP14x73	4	4	1H:3V	2.83	-74.96	82'	328'
M-C	1	HP14x73	5	5	1H:3.5V	1.33	-124.63	131'	655'
	2	HP14x73	5	5	1H:2.5V	1.33	-89.66	98'	490'
M-D	1	HP14x73	6	6	1H:3V	1.33	-108.71	116'	696'
	2	HP14x73	6	6	1H:3V	1.33	-80.25	86'	516'
M-E	1	HP14x73	6	6	1H:3V	1.33	-108.71	116'	696'
	2	HP14x73	6	6	1H:3V	1.33	-80.25	86'	516'
M-F	1	HP14x73	5	5	1H:3.5V	1.33	-124.63	131'	655'
	2	HP14x73	5	5	1H:2.5V	1.33	-89.66	98'	490'
M-G	1	HP14x73	5	5	1H:3.5V	2.83	-125.05	133'	665'
	2	HP14x73	5	5	1H:2.5V	2.83	-90.01	100'	500'
M-H	1	HP14x73	6	6	1H:3V	5.33	-108.51	120'	720'
	2	HP14x73	6	6	1H:3V	5.33	-81.00	91'	546'
		TOTAL HP 14x73 TENSION CONNECTORS		82				TOTAL HP14x73	8753'

NOTES: 1. CONTRACTOR SHALL VERIFY ALL FINAL PILE LENGTHS REQUIRED PRIOR TO ORDERING PILES.

US Army Corps of Engineers
New Orleans District

MARK	DESCRIPTION	DATE	APPR.

MARK	DESCRIPTION	DATE	APPR.

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
NEW ORLEANS, LOUISIANA

DESIGNED BY: CSP
DWN BY: DAS
CKD BY: LWS
SUBMITTED BY: STANLEY CONSULTANTS, INC
PLOT SCALE: NONE
PLOT DATE: 01-22-2010
SIZE: ANSI D
FILE NAME: wbv-14C07s600___s-600---.dgn
FILE NUMBER: H4H4002
CONTRACT NO.:
SOLICITATION NO.:
DATE: 01-22-2010

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HURRICANE PROTECTION PROJECT
WBV-14C.2 FLOODWALLS
WESTWINSTER PUMPING STATION
JEFFERSON PARISH, LOUISIANA

HP PILE SCHEDULES

SHEET IDENTIFICATION
S-600