WESTBANK AND VICINITY, NEW ORLEANS, LA.
HURRICANE PROTECTION PROJECT

OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

JEFFERSON PARISH, LA.

ENGINEERING ALTERNATIVE REPORT - WBV - 14g.2
HARVEY CANAL WEST BANK LEVEES - PHASE 2

OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PREPARED FOR:

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

PREPARED BY:

ENGINEERING & CONSULTING INC.
BCG
"Excellence in Engineering"
2701 KINGMAN ST.
METAIRIE, LOUISIANA

JULY 2008

WESTBANK AND VICINITY, NEW ORLEANS, LA.
HURRICANE PROTECTION PROJECT
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
JEFFERSON PARISH, LA.

ENGINEERING ALTERNATIVE REPORT - WBV - 14g.2
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TO NEW ESTELLE PUMPING STATION

JULY 2008

WEST BANK AND VICINITY,
NEW ORLEANS, LOUISIANA

HURRICANE PROTECTION PROJECT
OLD ESTELLE P.S. TO NEW ESTELLE P.S.

JEFFERSON PARISH, LOUISIANA

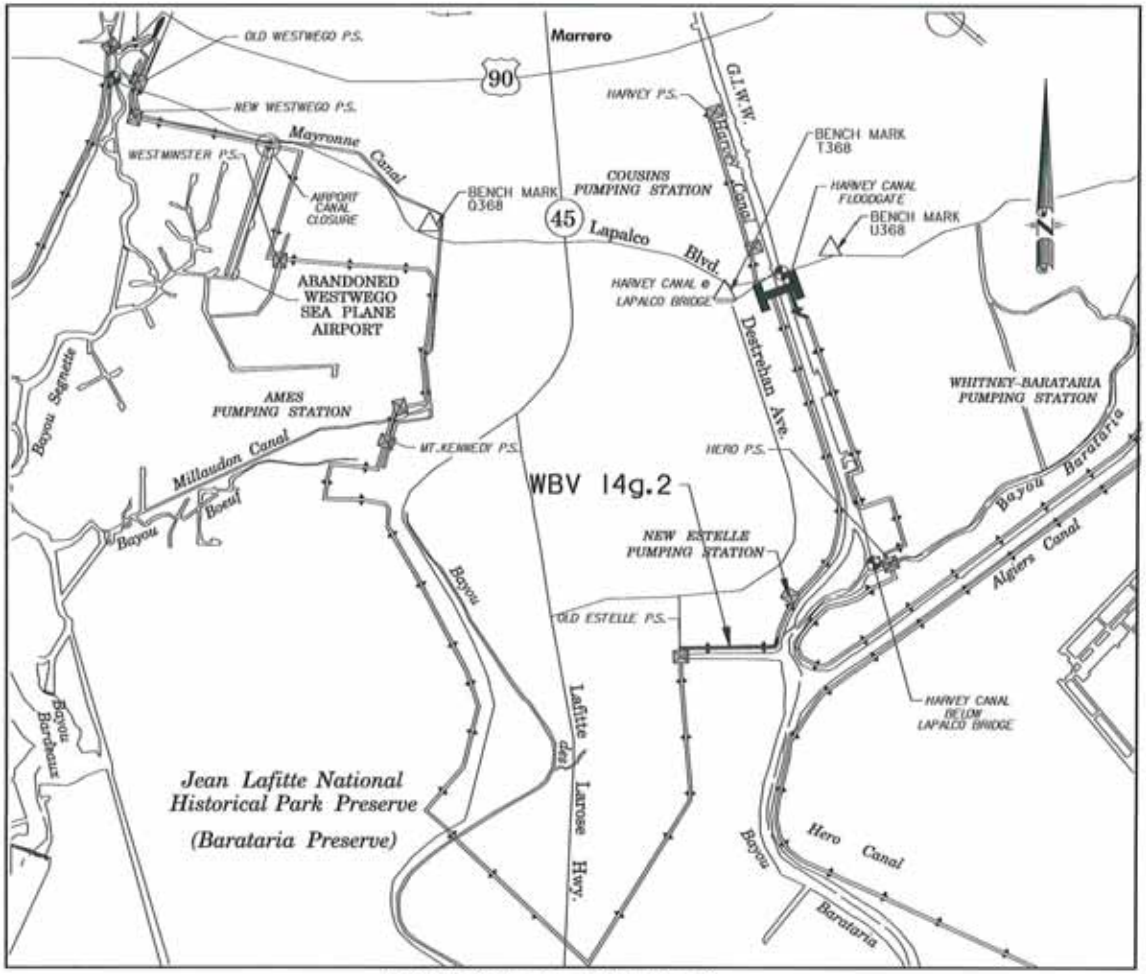
PLANS FOR

ENGINEERING ALTERNATIVE REPORT - WBV - 14g.2
HARVEY CANAL WEST BANK LEVEES - PHASE 2
OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

U. S. ARMY
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

JULY 2008

DRAWINGS IN THIS FOLIO
HAVE BEEN REDUCED ONE
HALF THE ORIGINAL SCALE



LOCATION OF WBV 14g.2

SCALE IN MILES

1 0 1 2

BENCH MARK DESCRIPTION		
NAME	DESCRIPTION	ELEV.
T368	2.4 KM (1.05 MI) NORTHERLY ALONG STATE HIGHWAY 45 (BARATARIA BOULEVARD) FROM THE JUNCTION OF STATE HIGHWAY 3134 IN MARRERO, THENCE 2.5 KM (1.55 MI) EASTERLY ALONG LAPALCO BOULEVARD, IN TOP OF AND 0.6 M (2.0 FT) NORTH OF THE SOUTH END OF THE SOUTH CONCRETE CURB OF THE BOULEVARD BRIDGE SPANNING HARVEY CANAL, 5.0 M (16.4 FT) SOUTH OF THE CENTERLINE OF THE EASTBOUND LANES OF THE BOULEVARD, 1.2 M (3.9 FT) EAST OF THE WEST END OF THE CURB, AND 0.3 M (1.0 FT) ABOVE THE LEVEL OF THE BOULEVARD.	5.31 (N.A.V.D.88 2004.65)
U368	2.4 KM (1.05 MI) NORTHERLY ALONG STATE HIGHTWAY 45 (BARATARIA BOULEVARD) FROM THE JUNCTION OF STATE HIGHWAY 3134 IN MARRERO, THENCE 4 KM (2.10 MI) EASTERLY ALONG LAPALCO BOULEVARD, IN TOP OF AND 0.7 M (2.3 FT) NORTH OF THE SOUTH END OF THE EAST CONCRETE ABUTMENT OF THE BOULEVARD BRIDGE SPANNING MURPHY CANAL, 8.7 M (28.5 FT) SOUTH OF THE CENTERLINE OF THE EASTBOUND LANES OF THE BOULEVARD, 0.9 M (3.0 FT) WEST OF THE EAST EDGE OF THE ABUTMENT, AND 0.3 M (1.0 FT) ABOVE THE LEVEL OF THE BOULEVARD.	-0.24 (N.A.V.D.88 2004.65)
Q368	1.7 KM (1.05 MI) WEST ALONG LAPALCO BOULEVARD FROM THE JUNCTION OF STATE HIGHWAY 45 (BARATARIA BOULEVARD) IN MARRERO, AT THE ENTRANCE TO THE MARRERO SEWER TREATMENT PLANT WHICH IS ON THE WEST SIDE OF OUTFALL CANAL, 21.48 METERS (70.5 FT.) NORTH OF THE CENTERLINE OF LAPALCO BOULEVARD 6.94 METERS (22.8 FT.) EAST OF THE CENTER OF THE DOUBLE SECURITY ENTRANCE GATE TO THE SEWER PLANT, 14.93 METERS (49.0 FT.) WEST AND 0.45 METERS (1.5 FT.) SOUTH OF THE SECURITY FENCE. NOTE, DRIVING RATE METAIRIE ROAD ANCHORED. THE MARK IS 0.42 METERS (1.4 FT.) SOUTH FROM A WITNESS POST. THE MARK IS 0.46 METERS (1.5 FT.) M BELOW LAPALCO BOULEVARD.	2.329 (N.A.V.D.88 2004.65)

GENERAL NOTES:

1. AZIMUTHS SHOWN ARE MEASURED CLOCKWISE FROM THE NORTH
2. ELEVATIONS ARE IN FEET AND REFER TO NORTH AMERICAN VERTICAL DATUM (NAVD 88 2004.65)
3. STATIONING IS REFERENCED TO COE B/L OR ALTERNATIVE ALIGNMENT B/L
4. CONSTRUCTION ACCESS TO SITE IS VIA OLD AND NEW ESTELLE PUMP STATIONS
5. REQUIRED RIGHT OF WAY IS PERMANENT FLOOD PROTECTION SERVITUDE. ACCESS EASEMENTS ARE TEMPORARY CONSTRUCTION SERVITUDE.

ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT STUDY REACH WBV 14g.2

SHEET IDENTIFICATION NUMBER 2

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	OLD ESTELLE PUMP STATION CAPACITY TO NEW ESTELLE PUMP STATION
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18	PLAN-ALTERNATIVE 1B.1-B/L STATION 829+00.00 - STATION 850+23.15
19	PLAN-ALTERNATIVE 1B.1-B/L STATION 850+23.15 - STATION 866+32.74
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22	PLAN-ALTERNATIVE 1B.2-B/L STATION 829+00.00 - STATION 850+23.15
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26	PLAN-ALTERNATIVE 1B.3-B/L STATION 829+00.00 - STATION 850+23.15
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50	PLAN-ALTERNATIVE 5.1-B/L STATION 829+00.00 - STATION 850+23.15
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US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

SYMBOL	DESCRIPTION	DATE	SYMBOL	DESCRIPTION	DATE

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

DESIGNED BY: ETS DATE: 08
DRAWN BY: HB CHECKED BY: ETS REVIEWED BY:
SUBMITTED BY: CONTRACT NO.
FILE NAME: FILE NUMBER:
NO. 2008 PLOT SCALE: - PLOT DATE: TB

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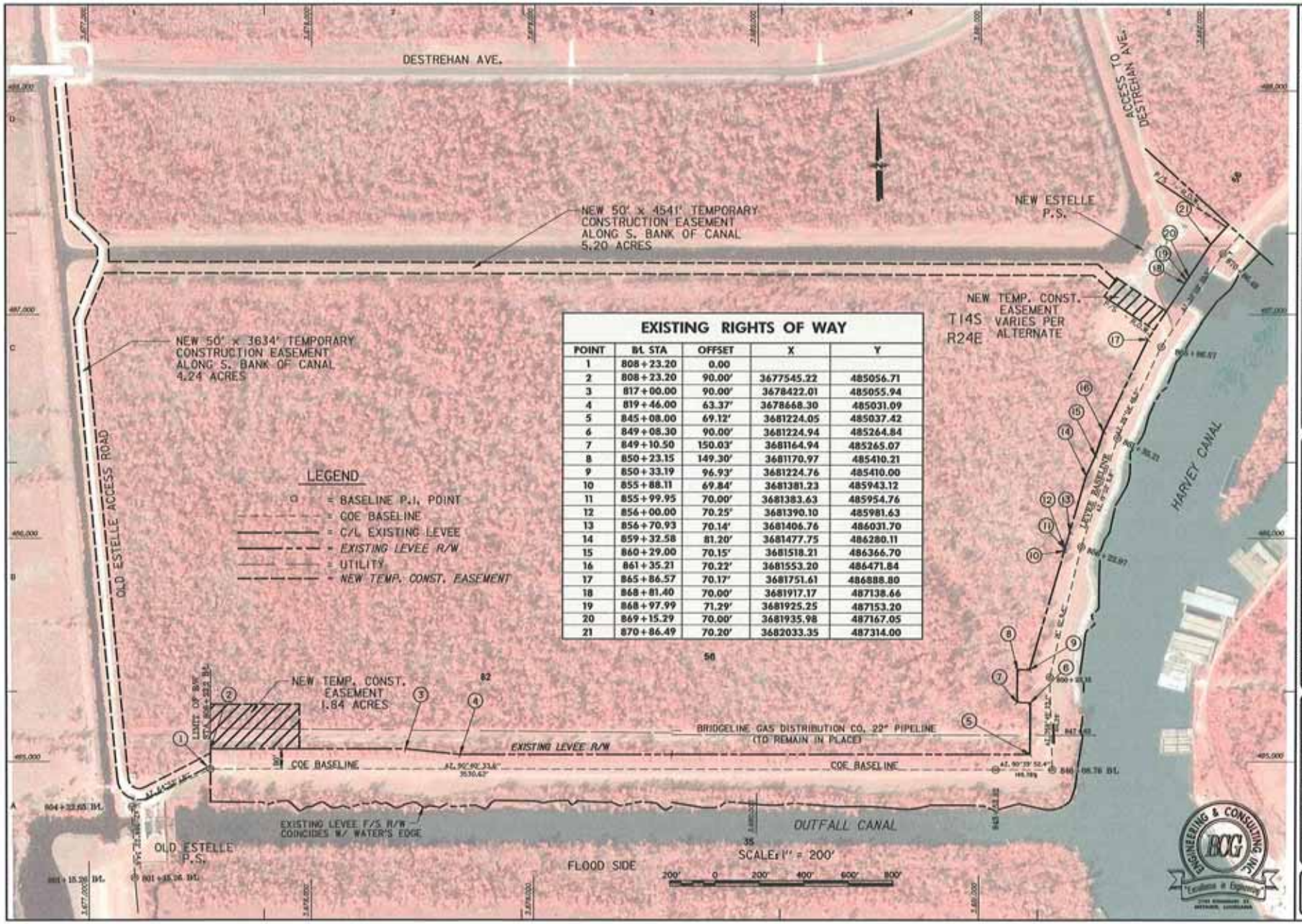
METAIRIE, LOUISIANA

ENGINEERING AND DESIGN
ENGINEERING ALTERNATIVE REPORT - HBC/HAC
HARVEY CANAL/BELLE CHASSE TUNNEL
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
JEFFERSON PARISH, LOUISIANA

INDEX TO SHEETS

SHEET IDENTIFICATION NUMBER
3



EXISTING RIGHTS OF WAY

POINT	BL STA	OFFSET	X	Y
1	808+23.20	0.00		
2	808+23.20	90.00'	3677545.22	485056.71
3	817+00.00	90.00'	3678422.01	485055.94
4	819+46.00	63.37'	3678668.30	485031.09
5	845+08.00	69.12'	3681224.05	485037.42
6	849+08.30	90.00'	3681224.94	485264.84
7	849+10.50	150.03'	3681164.94	485265.07
8	850+23.15	149.30'	3681170.97	485410.21
9	850+33.19	96.93'	3681224.76	485410.00
10	855+88.11	69.84'	3681381.23	485943.12
11	855+99.95	70.00'	3681383.63	485954.76
12	856+00.00	70.25'	3681390.10	485981.63
13	856+70.93	70.14'	3681406.76	486031.70
14	859+32.58	81.20'	3681477.75	486280.11
15	860+29.00	70.15'	3681518.21	486366.70
16	861+35.21	70.22'	3681553.20	486471.84
17	865+86.57	70.17'	3681751.61	486888.80
18	868+81.40	70.00'	3681917.17	487138.66
19	868+97.99	71.29'	3681925.25	487153.20
20	869+15.29	70.00'	3681935.98	487167.05
21	870+86.49	70.20'	3682033.35	487314.00

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVES REPORT - HBV-1942 HARVEY CANAL - ALTERNATIVE ALIGNMENT TO NEW ESTELLE PUMPING STATION

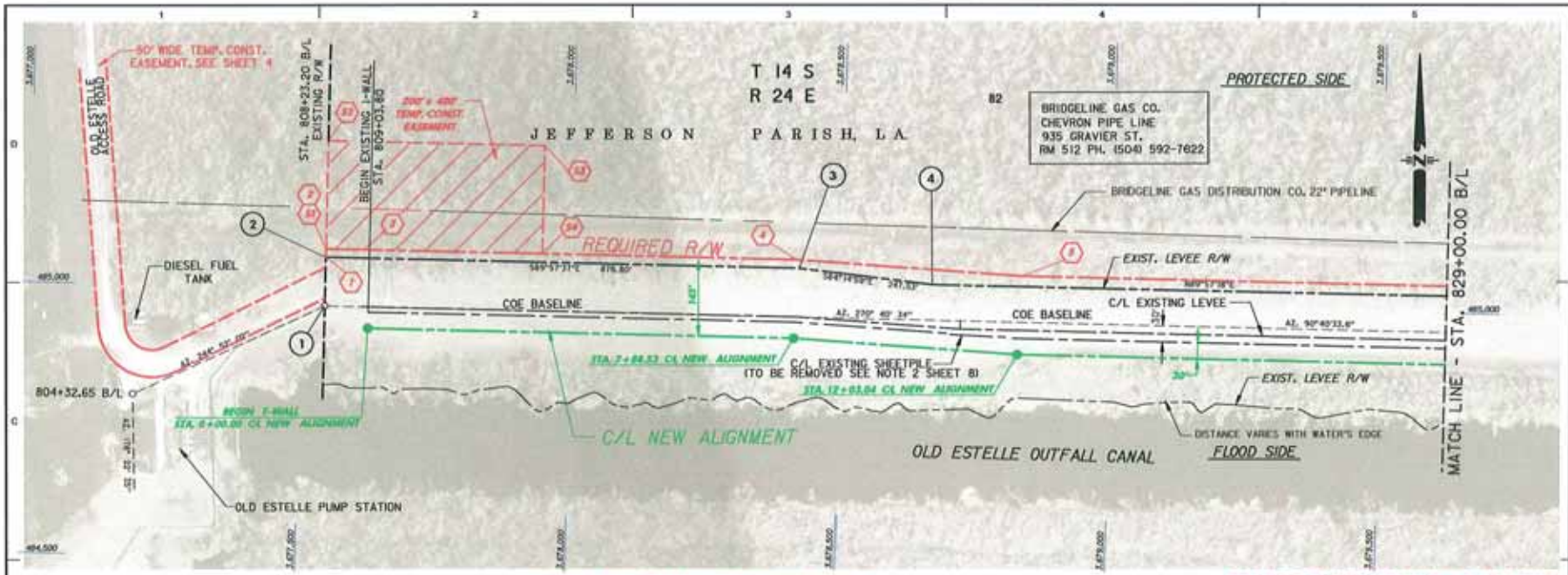
EXISTING & ACCESS RIGHTS OF WAY

SHEET IDENTIFICATION NUMBER
4

ALTERNATIVE 1A
EXISTING ALIGNMENT
FLOODWALL AND LEVEE (2057 ELEVATION)

ALTERNATIVE 1A. 1

EXISTING ALIGNMENT–FLOODWALL AND LEVEE (UN–REINFORCED)



FLOODWALL & LEVEE (UN-REINFORCED)

PLAN - ALTERNATIVE 1A.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY = 0.86 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

RIGHTS OF WAY

EXISTING POINT	EXISTING LOCATION B/L STATION	EXISTING LOCATION OFF-SET	EXISTING LOCATION X	EXISTING LOCATION Y	REQUIRED TEXT	REQUIRED LOCATION X	REQUIRED LOCATION Y
1	808+23.20	0.00'			1	3677545.22	485056.71
2	808+23.20	90.00'	3677545.22	485056.71	2	3677545.22	485072.02
3	817+00.00	90.00'	3678422.01	485055.94	3	3677614.62	485071.97
4	819+46.00	65.37'	3678668.30	485031.09	4	3678435.53	485071.38
					5	3678835.91	485050.58

LAYOUT C/L NEW ALIGNMENT C/L STATION	LOCATION X	LOCATION Y
0+00.0	3677625.70	484927.07
7+88.53	3678414.33	484926.77
12+03.04	3678828.22	484905.59
TEMP. CONST. EASEMENT		
51	3677545.22	485072.02
52	3677545.38	485272.02
53	3677945.38	485271.73
54	3677945.22	485071.73

ALTERNATIVE A.1
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.80 TO 829+00.00	0.86 ACRES
829+00.00 TO 850+23.15	3.49 ACRES
850+23.15 TO 865+86.57	16.20 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	20.55 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	11.82 ACRES

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

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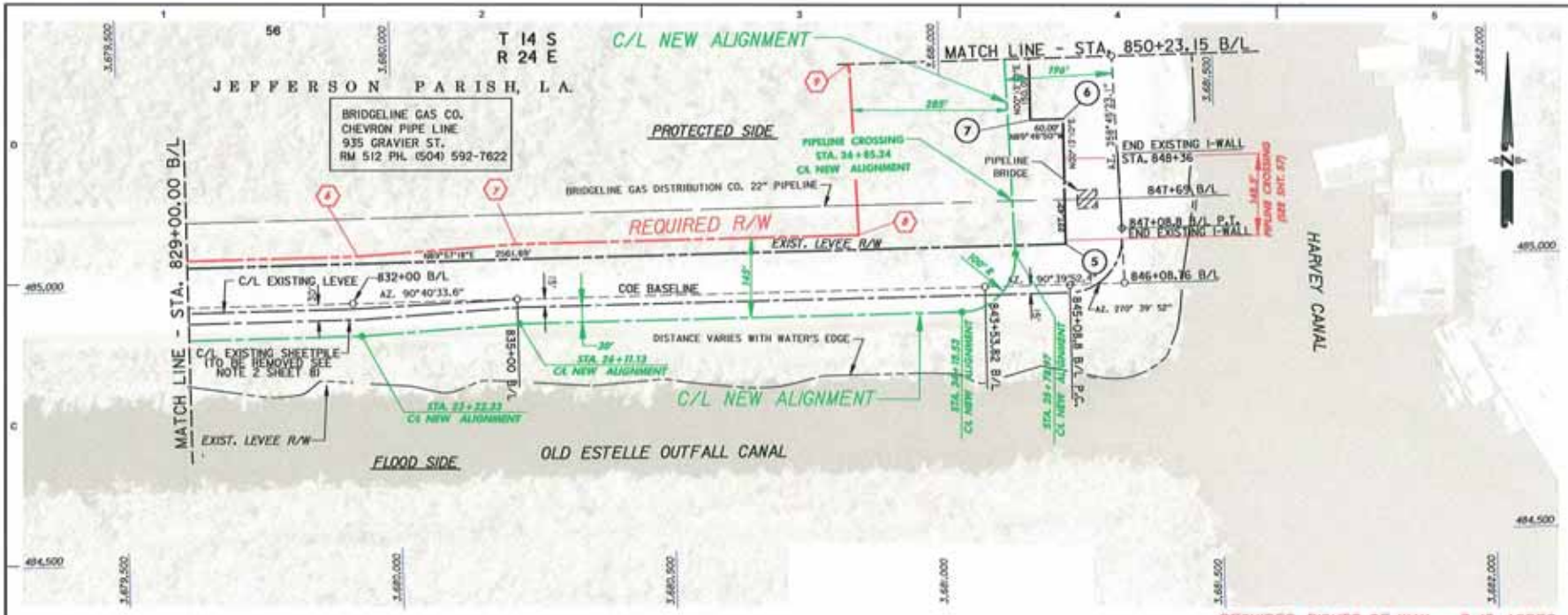
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVES - HPH(1&2) HARVEY CANAL TEMP. FLOODWALL - PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1A.1
B/L STA. 809+03.80 - STA. 829+00.00

SHEET IDENTIFICATION NUMBER
5



REQUIRED RIGHTS-OF-WAY = 3.49 ACRES

FLOODWALL AND LEVEE (UN-REINFORCED)

PLAN - ALTERNATIVE 1A.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY								LAYOUT C/L NEW ALIGNMENT		
EXISTING					REQUIRED					
POINT	LOCATION				TEXT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
5	845+08.00	69.12'	3681224.05	485037.42	6	3679933.68	485050.06	23+22.33	3679936.32	484905.06
6	849+08.30	90.00'	3681224.94	485264.84	7	3680221.80	485064.35	26+11.13	3680224.76	484919.35
7	849+10.50	150.03'	3681164.94	485265.07	8	3680846.67	485063.80	34+18.53	3681032.16	484918.64
					9	3680836.45	485375.89	33+78.97	3681132.19	485021.92

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STATE HIGHWAY 57, MATHURA, LOUISIANA

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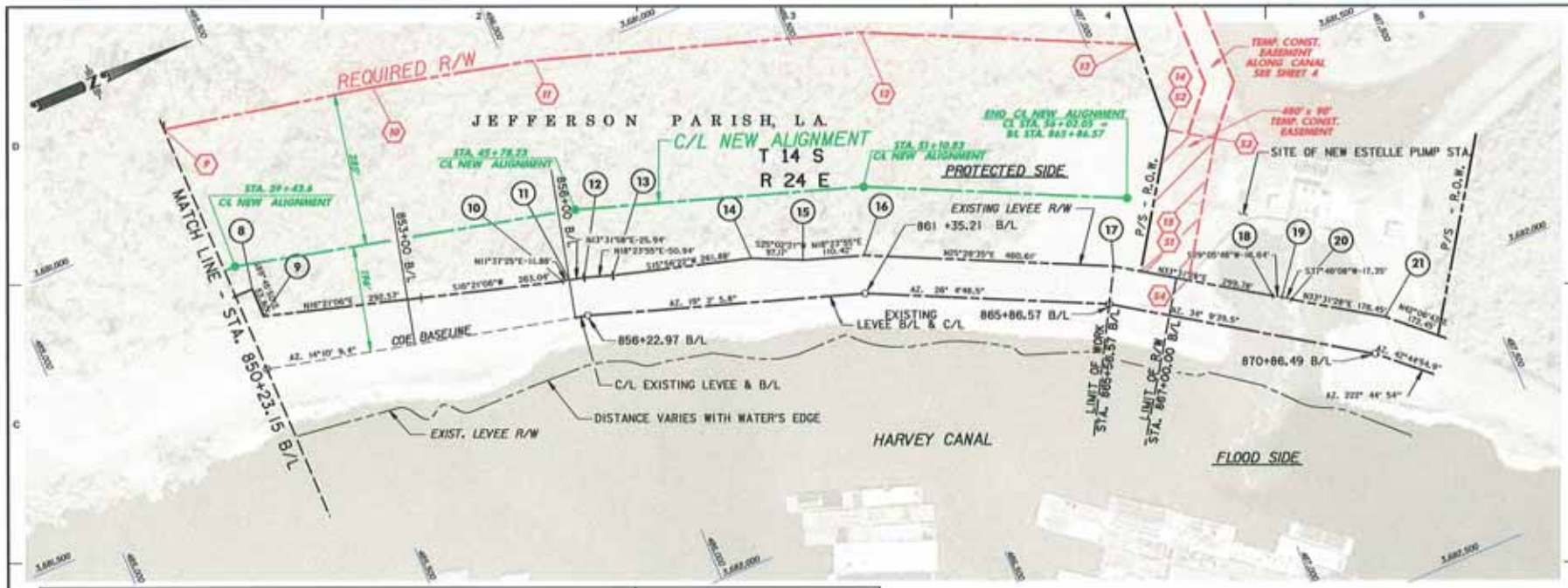
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - WBV-Hg.2
HARVEY CANAL WEST BANK LEVEES-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1A.1
B/L STA. 829+00.00 - STA. 850+23.15

SHEET IDENTIFICATION NUMBER
8



RIGHTS OF WAY

POINT	EXISTING LOCATION BL STATION	EXISTING LOCATION OFF-SET	EXISTING LOCATION X	EXISTING LOCATION Y	REQUIRED TEXT	REQUIRED LOCATION X	REQUIRED LOCATION Y
8	850+23.15	149.30'	3681170.97	485410.21	9	3680836.45	485375.89
9	850+33.19	96.93'	3681224.76	485410.00	10	3680914.79	485759.07
10	855+88.11	69.84'	3681381.23	485943.12	11	3680985.02	486050.73
11	855+99.95	70.00'	3681383.63	485954.76	12	3681172.64	486626.29
12	856+00.00	70.25'	3681390.10	485981.63	13	3681391.90	487087.08
13	856+70.93	70.14'	3681406.76	486031.70	14	3681558.81	487077.86
14	859+32.58	81.30'	3681477.75	486280.11	15	3681779.84	486931.41
15	860+29.00	70.15'	3681518.21	486366.70			
16	861+35.21	70.22'	3681553.20	486471.84			
17	865+86.57	70.17'	3681751.61	486888.80			
18	868+81.40	70.00'	3681917.17	487138.66			
19	868+97.99	71.29'	3681925.25	487153.20			
20	869+15.29	70.00'	3681935.98	487167.05			
21	870+86.49	70.20'	3682033.35	487314.00			

LAYOUT CL NEW ALIGNMENT

CL STATION	LOCATION X	LOCATION Y
29+43.60	3681119.90	485397.68
45+78.23	3681268.45	486014.68
51+10.83	3681436.60	486520.04
54+03.05	3681646.00	486960.11

TEMP. CONST. EASEMENT

51	3681779.84	486931.41
52	3681558.81	487077.86
53	3681608.30	487152.40
54	3681819.23	487005.95

REQUIRED RIGHTS-OF-WAY - 16.20 ACRES
TEMP. CONST. EASEMENT - 0.54 ACRES

FLOODWALL & LEVEE (UN-REINFORCED)

PLAN - ALTERNATIVE 1A.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- ○ = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

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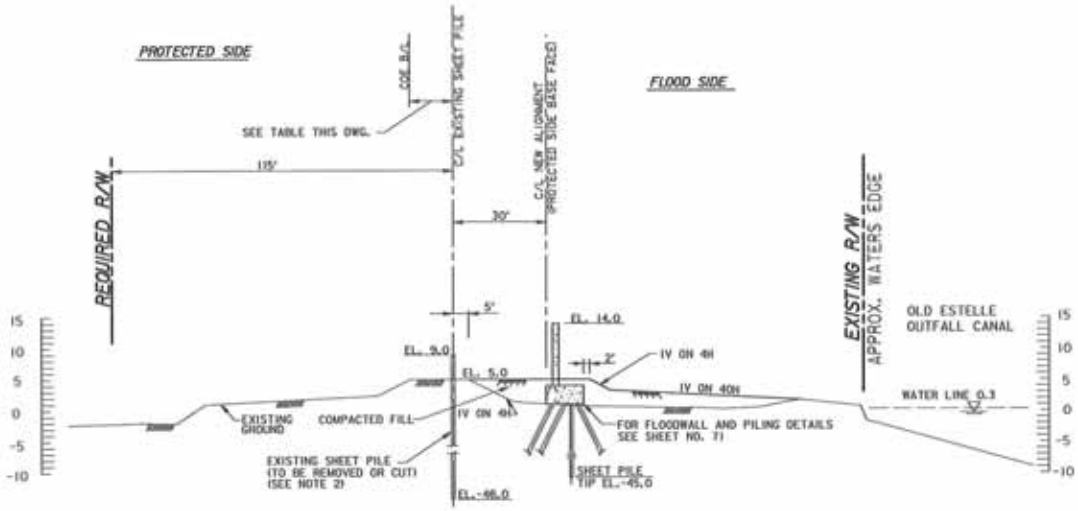
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HIRAM G. HOLLAND PUMPING STATION - HARVEY CANAL & OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1A.1
BL STA. 850+23.15 - STA. 865+86.57

SHEET IDENTIFICATION NUMBER
7



TYPICAL DESIGN SECTION - FLOODWALL ALONG OLD ESTELLE OUTFALL CANAL

STA. 809+03.80B/L TO STA. 846+94.75B/L

HORIZONTAL SCALE: 1" = 20'

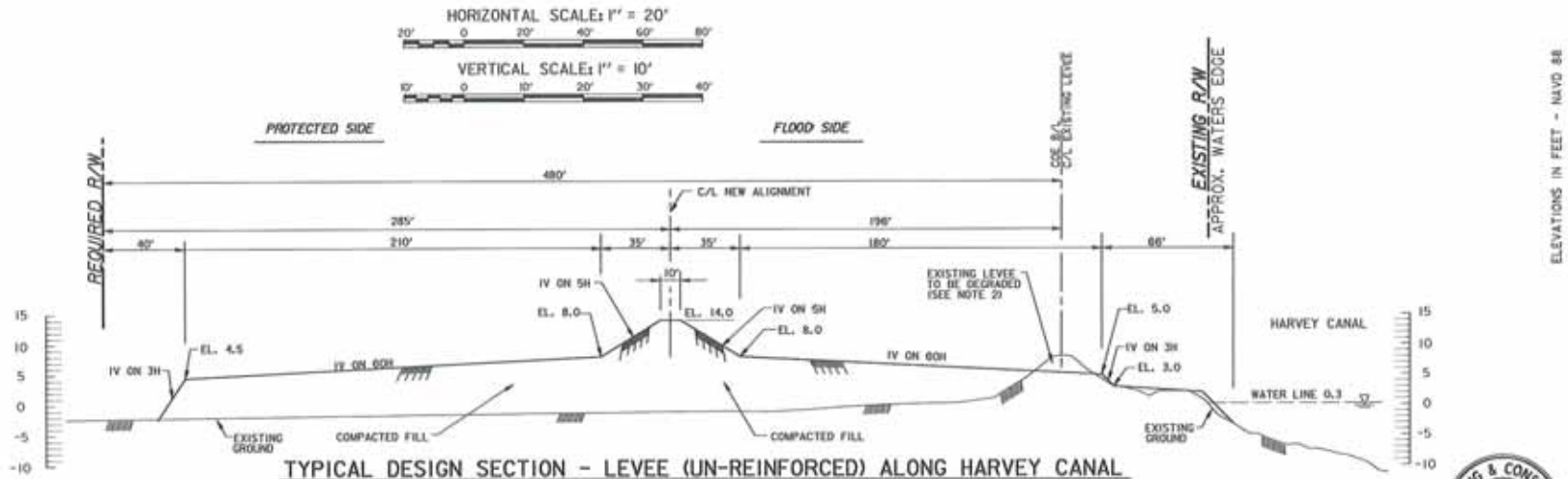
VERTICAL SCALE: 1" = 10'

ELEVATIONS IN FEET - NAVD 88

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (IN ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'

NOTES:

1. STA. 846+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. 57)
2. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
3. EL. 14.0 IS PROJECT GRADE.
4. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
5. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.



ELEVATIONS IN FEET - NAVD 88

TYPICAL DESIGN SECTION - LEVEE (UN-REINFORCED) ALONG HARVEY CANAL

STA. 848+43.25B/L TO 865+86.57B/L

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

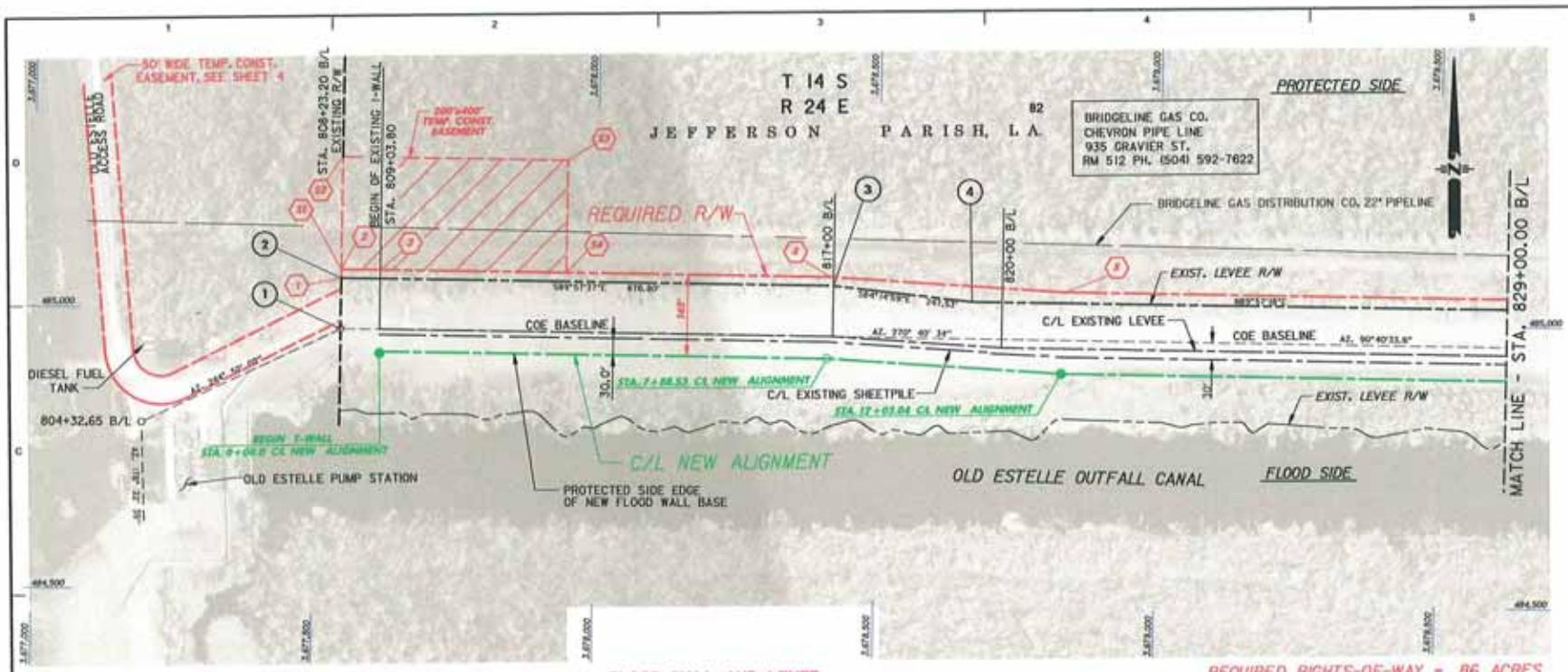
ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

ALTERNATIVE 1A.1
TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER
8

ALTERNATIVE 1A. 2

EXISTING ALIGNMENT FLOODWALL AND LEVEE (GEOTEXTILE REINFORCED)



FLOOD WALL AND LEVEE
(GEOTEXTILE REINFORCED)

PLAN - ALTERNATIVE 1A.2

REQUIRED RIGHTS-OF-WAY = .86 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

RIGHTS OF WAY

EXISTING					REQUIRED		
POINT	LOCATION				TEST	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y
1	808+23.20	0.00'			1	3677545.22	485056.71
2	808+23.20	90.00'	3677545.22	485056.71	2	3677545.22	485072.02
3	817+00.00	90.00'	3678422.01	485055.94	3	3677614.62	485071.97
4	819+46.00	65.37'	3678668.30	485031.09	4	3678415.51	485071.30
					5	3678831.91	485050.58

LAYOUT C/L NEW ALIGNMENT		
B/L STATION	LOCATION X	LOCATION Y
0+00.0	3677625.70	484927.07
7+88.53	3678414.23	484926.37
12+03.04	3678828.32	484905.59

TEMP. CONST. EASEMENT		
S1	3677545.22	485072.02
S2	3677545.38	485272.02
S3	3677945.38	485271.73
S4	3677945.22	485071.73

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

ALTERNATIVE 1A.2
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.8 TO 829+00	.86 ACRES
829+00 TO 850+23.15	2.06 ACRES
850+23.15 TO 865+86.57	8.10 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	11.02 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	12.25 ACRES

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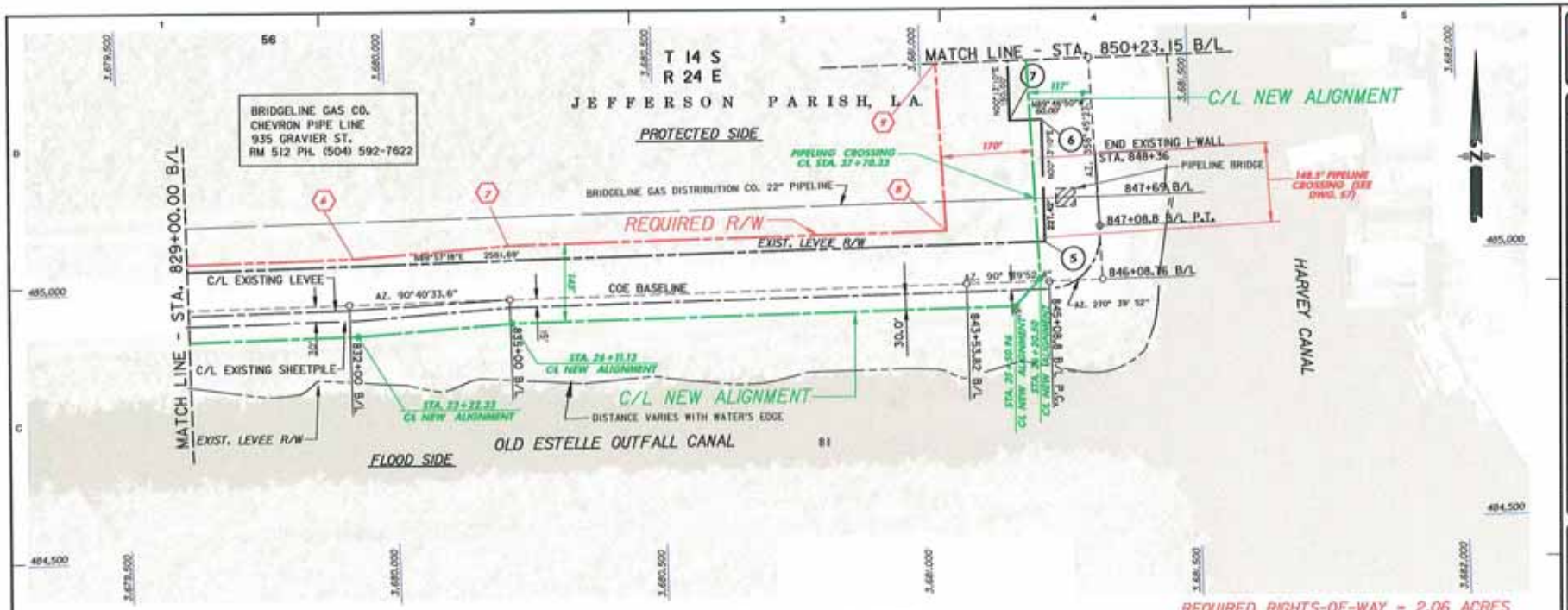
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HIRE/A-2 HARVEY CANAL WEST BANK LEVEE/PHASE 2 TO 100YR ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1A.2
B/L STA. 809+03.80 - STA. 829+00.00

SHEET IDENTIFICATION NUMBER
9



REQUIRED RIGHTS-OF-WAY - 2.06 ACRES

FLOOD WALL AND LEVEE
(GEOTEXTILE REINFORCED)

PLAN - ALTERNATIVE 1A.2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = *EXISTING LEVEE R/W*
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
POINT	LOCATION				TEXT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
5	845+08.00	69.12'	3681234.05	485037.42	4	3679932.88	485050.06	23+22.33	3679936.32	484905.06
6	849+08.30	90.00'	3681224.94	485264.84	7	3680231.80	485044.55	24+11.13	3680234.76	484919.35
7	849+10.50	150.03'	3681164.94	485265.07	8	3681029.78	485043.84	25+50.96	3681164.60	484918.53
					9	3681029.53	485376.65	26+20.50	3681212.99	484968.49

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
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MISSISSIPPI VALLEY DIVISION

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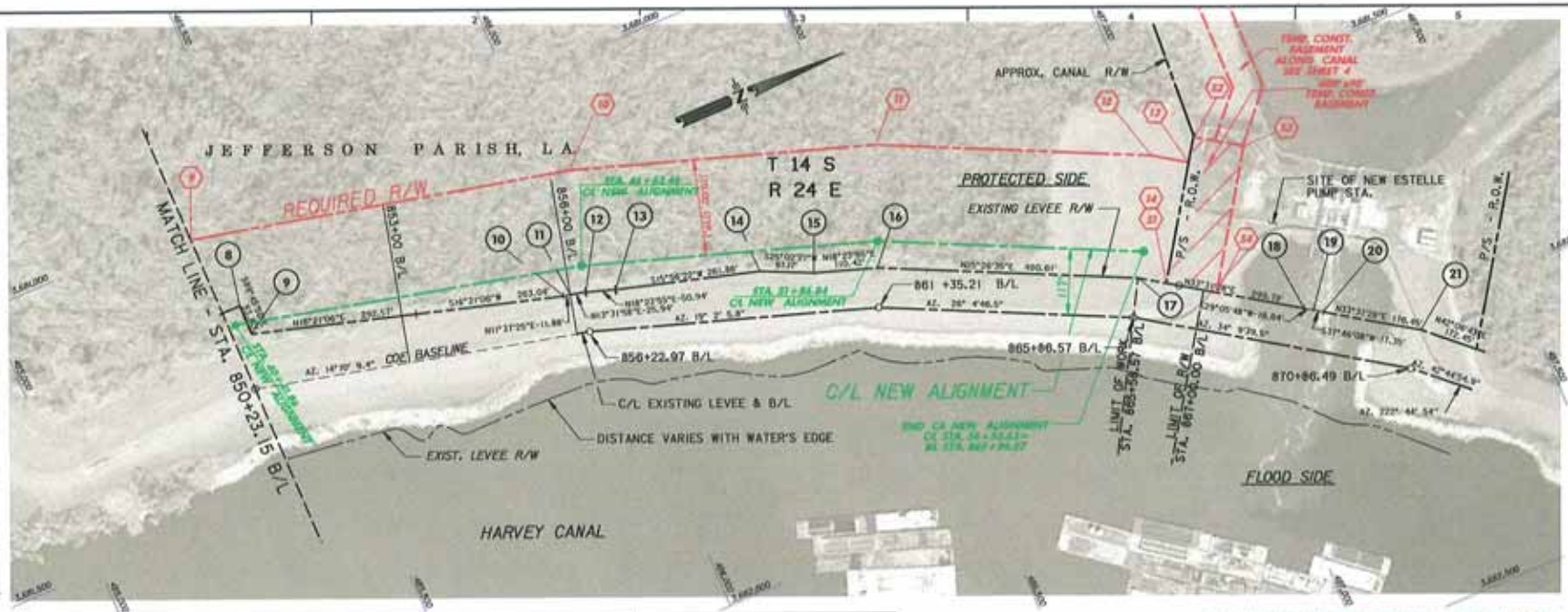
PLAN - ALTERNATIVE 1A.2
B/L STA. 829+00.00 - STA. 850+23.15

SHEET IDENTIFICATION NUMBER
10



RIGHTS OF WAY

EXISTING					REQUIRED		
POINT	LOCATION				TEXT	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y
8	850+23.15	149.30'	3681170.97	485410.21	9	3681029.53	485376.65
9	850+33.19	96.93'	3681224.76	485410.00	10	3681180.89	486039.74
10	855+88.11	69.84'	3681381.23	485943.12	11	3681352.02	486554.08
11	855+99.95	70.00'	3681383.63	485954.76	12	3681562.25	486995.88
12	856+00.00	70.25'	3681390.10	485981.63	13	3681779.84	486931.41
13	856+70.93	70.14'	3681406.76	486031.70	14	3681598.95	487051.27
14	859+32.58	81.20'	3681477.75	486280.11			
15	860+29.00	70.15'	3681518.21	486366.10			
16	861+35.21	70.22'	3681553.20	486471.84			
17	865+86.57	70.17'	3681751.61	486888.80			
18	868+81.40	70.00'	3681917.17	487138.66			
19	868+97.99	71.29'	3681925.25	487153.20			
20	869+15.29	70.00'	3681935.98	487167.05			
21	870+86.49	70.20'	3682033.35	487314.00			

LAYOUT C/L NEW ALIGNMENT

B/L STATION	LOCATION X	LOCATION Y
40+41.86	3681199.20	485289.58
46+62.46	3681244.47	485992.92
51+86.84	3681510.02	486490.49
56+53.63	3681710.59	486991.99
57+98.89	3681790.83	487033.09

TEMP. CONST. EASEMENT

51	3681598.95	487051.27
52	3681561.61	4877077.71
53	3681611.00	487152.25
54	3681830.01	487007.13

FLOOD WALL AND LEVEE
(GEOTEXTILE REINFORCED)

PLAN - ALTERNATIVE 1A.2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY - 8.10 ACRES
TEMP. CONST. EASEMENT - 0.97 ACRES

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

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US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

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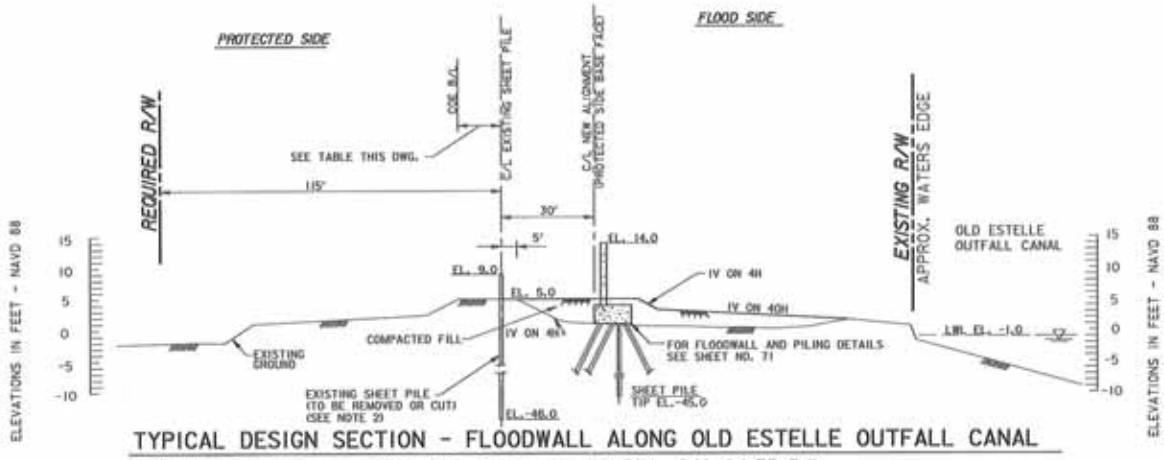
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - WBV-1A.2
HARVEY CANAL WEST BANK LEVEE-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1A.2
B/L STA. 850+23.15 - STA. 865+86.57

SHEET IDENTIFICATION NUMBER
11



TYPICAL DESIGN SECTION - FLOODWALL ALONG OLD ESTELLE OUTFALL CANAL

STA. 809+03.80 B/L TO STA. 846+94.75 B/L

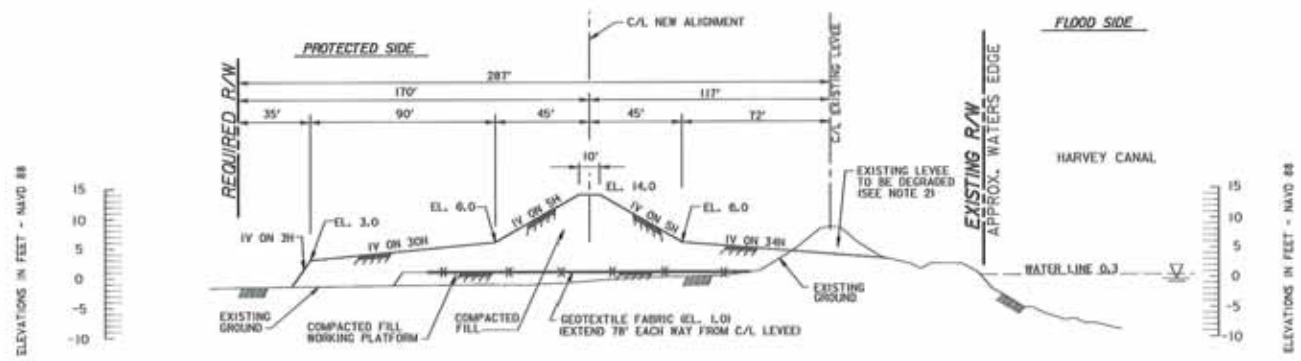
HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 10'

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (IN ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'

NOTES:

1. STA. 846+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. 57)
2. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
3. EL. 14.0 IS PROJECT GRADE.
4. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
5. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.
6. GEOTEXTILE FABRIC SHALL HAVE A TENSILE STRENGTH OF 27,400 LBS/FT. (AT 5% STRAIN).



TYPICAL DESIGN SECTION - LEVEE (GEOTEXTILE REINFORCED) ALONG HARVEY CANAL

STA. 848+43.25B/L TO 865+86.57B/L

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

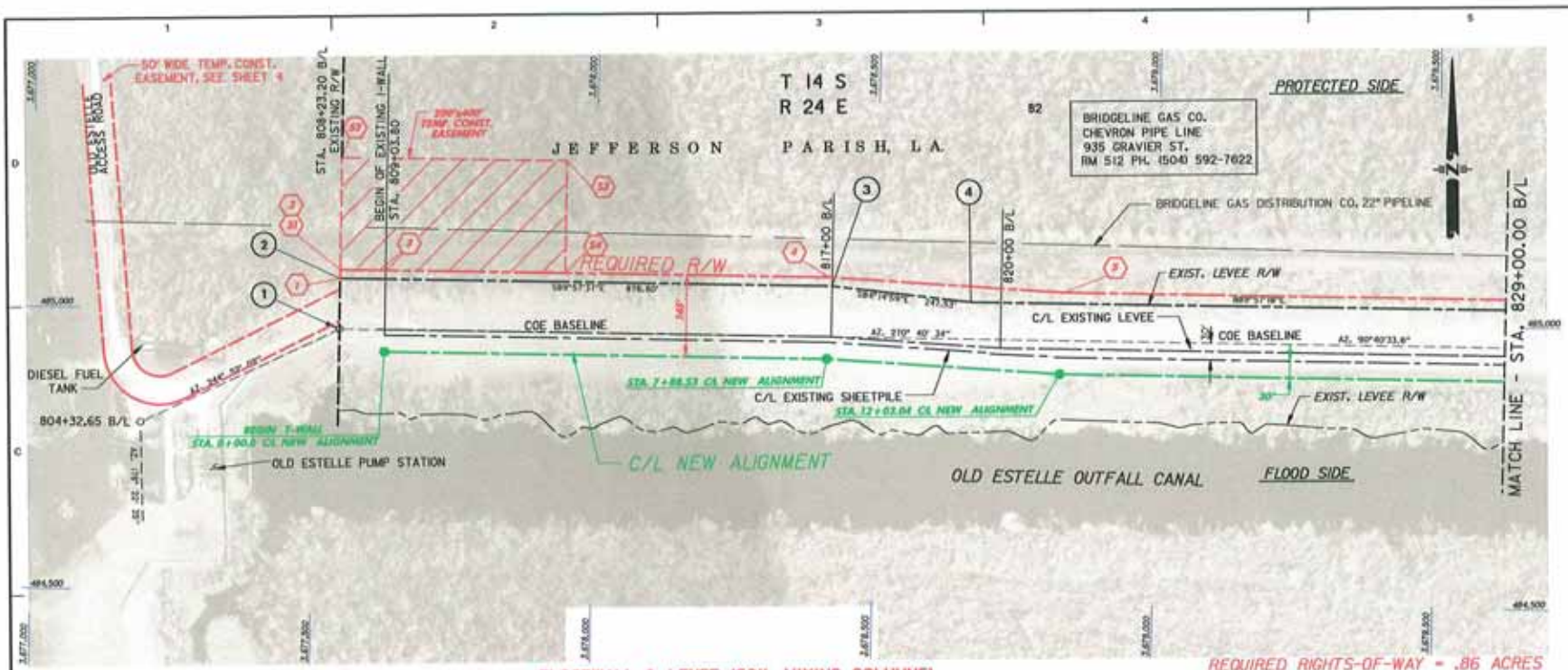
ALTERNATIVE 1A.2 TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER 12

BOG ENGINEERING & CONSULTING INC. "Excellence in Engineering"

ALTERNATIVE 1A. 3

EXISTING ALIGNMENT–FLOODWALL AND LEVEE (SOIL MIXING COLUMNS)



FLOODWALL & LEVEE (SOIL MIXING COLUMNS)

PLAN - ALTERNATIVE 1A.3

REQUIRED RIGHTS-OF-WAY = .86 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING					REQUIRED		
POINT	LOCATION				TEXT	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y
1	808+23.20	0.00'			1	3677545.22	485056.71
2	808+23.20	90.00'	3677545.22	485056.71	2	3677545.22	485072.02
3	817+00.00	90.00'	3678422.01	485055.94	3	3677614.63	485071.97
4	819+46.00	65.37'	3678668.30	485031.09	4	3678415.51	485071.38
					5	3678831.91	485050.58

LAYOUT C/L NEW ALIGNMENT

B/L STATION	LOCATION X	LOCATION Y
0+00.0	3677625.70	484927.07
7+88.53	3678414.23	484926.27
12+03.04	3678828.22	484905.59

TEMP. CONST. EASEMENT		
S1	3677545.22	485072.02
S2	3677545.38	485272.02
S3	3677945.38	485271.73
S4	3677945.22	485071.73

ALTERNATIVE 1A.3
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.8 TO 829+00	.86 ACRES
829+00 TO 850+23.15	1.20 ACRES
850+23.15 TO 865+86.57	1.04 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	3.10 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	12.20 ACRES

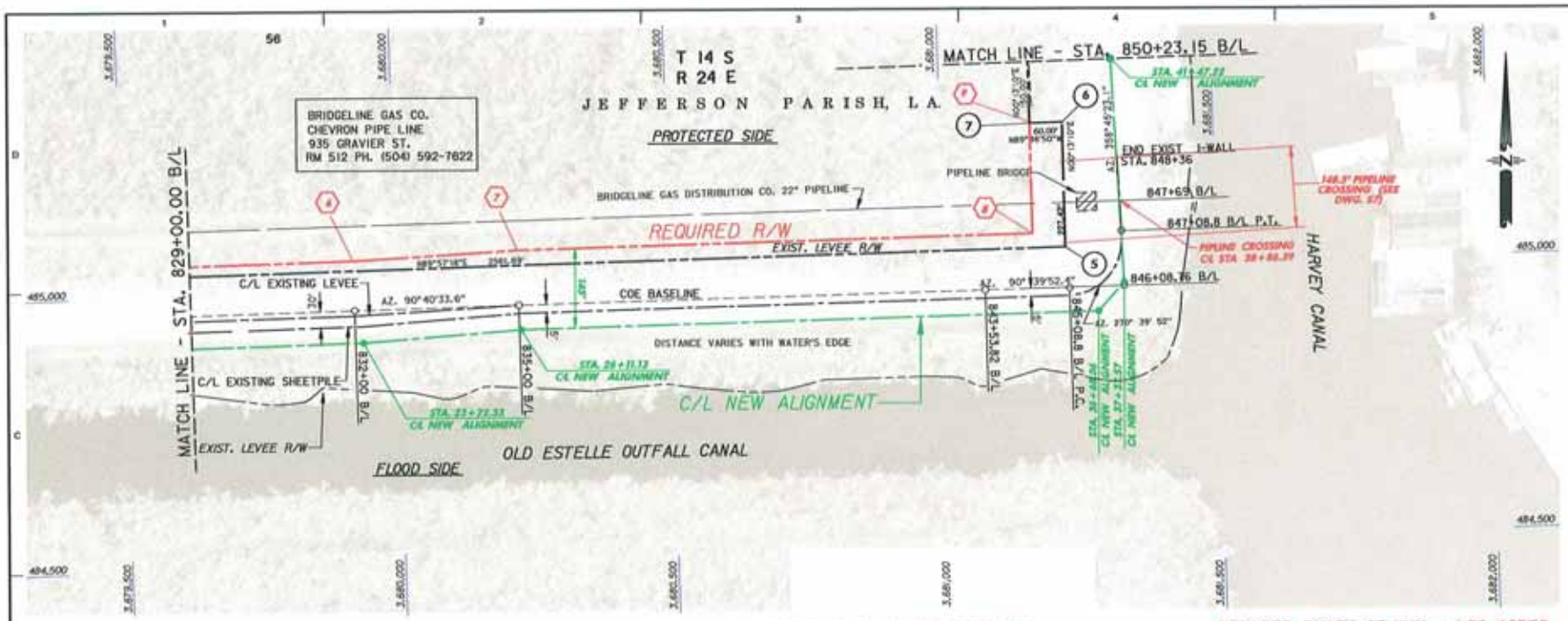
ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

PLAN - ALTERNATIVE 1A.3
B/L STA. 809+03.80 - STA. 829+00.00

SHEET IDENTIFICATION NUMBER
13



FLOODWALL & LEVEE (SOIL MIXING COLUMNS)

REQUIRED RIGHTS-OF-WAY - 1.20 ACRES

PLAN - ALTERNATIVE 1A.3

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY								LAYOUT C/L NEW ALIGNMENT		
EXISTING					REQUIRED					
	LOCATION					LOCATION			LOCATION	
POINT	B/L STATION	OFF-SET	X	Y	TEXT	X	Y	C/L STATION	X	Y
5	845+08.00	69.12'	3681224.05	485037.42	6	3679932.68	485050.06	33+22.33	3679936.32	484905.06
6	849+08.30	90.00'	3681224.91	485264.84	7	3680231.80	485064.55	26+11.13	3680234.76	484919.35
7	849+10.50	150.03'	3681164.94	485265.07	8	3681164.15	485063.52	36+68.06	3681281.69	484918.42
								37+37.57	3681320.03	484969.45
								41+47.33	3681316.65	485377.78

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

NO.	DESCRIPTION	DATE	APPR.	DATE	DESCRIPTION	DATE	APPR.

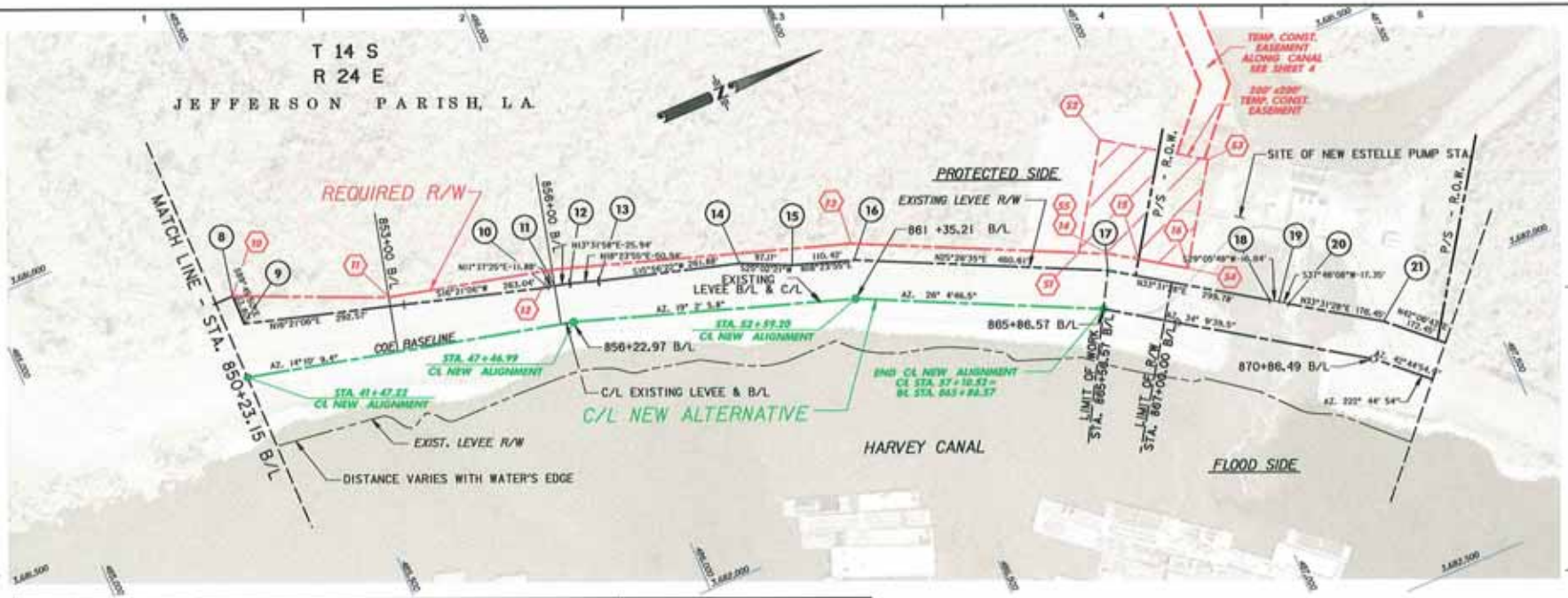
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT, HRSDS & HARVEY CANAL VERT BANK LEVEE, PHASE 2 TO OLD ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1A.3
B/L STA. 829+00.00 - STA. 850+23.15

ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

SHEET IDENTIFICATION NUMBER
14



RIGHTS OF WAY

EXISTING					REQUIRED		
POINT	LOCATION				TEXT	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y
8	850+23.15	149.30'	3681170.97	485410.21	10	3681170.97	485410.21
9	850+33.19	96.93'	3681224.76	485410.00	11	3681284.24	485670.12
10	855+88.11	69.84'	3681381.23	485943.12	12	3681354.46	485961.78
11	855+99.95	70.00'	3681383.63	485954.76	13	3681523.88	486478.29
12	856+00.00	70.25'	3681390.10	485981.63	14	3681725.38	486903.54
13	856+70.93	70.14'	3681406.76	486031.70	15	3681754.83	486947.98
14	859+32.58	81.20'	3681477.75	486280.11	16	3681805.00	487023.70
15	860+29.00	70.15'	3681518.21	486366.70			
16	861+35.21	70.22'	3681553.20	486471.84			
17	865+86.57	70.17'	3681751.61	486888.00			
18	868+81.40	70.00'	3681917.17	487138.66			
19	868+97.99	71.29'	3681925.25	487153.20			
20	869+15.29	70.00'	3681935.98	487167.05			
21	870+86.49	70.20'	3682033.35	487314.00			

LAYOUT C/L NEW ALIGNMENT

C/L STATION	LOCATION X	LOCATION Y
41+47.22	3681316.65	485277.78
47+46.99	3681457.06	485960.70
52+59.20	3681618.76	486446.72
57+10.53	3681812.69	486854.26

TEMP. CONST. EASEMENT

S1	3681701.22	486852.54
S2	3681527.81	486967.45
S3	3681608.20	487152.40
S4	3681829.23	487005.95
S5	3681725.38	486903.54

REQUIRED RIGHTS-OF-WAY = 1.04 ACRES
TEMP. CONST. EASEMENT = .92 ACRES

FLOODWALL & LEVEE (SOIL MIXING COLUMNS)

PLAN - ALTERNATIVE 1A.3

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering" 2101 BINGHAM ST. METAIRIE, LOUISIANA

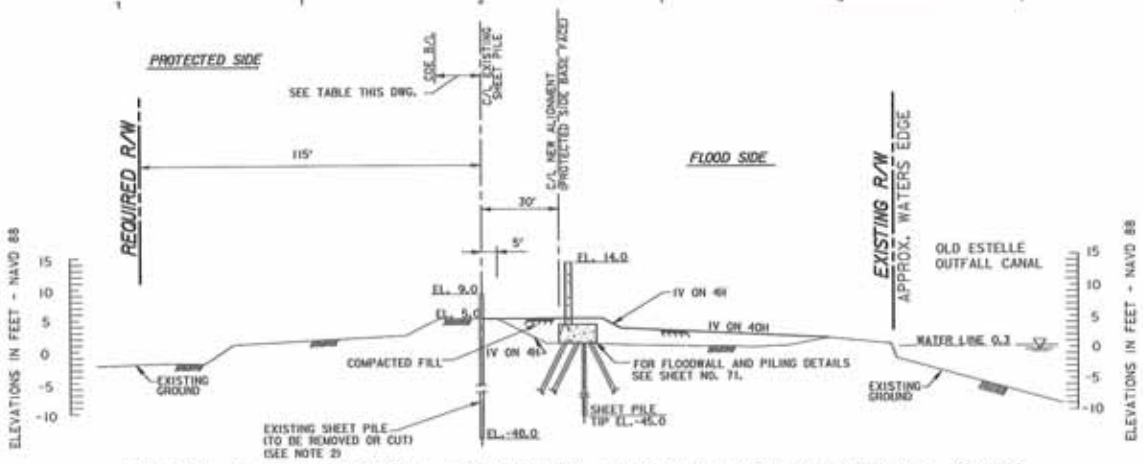
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - VIBRA-FLOOD HARVEY CANAL WEST BANK LEVEE-PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1A.3
B/L STA. 850+23.15 - STA. 865+86.57

SHEET IDENTIFICATION NUMBER 15



TYPICAL DESIGN SECTION - FLOODWALL ALONG OLD ESTELLE OUTFALL CANAL

STA. 809+03.80 B/L TO STA. 846+94.75 B/L

HORIZONTAL SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

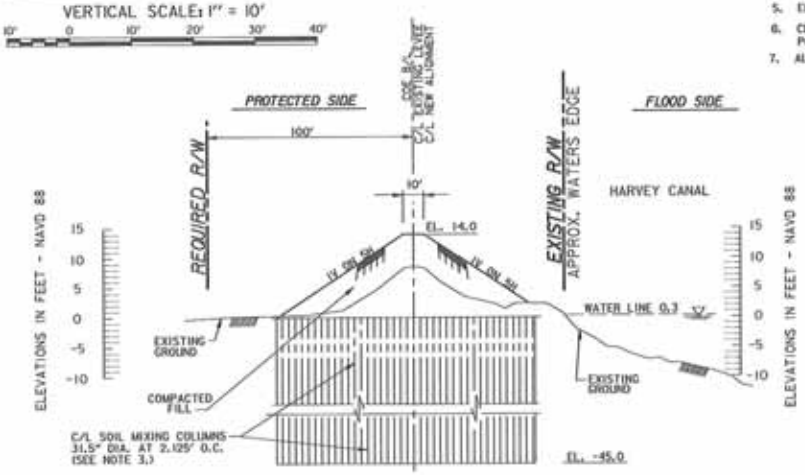
VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (IN ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'

NOTES:

1. STA. 846+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. 75)
2. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
3. FOR SOIL MIXING COLUMNS, NO MORE THAN 500 LF OF EXISTING LEVEE IS TO BE REMOVED AT ANY ONE TIME.
4. FOR SOIL MIXING COLUMNS DETAILS, SEE DWG. NO. 78.
5. EL. 14.0 IS PROJECT GRADE.
6. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
7. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.



TYPICAL DESIGN SECTION - LEVEE (SOIL MIXING COLUMNS) ALONG HARVEY CANAL

STA. 848+43.25 B/L TO STA. 865+86.57 B/L

HORIZONTAL SCALE: 1" = 30'

30' 0 30' 60' 90' 120'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

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US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ALTERNATIVE 1A.3 TYPICAL DESIGN SECTIONS

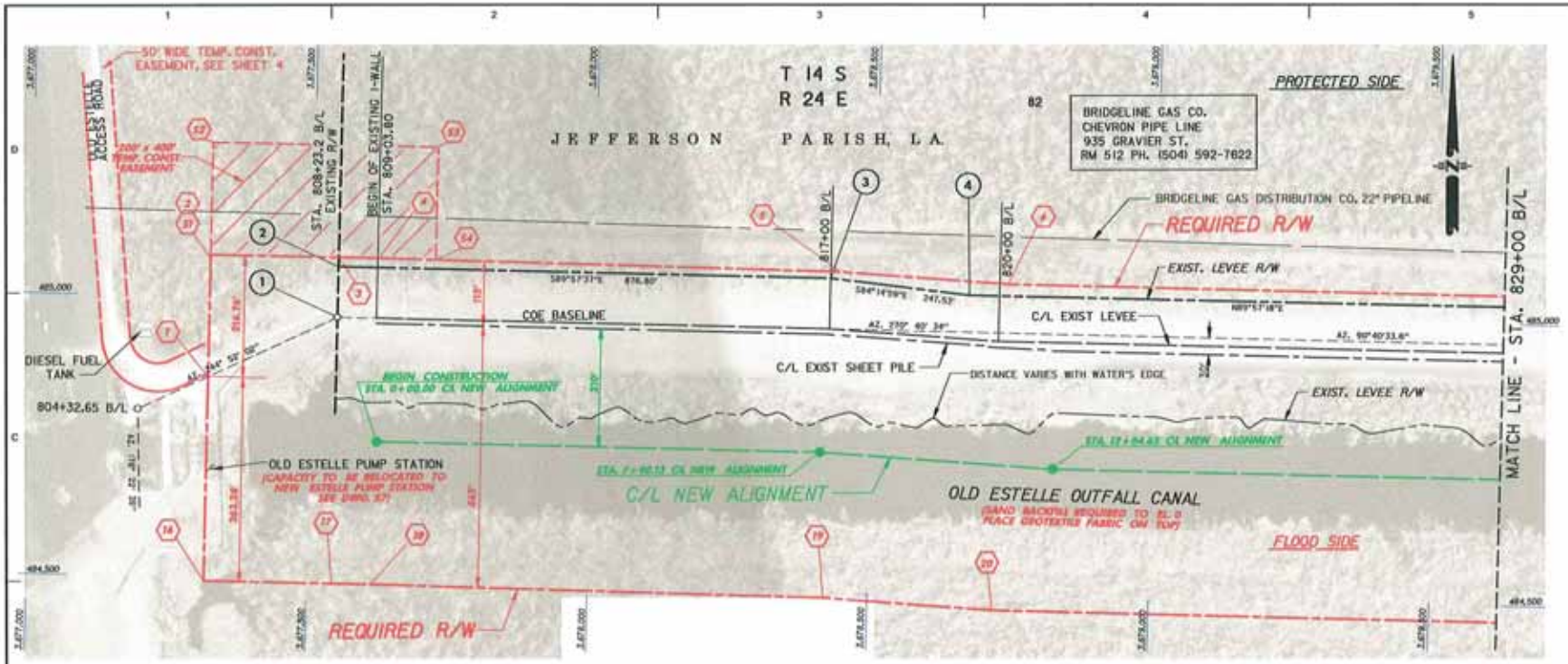
SHEET IDENTIFICATION NUMBER 10

ALTERNATIVE 1B

EXISTING ALIGNMENT-LEVEE (2057 ELEVATION) AND RELOCATE OLD ESTELLE PUMP STATION CAPACITY TO NEW ESTELLE PUMP STATION

ALTERNATIVE 1B.1

EXISTING ALIGNMENT-LEVEE (UN-REINFORCED) AND RELOCATE OLD ESTELLE PUMP STATION CAPACITY TO NEW ESTELLE PUMP STATION



REQUIRED RIGHTS-OF-WAY - 19.68 ACRES
TEMP. CONST. EASEMENT - 1.84 ACRES

RIGHTS OF WAY

EXISTING

POINT	LOCATION BL STATION	LOCATION OFF-SET	LOCATION X	LOCATION Y
1	808+23.20	0.00'		
2	808+23.20	90.00'	3677545.22	485056.71
3	817+00.00	90.00'	3678422.01	485055.94
4	839+46.00	65.37'	3678668.30	485031.09

NOTE:
1: SEE PLAN SHEET FOR DIMENSION TO ROW POINT

REQUIRED

POINT	LOCATION X	LOCATION Y
1	3677317.13	484856.69
2	3677317.33	485073.44
3	3677545.23	485073.24
4	3677616.43	485073.18
5	3678438.35	485047.37
6	3678736.58	485052.30
16	3677316.81	484493.44
17	3677544.72	484493.54
18	3677614.32	484493.18
19	3678431.56	484487.47
20	3678721.58	484472.31

LAYOUT C/L NEW ALIGNMENT

C/L STATION	LOCATION X	LOCATION Y
0+00.0	3677619.52	484747.07
7+90.13	3678409.65	484746.27
12+04.65	3678823.65	484725.59

TEMP. CONST. EASEMENT

POINT	X	Y
51	3677317.33	485073.44
52	3677317.49	485273.44
53	3677646.88	485273.16
54	3677717.31	485073.47

LEVEE (UN-REINFORCED) AND RELOCATE PUMP STATION CAPACITY
PLAN - ALTERNATIVE 1B.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

ALTERNATIVE 1B.1
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.80 TO 829+00.00	19.68 ACRES
829+00.00 TO 850+23.15	16.32 ACRES
850+23.15 TO 866+23.15	16.55 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	52.55 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	12.26 ACRES

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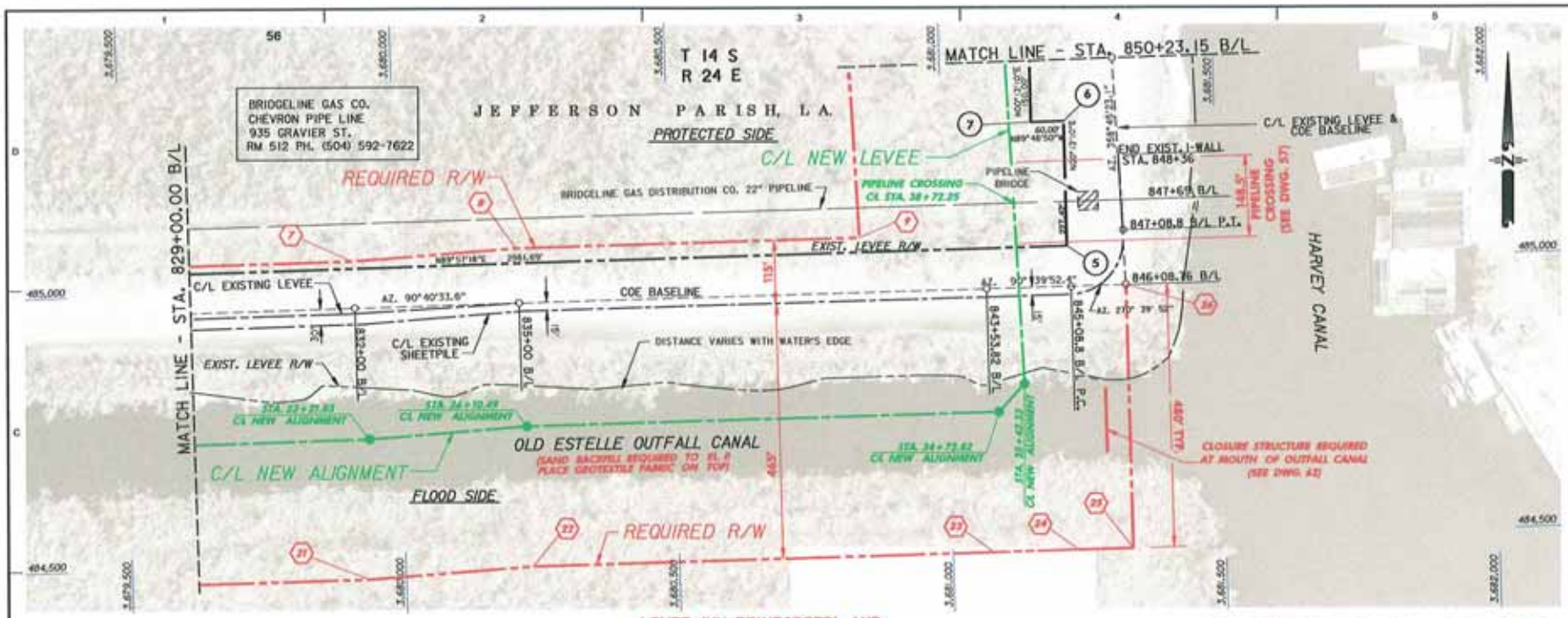
ENGINEERING ANALYSIS, REPORT - INBN-14-2 HARVEY CANAL WEST BANK LEVEE - PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.1
B/L STA. 809+03.80 - STA. 829+00.00

SHEET IDENTIFICATION NUMBER
17



LEVEE (UN-REINFORCED) AND
RELOCATE PUMP STATION CAPACITY
PLAN - ALTERNATIVE 1B.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY = 16.32 ACRES

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
	LOCATION					LOCATION			LOCATION	
POINT	B/L STATION	OFF-SET	X	Y	TEXT	X	Y	B/L STATION	X	Y
5	845+08.00	69.12'	3681224.05	485037.42	7	3679918.94	485050.05	23+21.83	3679940.83	484725.07
6	849+08.30	90.00'	3681224.94	485264.84	8	3680219.03	485064.22	24+10.49	3680229.14	484739.35
7	849+10.50	150.03'	3681164.94	485265.07	9	3680845.67	485063.77	34+72.82	3681091.47	484738.59
								35+42.33	3681139.84	484788.52
					21	3679932.81	484470.06			
					22	3680232.51	484484.11			
					23	3681074.89	484483.61			
					24	3681229.80	484482.47			
					25	3681229.96	484483.46			
					26	3681330.22	484963.46			

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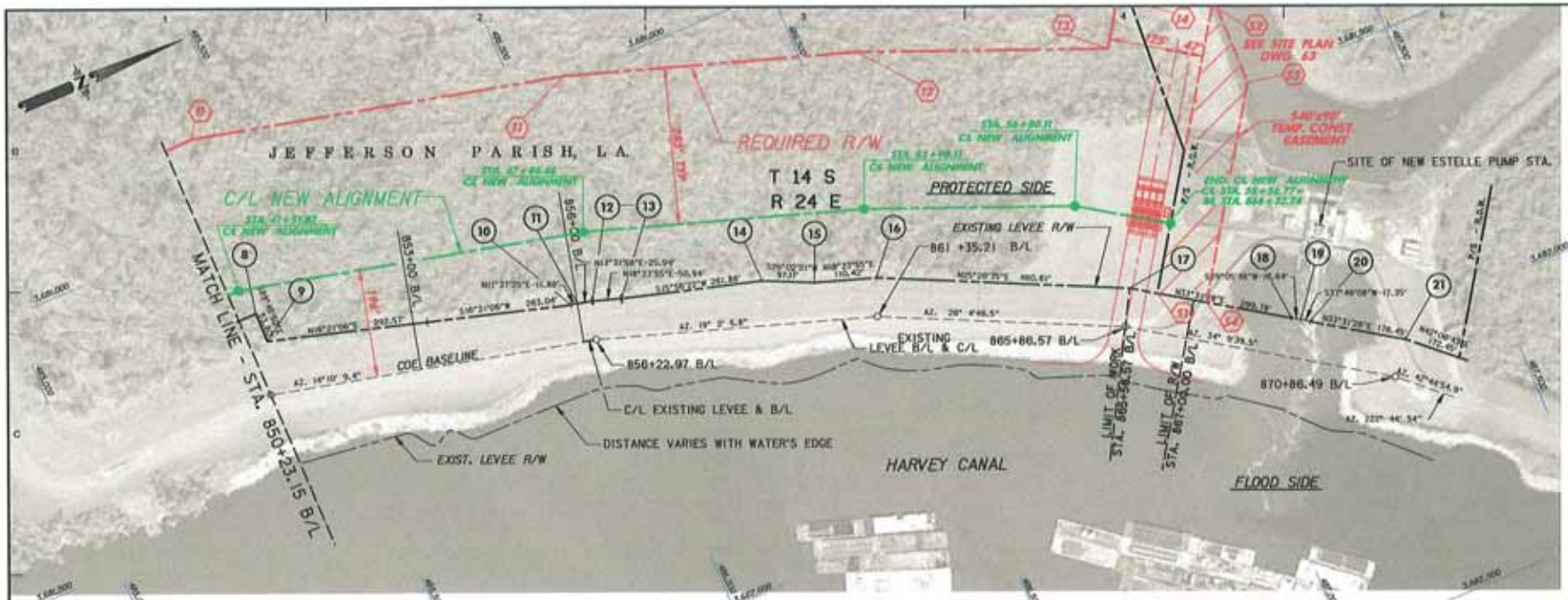
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HARVEY CANAL WEST BANK LEVEES - PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.1
B/L STA. 829+00.00 - STA. 850+23.15

SHEET IDENTIFICATION NUMBER
18



RIGHTS OF WAY

EXISTING					REQUIRED		
POINT	LOCATION				TEXT	LOCATION	
	BL STATION	OFF-SET	X	Y		X	Y
8	850+23.15	149.30'	3681170.97	485410.21	10	3680833.79	485426.90
9	850+33.19	96.93'	3681224.76	485410.00	11	3680994.20	486093.17
10	855+88.11	69.84'	3681381.23	485943.12	12	3681162.23	486598.20
11	855+99.95	70.00'	3681383.63	485954.76	13	3681325.44	487021.20
12	856+00.00	70.25'	3681390.10	485981.63	14	3681223.57	487095.04
13	856+70.93	70.14'	3681406.76	486031.70			
14	859+32.58	81.20'	3681477.75	486280.11			
15	860+29.00	70.15'	3681518.21	486366.70			
16	861+35.21	70.22'	3681553.20	486471.84			
17	865+86.57	70.17'	3681751.61	486888.80			
18	868+81.40	70.00'	3681917.17	487138.66			
19	868+97.99	71.29'	3681925.25	487153.20			
20	869+15.29	70.00'	3681935.98	487167.05			
21	870+86.49	70.20'	3682033.35	487314.00			

LAYOUT
C/L NEW ALIGNMENT

C/L STATION	LOCATION	
	X	Y
43+51.82	3681119.89	485297.68
47+86.46	3681268.45	486014.69
52+98.11	3681429.98	486500.17
56+80.11	3681575.33	486854.98
58+56.77	3681673.67	487002.42

TEMP. CONST. EASEMENT		
51	3681779.84	486931.41
52	3681327.75	487330.96
53	3681491.25	487329.40
54	3681829.00	487005.60

LEVEE (UN-REINFORCED) AND
RELOCATE PUMP STATION CAPACITY

PLAN - ALTERNATIVE 1B.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY - 16.55 ACRES
TEMP. CONST. EASEMENT - 0.98 ACRES

LEGEND

- = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

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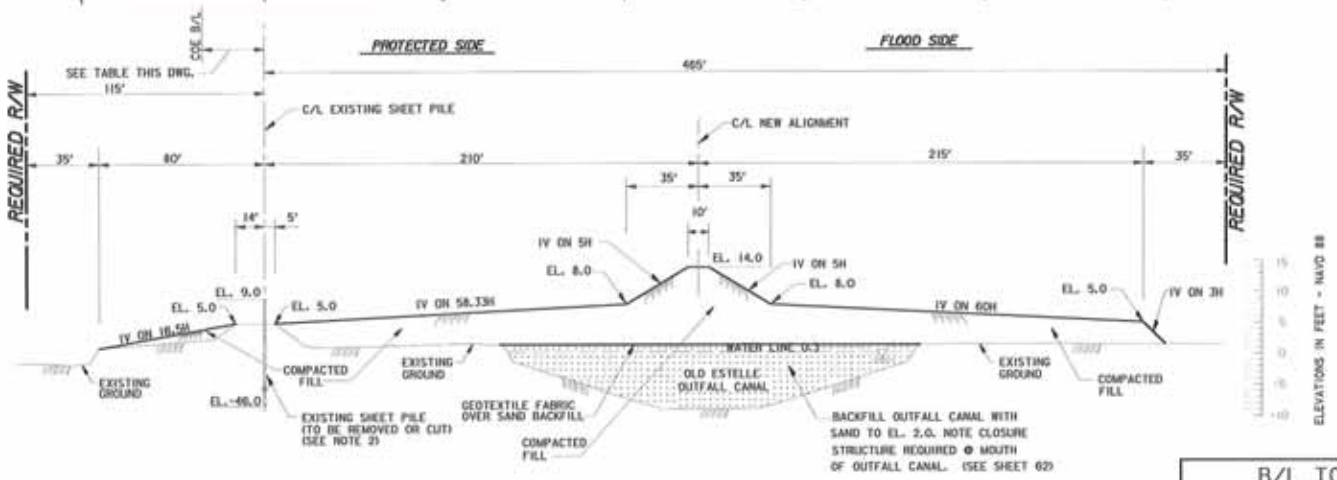
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HIRE-NO 2
HARVEY CANAL - JEFFERSON PARISH, LOUISIANA 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.1
BL STA. 850+23.15 - STA. 869+32.74

SHEET IDENTIFICATION NUMBER
19



TYPICAL DESIGN SECTION - LEVEE (UN-REINFORCED) ALONG OLD ESTELLE OUTFALL CANAL

STA. 809+03.80 B/L TO STA. 894+94.75 B/L

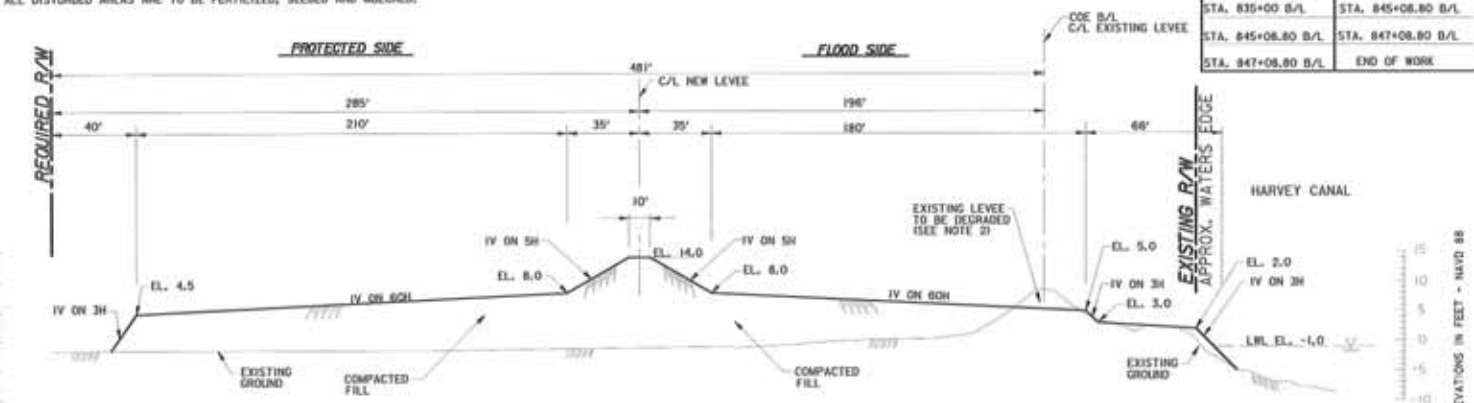
HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

NOTES:

1. STA. 848+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. 57)
2. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
3. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
4. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (IN ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'



TYPICAL DESIGN SECTION - LEVEE (UN-REINFORCED) ALONG HARVEY CANAL

STA. 848+43.25 B/L TO 864+84.82 B/L

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

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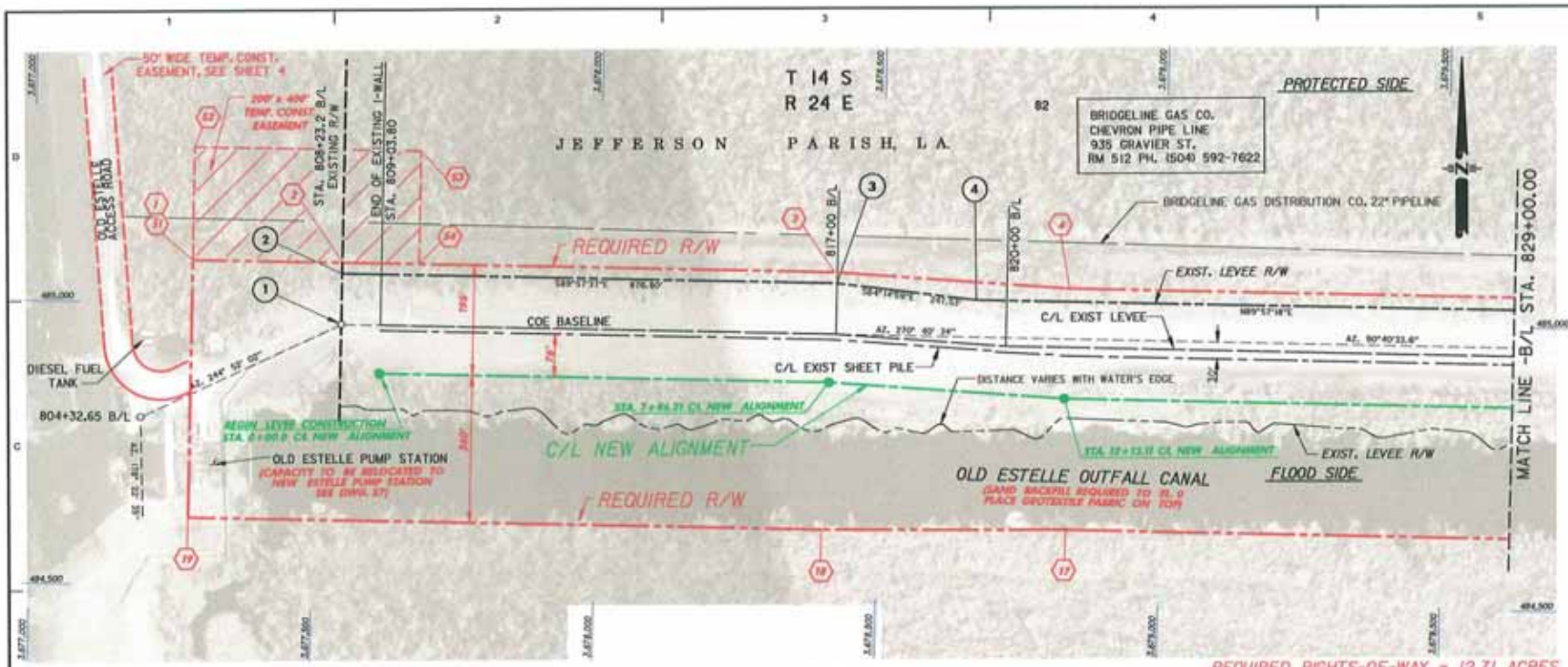
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ALTERNATIVE 1B.1
TYPICAL DESIGN SECTION

SHEET IDENTIFICATION NUMBER
20

ALTERNATIVE 1B.2

EXISTING ALIGNMENT–LEVEE (GEOTEXTILE REINFORCED) AND RELOCATE OLD ESTELLE PUMP STATION CAPACITY TO NEW ESTELLE PUMP STATION



LEVEE (GEOTEXTILE REINFORCED) AND RELOCATE PUMP STATION CAPACITY

PLAN - ALTERNATIVE 1B.2

REQUIRED RIGHTS-OF-WAY = 12.71 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING POINT	EXISTING LOCATION B/L STATION	EXISTING LOCATION OFF-SET	EXISTING LOCATION X	EXISTING LOCATION Y	REQUIRED TEXT	REQUIRED LOCATION X	REQUIRED LOCATION Y	LAYOUT C/L NEW ALIGNMENT LOCATION B/L STATION	LAYOUT C/L NEW ALIGNMENT LOCATION X	LAYOUT C/L NEW ALIGNMENT LOCATION Y
1	808+23.20	0.00'			1	3677280.83	485076.31	8+00.0	3677614.47	484880.97
2	808+23.20	90.00'	3677545.22	485056.71	2	3677545.24	485074.03	7+96.21	3678410.68	484880.39
3	817+00.00	90.00'	3678422.01	485055.94	3	3678415.62	485075.38	12+13.11	3678827.06	484859.59
4	819+46.00	65.37'	3678668.30	485031.09	4	3678832.01	485054.58			
								TEMP. CONST. EASEMENT		
					17	3678834.28	484628.24	51	3677280.83	485076.31
					18	3678403.02	484620.07	52	3677280.97	485276.31
					19	3677280.43	484620.90	53	3677680.97	485275.92
								54	3677680.83	485075.92

ALTERNATIVE 1B.2
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.8 TO 829+00	12.71 ACRES
829+00 TO 850+23.15	9.60 ACRES
850+23.15 TO 866+23.15	8.79 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	31.10 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	12.26 ACRES

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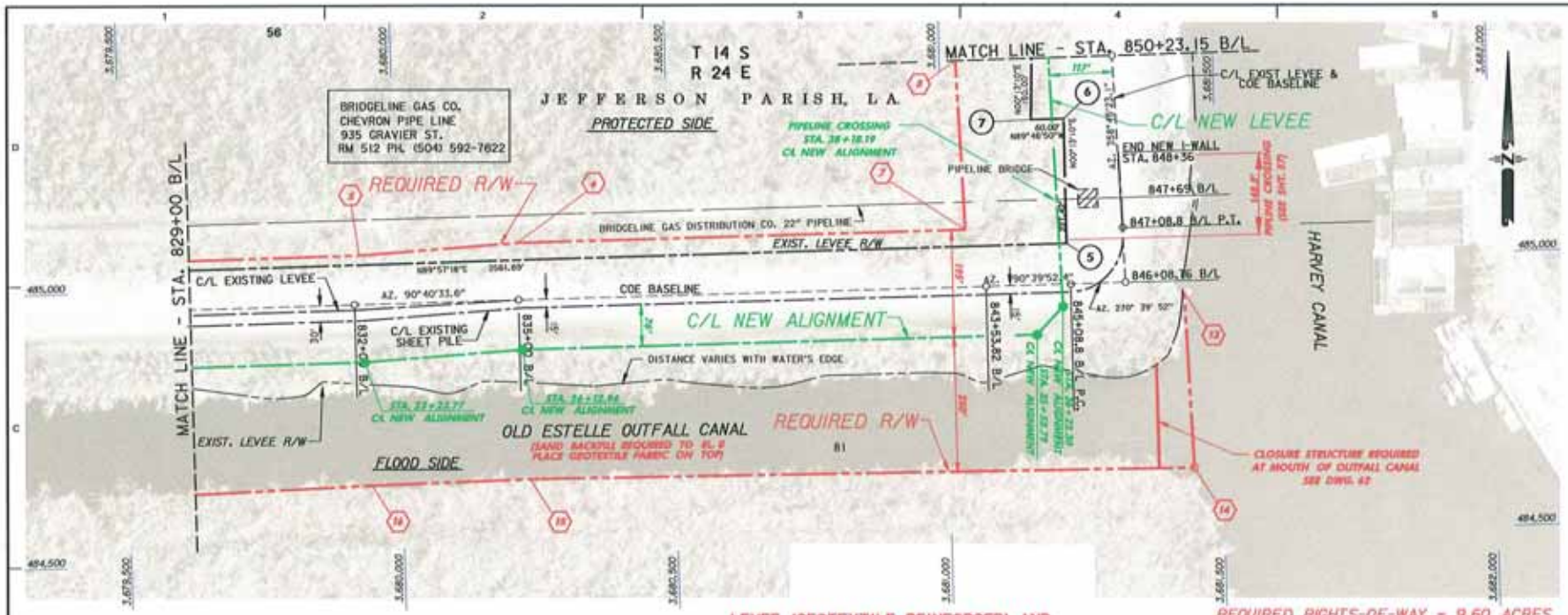
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HSDRRS-2 HURRICANE PROTECTION, NEW ORLEANS, LOUISIANA O.D. ESTELLE PUMP STATION, CHAPTER 2 TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.2
BL STA. 809+03.80-STA. 829+00.00

SHEET IDENTIFICATION NUMBER
21



REQUIRED RIGHTS-OF-WAY - 9.60 ACRES

LEVEE (GEOTEXTILE REINFORCED) AND RELOCATE PUMP STATION CAPACITY

PLAN - ALTERNATIVE 1B.2

RIGHTS OF WAY											
EXISTING					REQUIRED			LAYOUT CL NEW ALIGNMENT			
POINT	LOCATION				TEXT	LOCATION		CL STATION	LOCATION		
	BL STATION	OFF-SET	X	Y		X	Y		X	Y	
5	845+08.00	69.13'	3681224.05	485037.42	5	3679932.58	485054.06	33+33.77	3679937.47	484889.07	
6	849+08.30	90.00'	3681224.94	485264.84	4	3680221.14	485048.36	36+12.94	3680225.88	484873.35	
7	849+10.50	150.03'	3681164.94	485265.07	7	3681039.68	485067.64	35+32.79	3681146.13	484872.53	
					8	3681029.53	485276.65	36+22.30	3681214.49	484922.46	
					13	3681436.71	484941.84				
					14	3681447.17	484622.38				
					15	3680232.41	484637.36				
					16	3679944.30	484634.00				

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

US ARMY CORPS OF ENGINEERS

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

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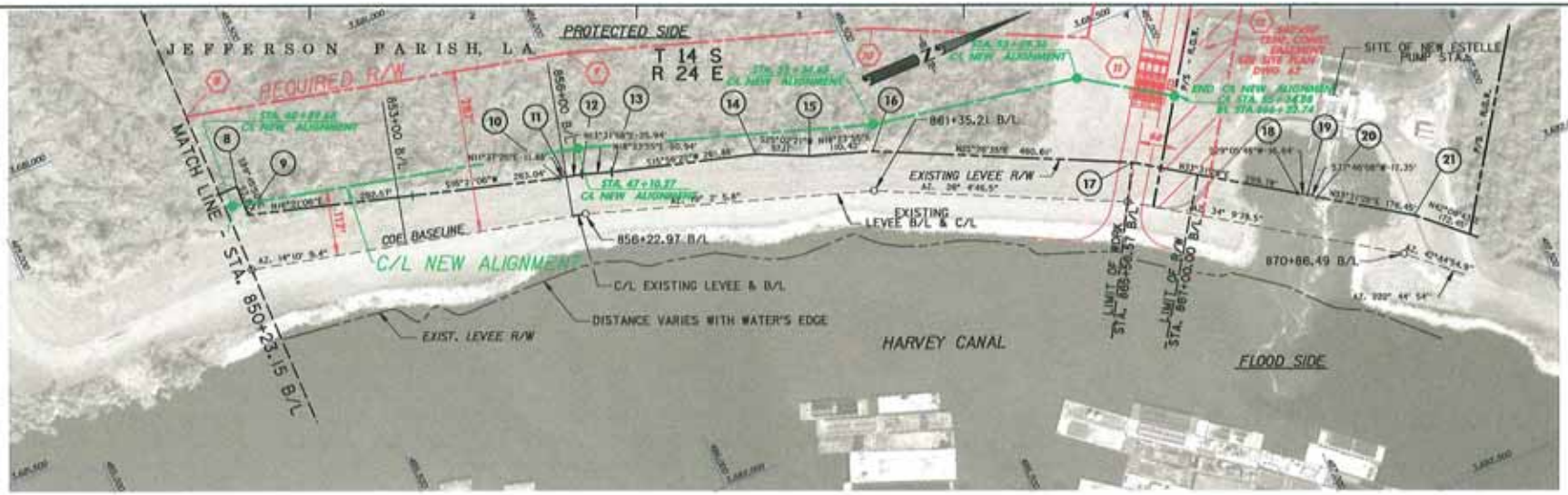
ENGINEERING ALTERNATIVE REPORT - HSDRRS-1B.2 HARVEY CANAL - LEVEE RELOCATION - PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.2
BL STA. 829+00-STA. 850+23.15

SHEET IDENTIFICATION NUMBER
22



LEVEE (GEOTEXTILE REINFORCED) AND
RELOCATE PUMP STATION CAPACITY

PLAN - ALTERNATIVE 1B.2

REQUIRED RIGHTS-OF-WAY - 8.79 ACRES
TEMP. CONST. EASEMENT - 0.98 ACRES

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

POINT	EXISTING LOCATION B/L STATION	EXISTING LOCATION OFF-SET	EXISTING LOCATION X	EXISTING LOCATION Y	REQUIRED TEXT	REQUIRED LOCATION X	REQUIRED LOCATION Y
8	850+23.15	149.30'	3681170.97	485410.21			
9	850+33.19	96.93'	3681224.76	485410.00	8	3681021.31	47176.55
10	855+88.11	69.84'	3681381.23	485943.12	9	3681180.89	47839.74
11	855+99.95	70.00'	3681383.63	485954.76	10	3681352.02	486554.08
12	856+00.00	70.25'	3681390.10	485981.63	11	3681516.59	486899.93
13	856+70.93	70.14'	3681406.76	486031.70	12	3681223.57	487095.04
14	859+32.58	81.20'	3681477.75	486280.11			
15	860+29.00	70.15'	3681518.21	486366.70			
16	861+35.21	70.22'	3681553.20	486471.84			
17	865+86.57	70.17'	3681751.61	486888.80			
18	868+81.40	70.00'	3681917.17	487138.66			
19	868+97.99	71.29'	3681925.25	487153.20			
20	869+15.29	70.00'	3681935.98	487167.05			
21	870+86.49	70.20'	3682033.35	487314.00			

LAYOUT C/L NEW ALIGNMENT

C/L STATION	LOCATION X	LOCATION Y
40+89.68	3681199.20	47189.58
47+10.27	3681344.47	47792.92
53+34.65	3681510.02	48290.48
53+59.36	3681575.75	48455.94
55+34.88	3681672.46	48802.56

TEMP. CONST. EASEMENT

51	3681779.84	486931.41
52	3681327.79	487230.96
53	3681491.25	487229.40
54	3681829.00	487005.60

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

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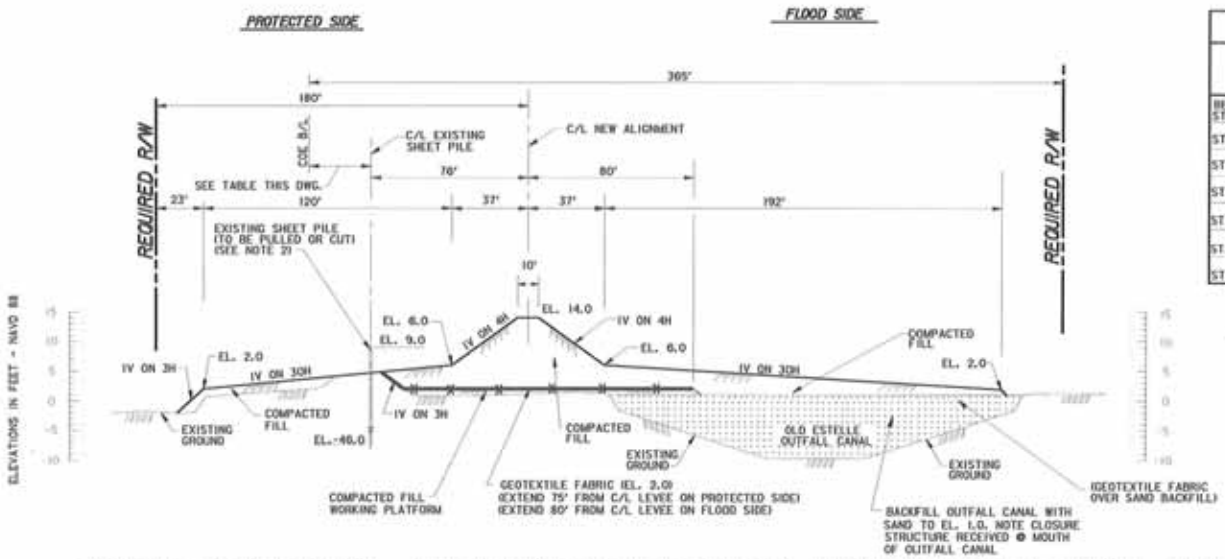
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY TECHNICAL DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HSDRRS PHASE 2 PROTECTION AND RELOCATION OF PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.2
B/L STA. 850+23.15 - STA. 866+32.74

SHEET IDENTIFICATION NUMBER
23

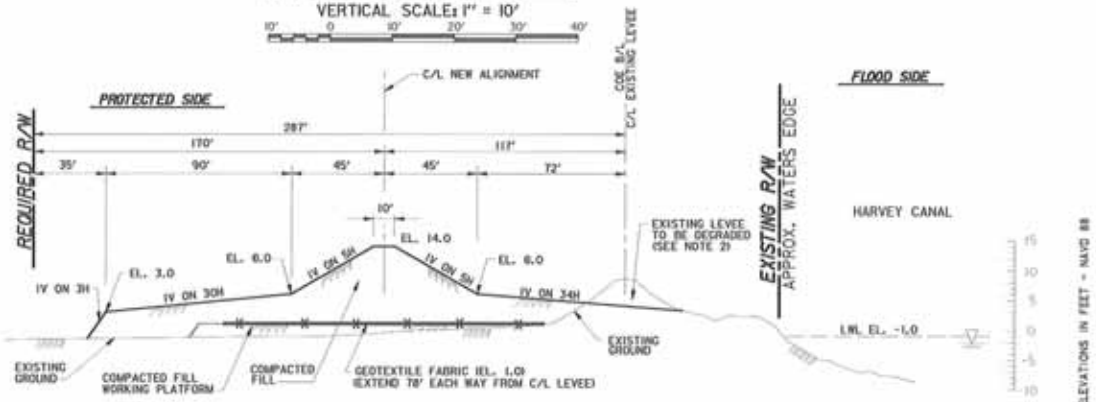


TYPICAL DESIGN SECTION - LEVEE (GEOTEXTILE REINFORCED) ALONG OLD ESTELLE OUTFALL CANAL

STA. 809+03.80 B/L TO STA. 846+94.75 B/L

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'



TYPICAL DESIGN SECTION - LEVEE (GEOTEXTILE REINFORCED) ALONG HARVEY CANAL

STA. 848+43.25 B/L TO STA. 864+84.82 B/L

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

B/L TO EXISTING C/L DISTANCE

FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (IN ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'

NOTES:

1. STA. 846+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. S7)
2. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
3. EL. 14.0 IS PROJECT GRADE.
4. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
5. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.
6. GEOTEXTILE FABRIC SHALL HAVE A TENSILE STRENGTH OF 27,400 LBS/FT. (AT 5% STRAIN).

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

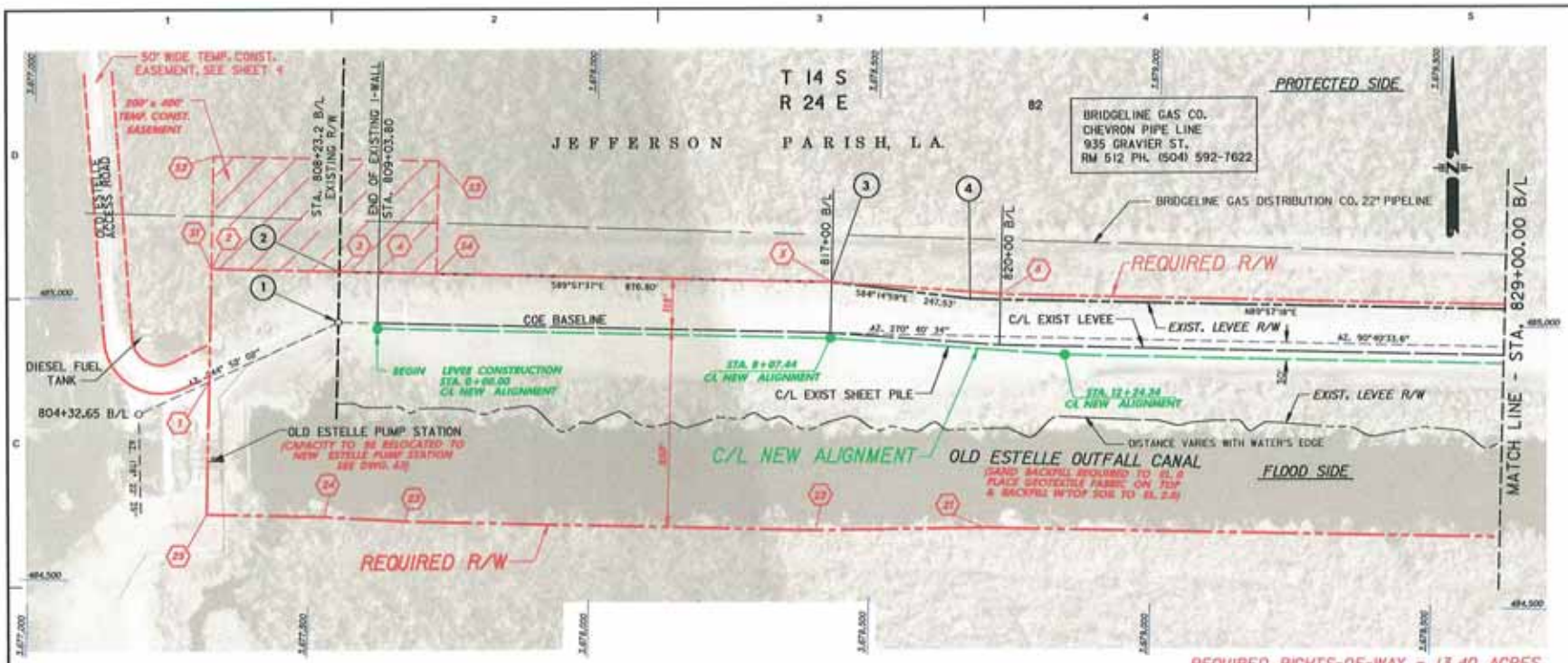
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ALTERNATIVE 1B.2
TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER
24

ALTERNATIVE 1B.3

EXISTING ALIGNMENT–LEVEE (SOIL MIXING COLUMNS) AND RELOCATE OLD ESTELLE PUMP STATION CAPACITY TO NEW ESTELLE PUMP STATION



REQUIRED RIGHTS-OF-WAY = 13.40 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
	LOCATION					LOCATION			LOCATION	
POINT	B/L STATION	OFF-SET	X	Y	POINT	X	Y	C/L STATION	X	Y
1	808+23.20	0.00'			1	3677317.12	484856.69	0+00.0	3677614.53	484956.98
2	808+23.20	90.00'	3677545.22	485056.71	2	3677317.30	485056.91	8+07.44	3678421.97	484956.38
3	817+00.00	90.00'	3678422.01	485055.94	3	3677545.22	485056.71	12+24.24	3678838.35	484935.58
4	819+46.00	65.37'	3678668.30	485031.09	4	3677614.61	485056.68			
					5	3678424.19	485055.94	TEMP. CONST. EASEMENT		
					6	3678724.38	485048.64	31	3677545.22	485072.03
					21	3678700.88	484625.71	32	3677545.38	485272.02
					22	3678403.02	484615.07	33	3677945.38	485271.73
					23	3677672.37	484615.61	34	3677945.22	485071.73
					24	3677526.62	484620.71			
					25	3677316.92	484620.87			

LEVEE (SOIL MIXING COLUMNS) AND RELOCATE PUMP STATION CAPACITY

PLAN - ALTERNATIVE 1B.3

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

ALTERNATIVE 1B.3
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.8 TO 829+00	13.40 ACRES
829+00 TO 850+23.15	1.73 ACRES
850+23.15 TO 866+23.15	3.50 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	18.63 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	12.26 ACRES

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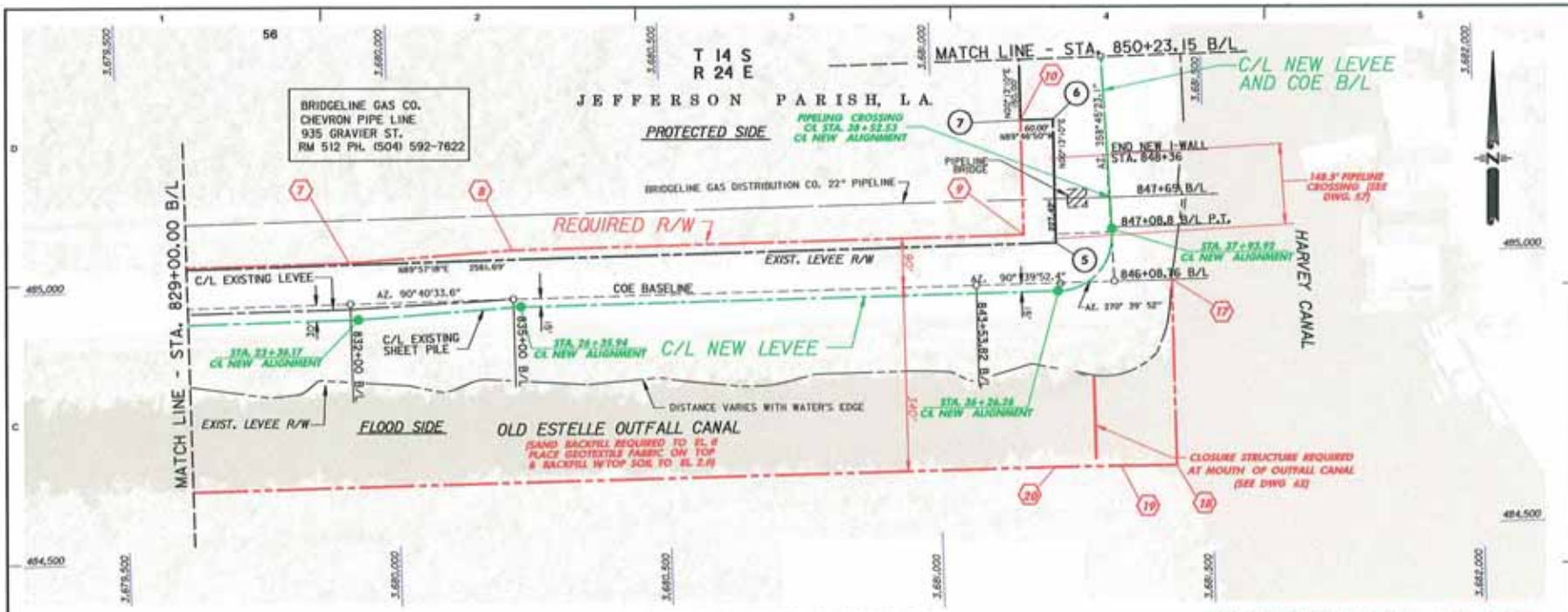
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - REVISIONS HARVEY CANAL - JEFFERSON PARISH, LOUISIANA
OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.3
B/L STA. 809+03.80-STA. 829+00.00

SHEET IDENTIFICATION NUMBER
25



LEVEE (SOIL MIXING COLUMNS) AND RELOCATE PUMP STATION CAPACITY

PLAN - ALTERNATIVE 1B.3

REQUIRED RIGHTS-OF-WAY - 1.73 ACRES

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
POINT	LOCATION				TEXT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
5	845+08.00	69.12'	3681224.05	485037.42	7	3679921.78	485039.63	33+36.17	3679935.56	484935.06
6	849+08.30	90.00'	3681224.94	485264.84	8	3680221.80	485054.35	36+35.94	3680234.97	484940.90
7	849+10.50	150.03'	3681164.94	485265.07	9	3681164.76	485053.57	36+26.26	3681225.04	484948.47
					10	3681164.94	485265.07	37+93.92	3681227.86	485059.41
					17	3681435.82	484963.39			
					18	3681435.62	484672.42			
					19	3681332.89	484623.69			
					20	3681212.60	484625.17			

LEGEND

- ○ = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

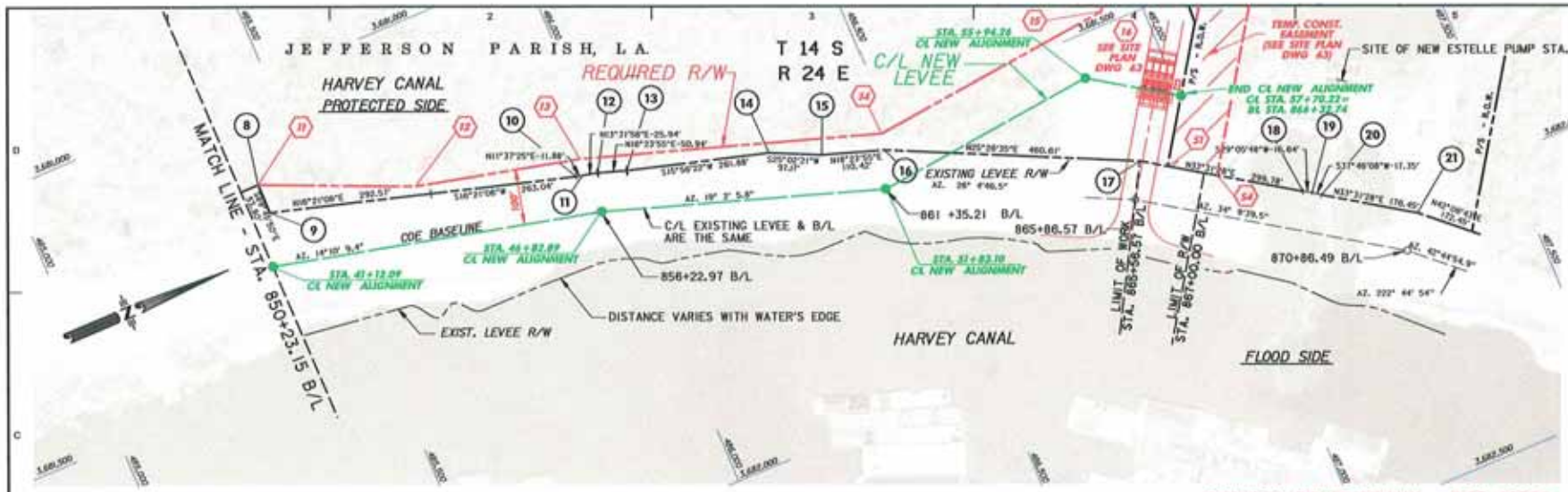
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

PLAN - ALTERNATIVE 1B.3
BL STA. 829+00.00-STA. 850+23.15

SHEET IDENTIFICATION NUMBER
26



REQUIRED RIGHTS-OF-WAY - 3.50 ACRES
TEMP. CONST. EASEMENT - 0.98 ACRES

LEVEE (SOIL MIXING COLUMNS) AND RELOCATE PUMP STATION CAPACITY

PLAN - ALTERNATIVE IB.3

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
	LOCATION					LOCATION			LOCATION	
POINT	B/L STATION	OFF-SET	X	Y	TEXT	X	Y	B/L STATION	X	Y
8	850+23.15	149.30'	3681170.97	485410.21						
9	850+33.19	96.93'	3681224.76	485410.00	11	3681170.96	485410.21	41+12.09	3681316.66	485377.60
10	855+88.11	69.84'	3681381.23	485943.12	12	3681284.23	485670.13	46+82.89	3681456.70	485959.30
11	855+99.95	70.00'	3681383.63	485954.76	13	3681354.46	485961.79	51+83.10	3681618.76	486446.72
12	856+00.00	70.25'	3681390.30	485981.63	14	3681523.87	486478.39	53+38.86	3681774.11	486773.19
13	856+70.93	70.14'	3681406.76	486031.70	15	3681475.34	486936.74	55+94.26	3681575.79	486855.63
14	859+32.58	81.20'	3681477.75	486280.11	16	3681223.57	487095.04	57+70.22	3681472.67	487002.42
15	860+29.00	70.15'	3681518.21	486366.70						
16	861+35.21	70.22'	3681553.20	486471.84						
17	865+86.57	70.17'	3681751.61	486889.80						
18	868+81.40	70.00'	3681917.17	487138.46						
19	868+97.99	71.29'	3681925.25	487153.20						
20	869+15.29	70.00'	3681935.98	487167.05						
21	870+86.49	70.20'	3682033.35	487314.00						

TEMP. CONST. EASEMENT		
51	3681779.84	486931.41
52	3681327.75	487230.96
53	3681491.25	487329.40
54	3681829.00	487005.60

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

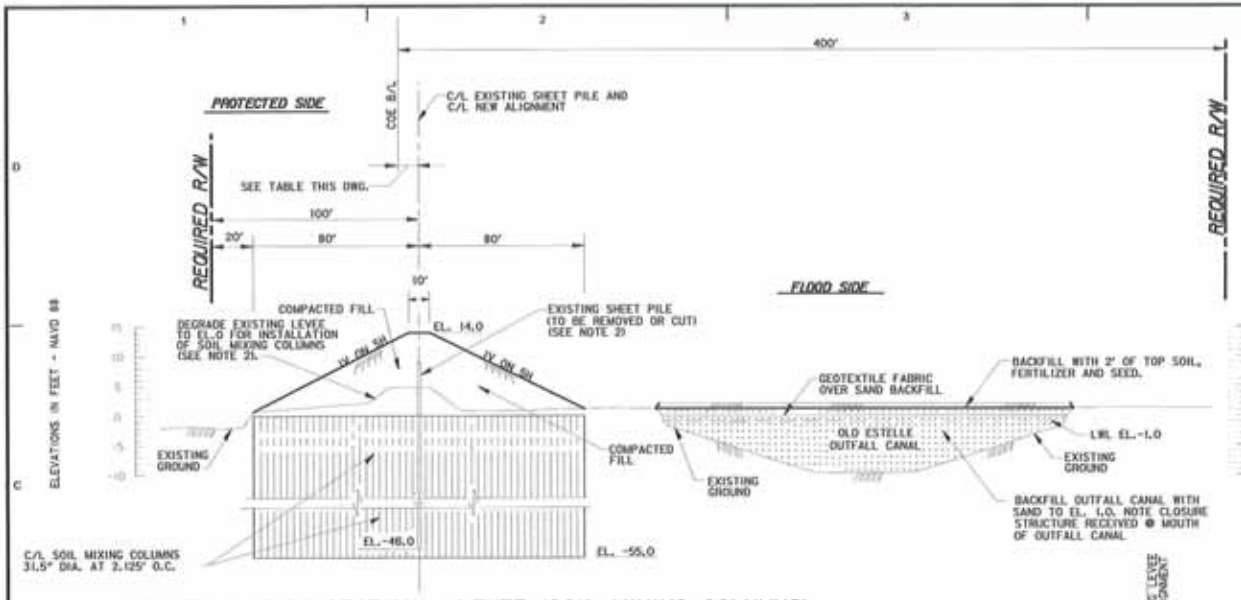
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HIBU-1&2 HARVEY CANAL PUMPING STATION - ALTERNATIVE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 1B.3
B.L STA. 850+23.15 - STA. 869+32.74

SHEET IDENTIFICATION NUMBER
27



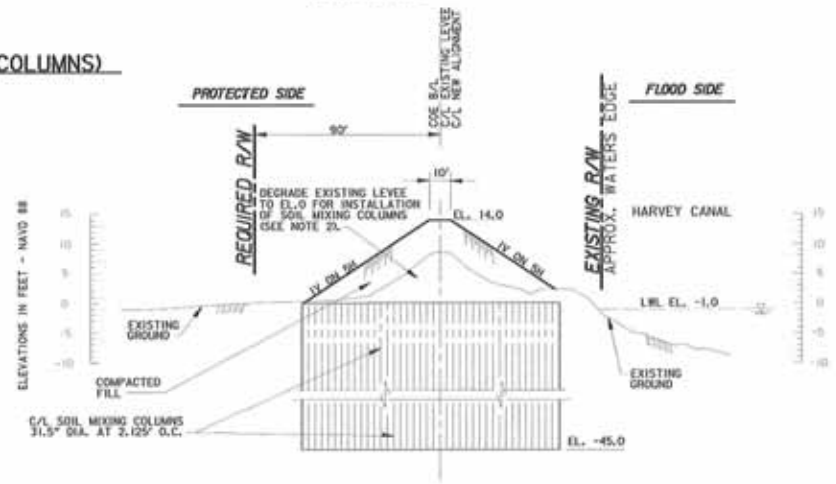
TYPICAL DESIGN SECTION - LEVEE (SOIL MIXING COLUMNS) ALONG OLD ESTELLE OUTFALL CANAL

STA. 809+03.80 B/L TO STA. 846+94.75 B/L

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (ON ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'



TYPICAL DESIGN SECTION - LEVEE (SOIL MIXING COLUMNS) ALONG HARVEY CANAL

STA. 848+43.25 B/L TO STA. 864+84.82 B/L

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

NOTES:

1. STA. 846+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. 5T)
2. FOR SOIL MIXING COLUMNS, NO MORE THAN 500 LF OF EXISTING LEVEE IS TO BE REMOVED AT ANY ONE TIME.
3. FOR SOIL MIXING COLUMNS DETAILS, (SEE DWG. NO. 7S).
4. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
5. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.

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U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

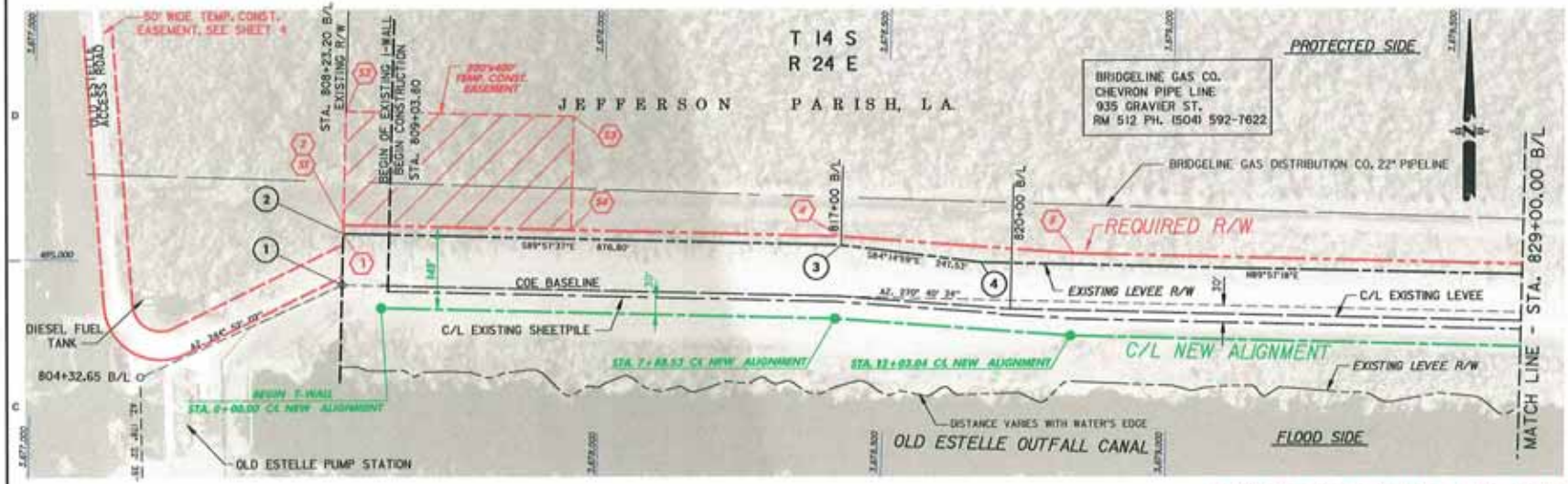
ALTERNATIVE 1B.3 TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER 28

ALTERNATIVE 2

EXISTING ALIGNMENT

FLOODWALL (2057 ELEVATION)



REQUIRED RIGHTS-OF-WAY = 0.85 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

FLOODWALL
PLAN - ALTERNATIVE 2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
	LOCATION					LOCATION			LOCATION	
POINT	B/L STATION	OFF-SET	X	Y	TEXT	X	Y	C/L STATION	X	Y
1	808+23.20	0.00'			1	3677545.22	485056.71	8+00.00	3677825.79	484927.07
2	808+23.20	90.00'	3677545.22	485056.71	2	3677545.22	485072.15	7+88.53	3678414.23	484926.27
3	817+00.00	90.00'	3678422.01	485055.94	3	3677825.83	485072.07	12+03.04	3678838.32	484905.59
4	819+46.00	65.37'	3678668.30	485031.09	4	3678417.92	485071.24			
					5	3678833.91	485050.38	TEMP. CONST. EASEMENT		
								51	3677543.33	485072.02
								52	3677545.38	485272.02
								53	3677945.38	485271.73
								54	3677945.33	485071.73

ALTERNATIVE 2.1
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.80 TO 829+00.00	0.85 ACRES
829+00.00 TO 850+23.15	1.63 ACRES
850+23.15 TO 866+23.15	4.68 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	7.80 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	13.20 ACRES

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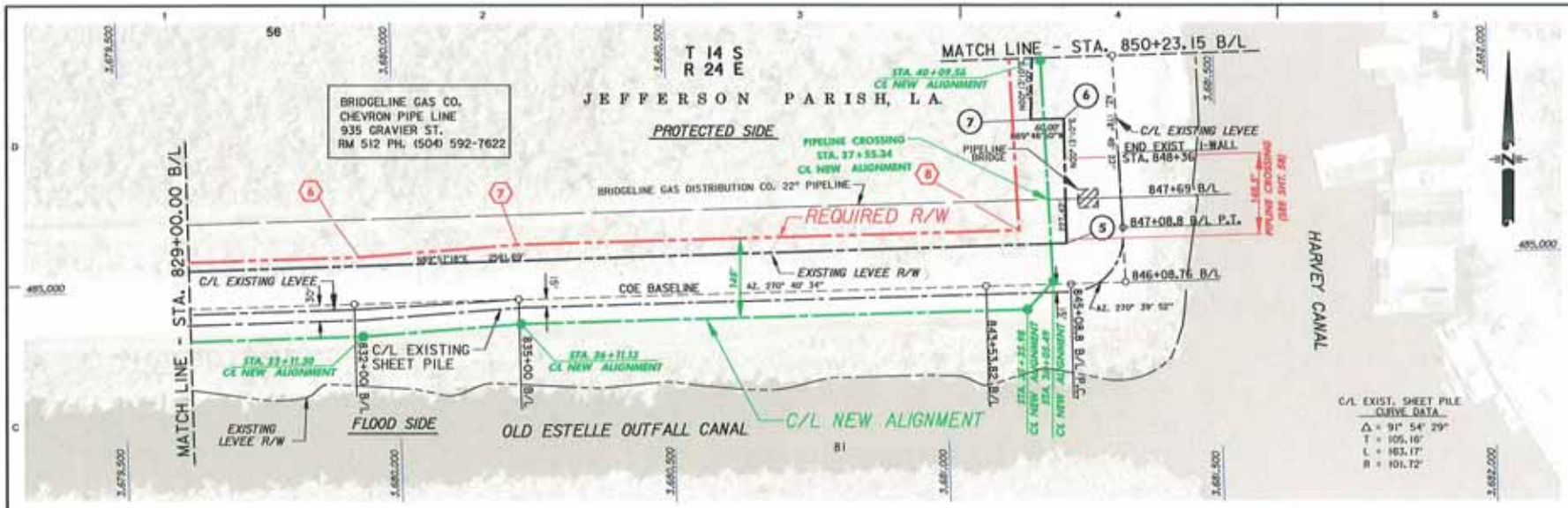
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HURRICANE PROTECTION FOR HARVEY & JEFFERSON PARISHES
OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 2
B/L STA. 809+03.80 - STA. 829+00.00

SHEET IDENTIFICATION NUMBER
29



REQUIRED RIGHTS-OF-WAY = 1.63 ACRES

FLOODWALL
PLAN - ALTERNATIVE 2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- ○ = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY								LAYOUT C/L NEW ALIGNMENT		
EXISTING					REQUIRED					
POINT	LOCATION				TEXT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
5	845+08.00	69.12'	3681224.05	485037.42	6	3679932.68	485050.06	23+11.20	3679934.32	484905.06
6	849+08.30	90.09'	3681224.94	485264.84	7	3680221.24	485064.36	28+11.13	3680224.76	484919.25
7	849+30.50	150.03'	3681164.94	485265.07	8	3681127.83	485063.55	33+35.98	3681149.61	484918.54
								36+05.49	3681197.98	484968.47
								40+09.56	3681184.76	485372.32

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

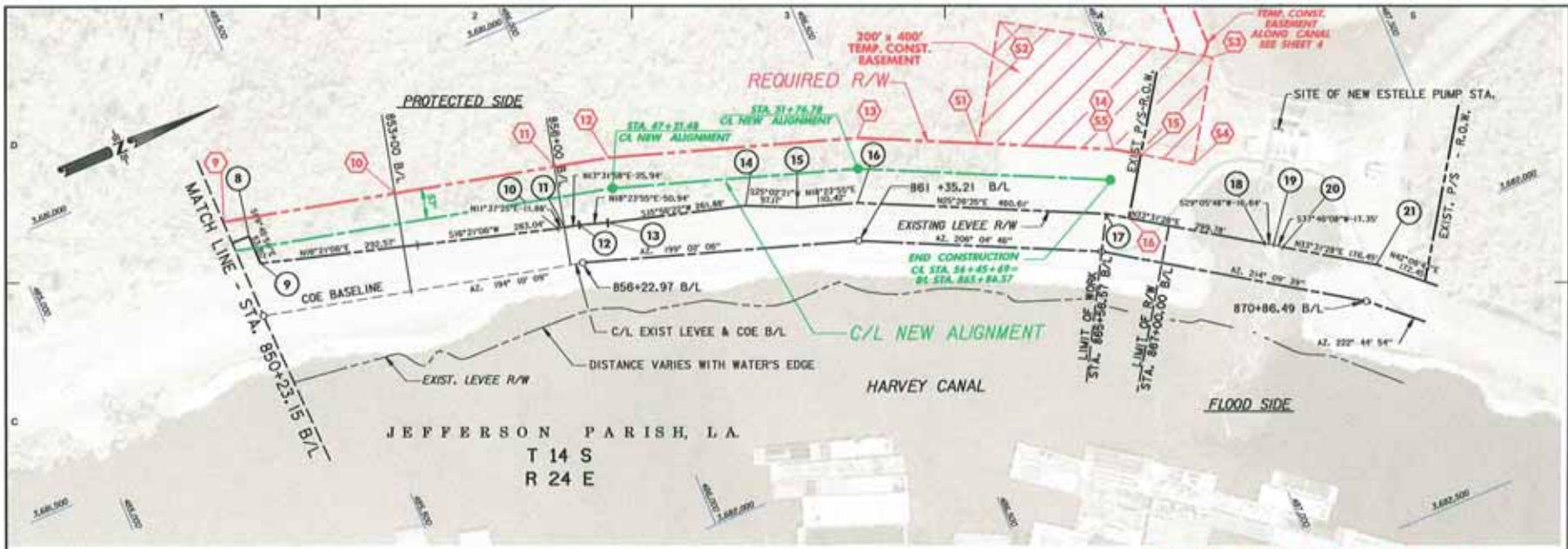
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING & CONSULTING INC. "Excellence in Engineering"

ENGINEERING ALTERNATIVE REPORT - HBR/HLS HARVEY CANAL LEVEE IMPROVEMENT O.E. ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 2
B/L STA. 829+00.00 - STA. 850+23.15

SHEET IDENTIFICATION NUMBER
30



REQUIRED RIGHTS-OF-WAY = 4.60 ACRES
TEMP. CONST. EASEMENT = 1.92 ACRES

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
POINT	LOCATION				TEXT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
8	850+23.15	149.30'	3681170.97	485410.21	9	3681137.53	485378.16	47+21.48	3681351.41	486064.46
9	850+33.19	96.93'	3681224.76	485410.00	10	3681202.56	485489.78	51+76.78	3681495.34	486496.48
10	855+88.11	69.84'	3681381.23	485943.12	11	3681272.79	485981.43	56+45.69	3681496.63	486919.89
11	855+99.95	70.00'	3681383.63	485954.76	12	3681296.56	486080.16			
12	856+00.00	70.25'	3681390.10	485981.63	13	3681442.17	486517.80			
13	856+70.93	70.14'	3681406.76	486031.70	14	3681646.89	486948.02			
14	859+32.58	81.20'	3681477.75	486280.11	15	3681675.15	486990.68			
15	860+29.00	70.15'	3681518.21	486366.70	16	3681775.18	486934.39			
16	861+35.21	70.22'	3681553.20	486471.84						
17	865+86.57	70.17'	3681751.61	486888.80						
18	868+81.40	70.00'	3681917.17	487138.66						
19	868+97.99	71.29'	3681925.25	487153.20						
20	869+15.29	70.00'	3681935.98	487167.05						
21	870+86.49	70.20'	3682033.35	487314.00						

TEMP. CONST. EASEMENT		
51	3681539.43	486720.53
52	3681245.36	489644.14
53	3681360.26	487181.52
54	3681729.04	487074.33
55	3681646.89	486948.02

FLOODWALL
PLAN - ALTERNATIVE 2

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

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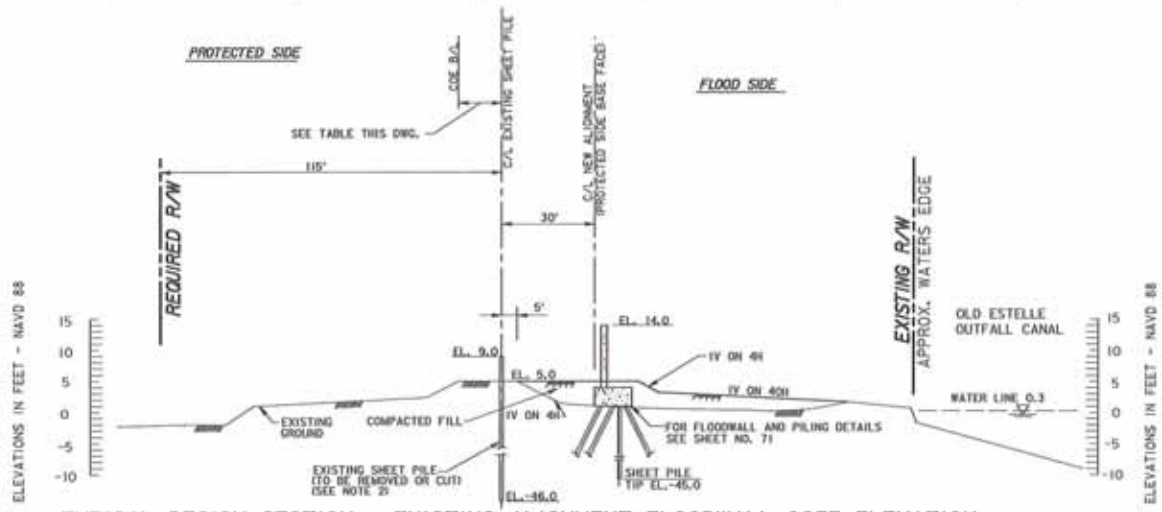
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING AL TERNATIVE REPORT - HIRM-1962 HURRICANE PROTECTION PROJECT PLAN - ALTERNATIVE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 2
B/L STA. 850+23.15 - STA. 865+86.57

SHEET IDENTIFICATION NUMBER
31



TYPICAL DESIGN SECTION - EXISTING ALIGNMENT FLOODWALL 2057 ELEVATION ALONG OLD ESTELLE OUTFALL CANAL

STA. 809+03.80 B/L TO STA. 846+94.75 B/L

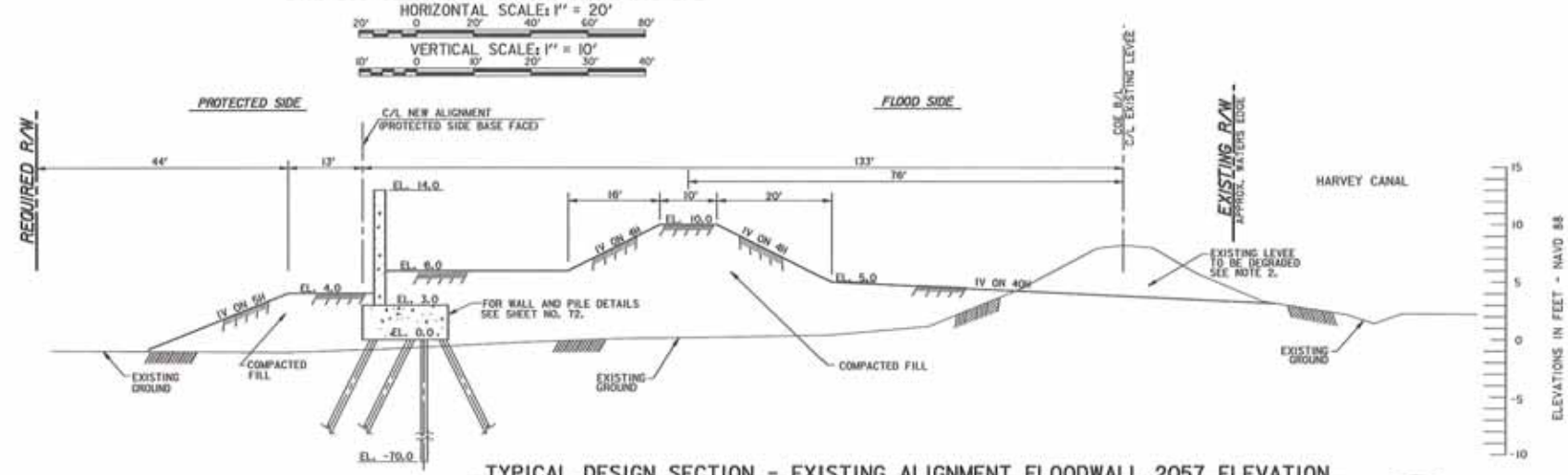
HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 10'

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (ON ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'

NOTES:

1. STA. 846+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. 58)
2. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
3. EL. 14.0 IS PROJECT GRADE.
4. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
5. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.



TYPICAL DESIGN SECTION - EXISTING ALIGNMENT FLOODWALL 2057 ELEVATION ALONG HARVEY CANAL

STA. 848+43.25 B/L TO STA. 865+86.57 B/L

HORIZONTAL SCALE: 1" = 10'

VERTICAL SCALE: 1" = 5'

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ALTERNATIVE 2
TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER
32

ALTERNATIVE 3

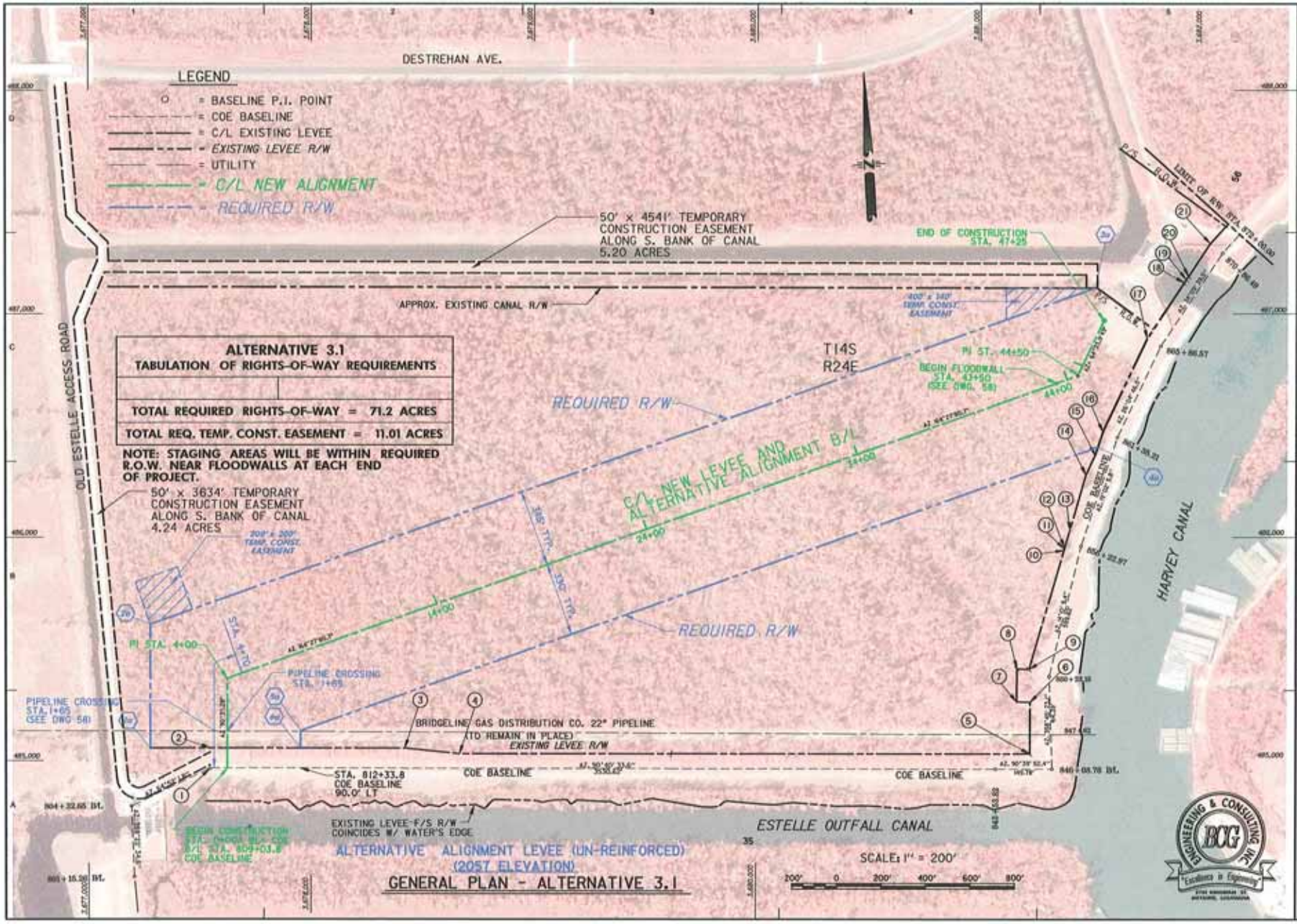
ALTERNATIVE ALIGNMENT LEVEE

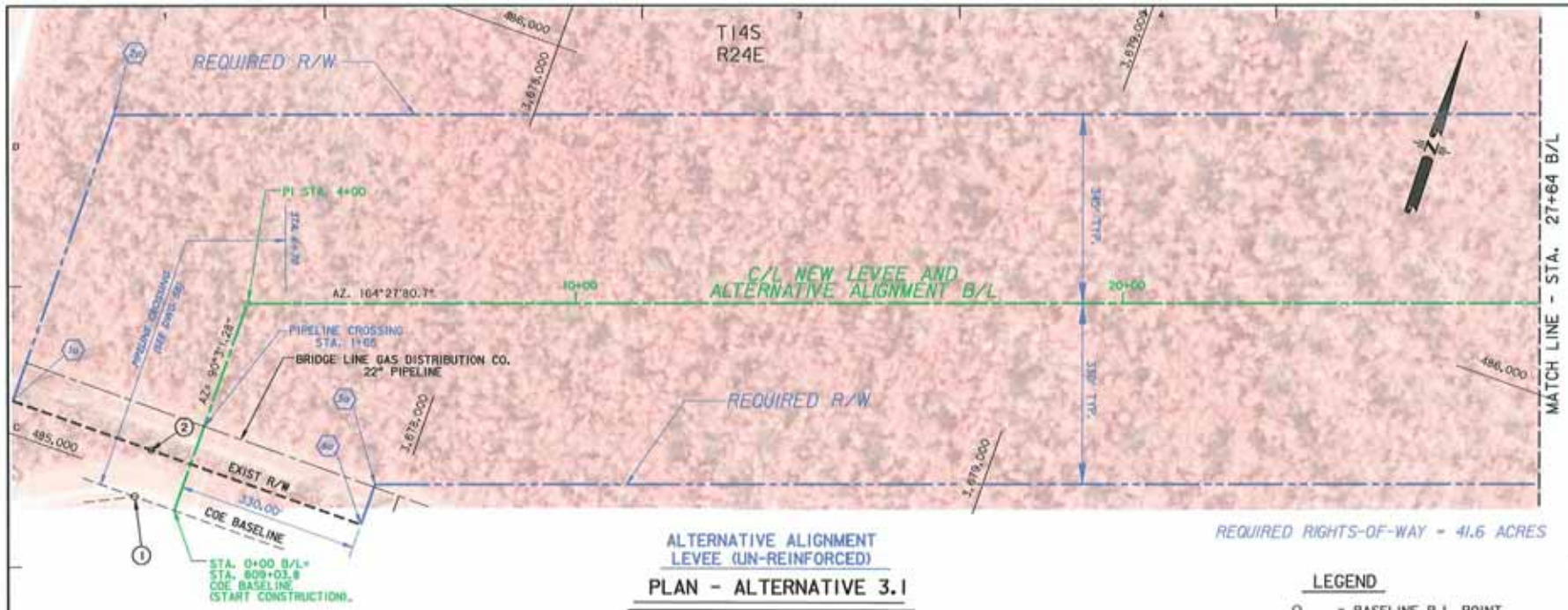
(2057 ELEVATION)

ALTERNATIVE 3.1

ALTERNATIVE ALIGNMENT LEVEE

(UN-REINFORCED)


DESTREHAN AVE.
LEGEND
= BASELINE P.I. POINT
= COE BASELINE
= C/L EXISTING LEVEE
= EXISTING LEVEE R/W
= UTILITY
= C/L NEW ALIGNMENT
= REQUIRED R/W
50' x 4541' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 5.20 ACRES
END OF CONSTRUCTION STA. 47+25
APPROX. EXISTING CANAL R/W
400' x 340' TEMP. CONST. EASEMENT
T14S
R24E
PI ST. 44+50
BEGIN FLOODWALL STA. 43+50 (SEE DWG. 58)
REQUIRED R/W
C/L NEW LEVEE AND ALTERNATIVE ALIGNMENT B/L
OLD ESTELLE ACCESS ROAD
50' x 3634' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 4.24 ACRES
200' x 200' TEMP. CONST. EASEMENT
PI STA. 4+00
PIPELINE CROSSING STA. 1+65
PIPELINE CROSSING STA. 1+65 (SEE DWG 58)
BRIDGELINE GAS DISTRIBUTION CO. 22" PIPELINE (TO REMAIN IN PLACE)
EXISTING LEVEE R/W
STA. 812+33.8 COE BASELINE 90.0' LT
COE BASELINE
EXISTING LEVEE F/S R/W COINCIDES W/ WATER'S EDGE
ESTELLE OUTFALL CANAL
HARVEY CANAL
ALTERNATIVE ALIGNMENT LEVEE (UN-REINFORCED) (20ST ELEVATION)
GENERAL PLAN - ALTERNATIVE 3.1
SCALE: 1" = 200'
200' 0 200' 400' 600' 800'
ALTERNATIVE 3.1
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS
TOTAL REQUIRED RIGHTS-OF-WAY = 71.2 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT = 11.01 ACRES
NOTE: STAGING AREAS WILL BE WITHIN REQUIRED R.O.W. NEAR FLOODWALLS AT EACH END OF PROJECT.
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT
BOG ENGINEERING & CONSULTING INC
GENERAL PLAN ALTERNATIVE 3.1
SHEET IDENTIFICATION NUMBER 33



ALTERNATIVE ALIGNMENT
LEVEE (UN-REINFORCED)

PLAN - ALTERNATIVE 3.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY = 41.6 ACRES

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY				
POINT	B/L STA	OFFSET	X	Y
1	808+23.20	0.00'		
2	808+23.20	90.00'	3677545.22	485056.71

REQUIRED R.O.W.		
POINT	LOCATION X	LOCATION Y
1a	3677276.79	485056.95
3a	3677277.28	485638.34
5a	3677951.86	485133.54
4a	3677951.79	485056.35

LAYOUT C/L NEW ALIGNMENT		
C/L STATION	LOCATION X	LOCATION Y
0+00.0	3677614.77	484924.15
7+99.73	3678414.23	484926.27
12+14.34	3678828.25	484905.59

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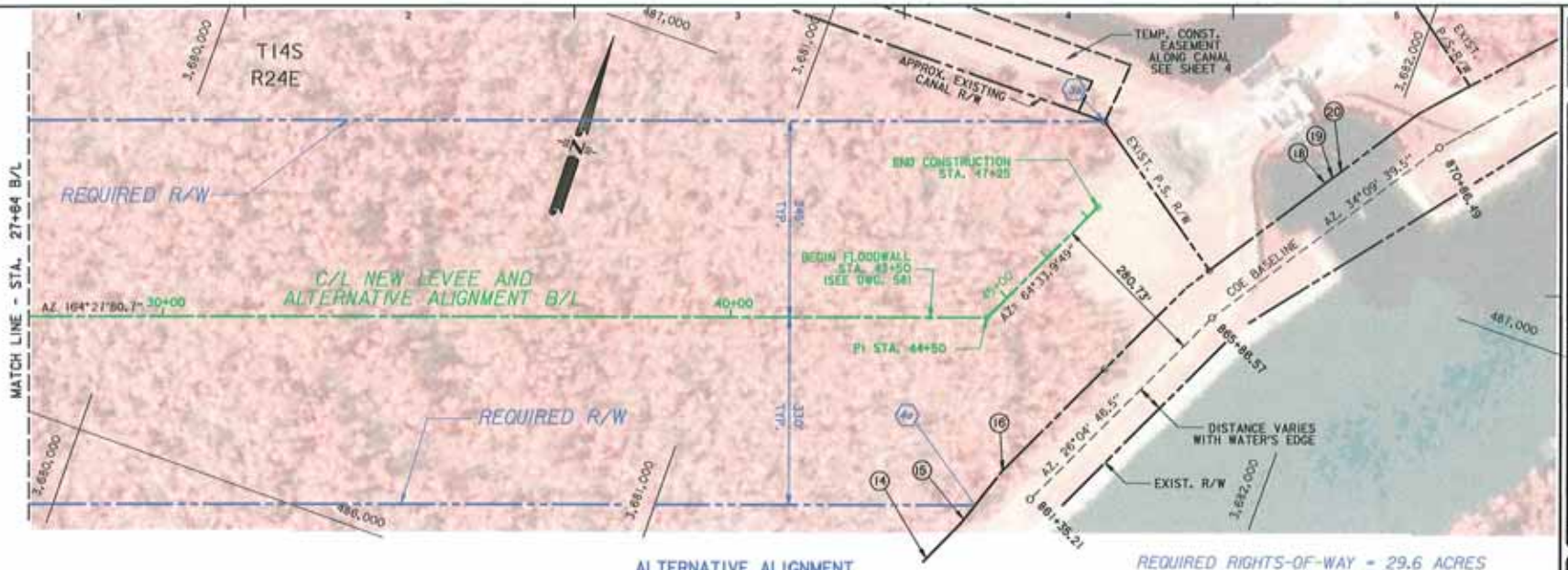
ENGINEERING ALTERNATIVE REPORT - REV-1 &2
HURRICANE PROTECTION WALLS
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 3.1
STA. 0+00-STA. 27+64

SHEET IDENTIFICATION NUMBER
34



ALTERNATIVE ALIGNMENT
LEVEE (UN-REINFORCED)

REQUIRED RIGHTS-OF-WAY = 29.6 ACRES

PLAN - ALTERNATIVE 3.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- ○ = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY				
POINT	BL STA	OFFSET	X	Y
14	859+32.58	81.20'	3681477.75	486280.11
15	860+29.00	70.15'	3681518.21	486366.70
16	861+35.21	70.22'	3681553.20	486471.84
17	865+86.57	70.17'	3681751.61	486888.80
18	868+81.40	70.00'	3681917.17	487138.66
19	868+97.99	71.29'	3681925.25	487153.20
20	869+15.29	70.00'	3681935.98	487167.05

REQUIRED R.O.W.		
POINT	LOCATION X	LOCATION Y
3a	3681517.48	487115.56
4a	3681530.78	486404.01

LAYOUT C/L NEW ALIGNMENT		
C/L STATION	LOCATION X	LOCATION Y
0+00.0	3677614.77	484934.15
7+99.73	3678414.33	484936.27
12+14.54	3679828.25	484905.59

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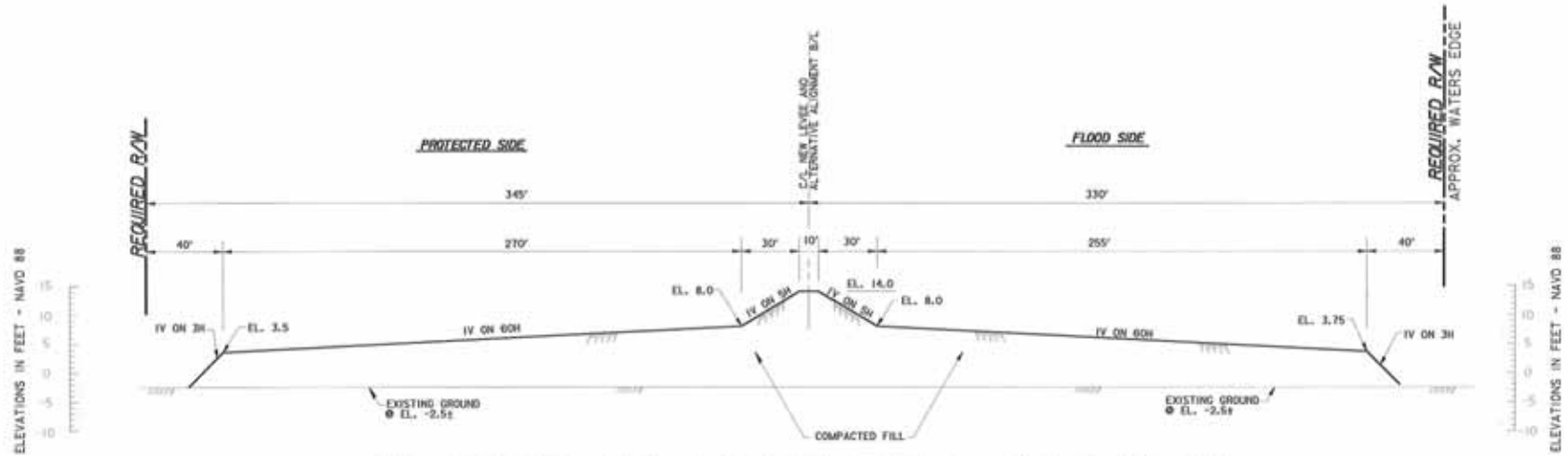
ENGINEERING, ALTERNATIVE REPORT - MR/LNG 2
HARVEY CANAL WEST BANK LEVEES-PHASE 2
OLD ESTELLE PUMPING STATION
TO WEST ESTELLE PUMPING STATION
JEFFERSON PARISH, LOUISIANA

PLAN - ALTERNATIVE 3.1
STA. 27+64-STA. 47+25

SHEET IDENTIFICATION NUMBER
35



TYPICAL DESIGN SECTION - ALTERNATIVE ALIGNMENT - LEVEE (UN-REINFORCED)

STA. 4+70 TO STA. 43+50

HORIZONTAL SCALE: 1" = 30'

VERTICAL SCALE: 1" = 10'

NOTES:

1. STA. 0+00 TO STA. 4+70 PIPELINE CROSSING (SEE DWG. 58)
2. STA. 43+50 TO STA. 47+25 FLOODWALL REQ'D (SEE DWG. 58)
3. ALL STATIONING REFERENCED TO ALTERNATIVE ALIGNMENT BASELINE.
4. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
5. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
6. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.

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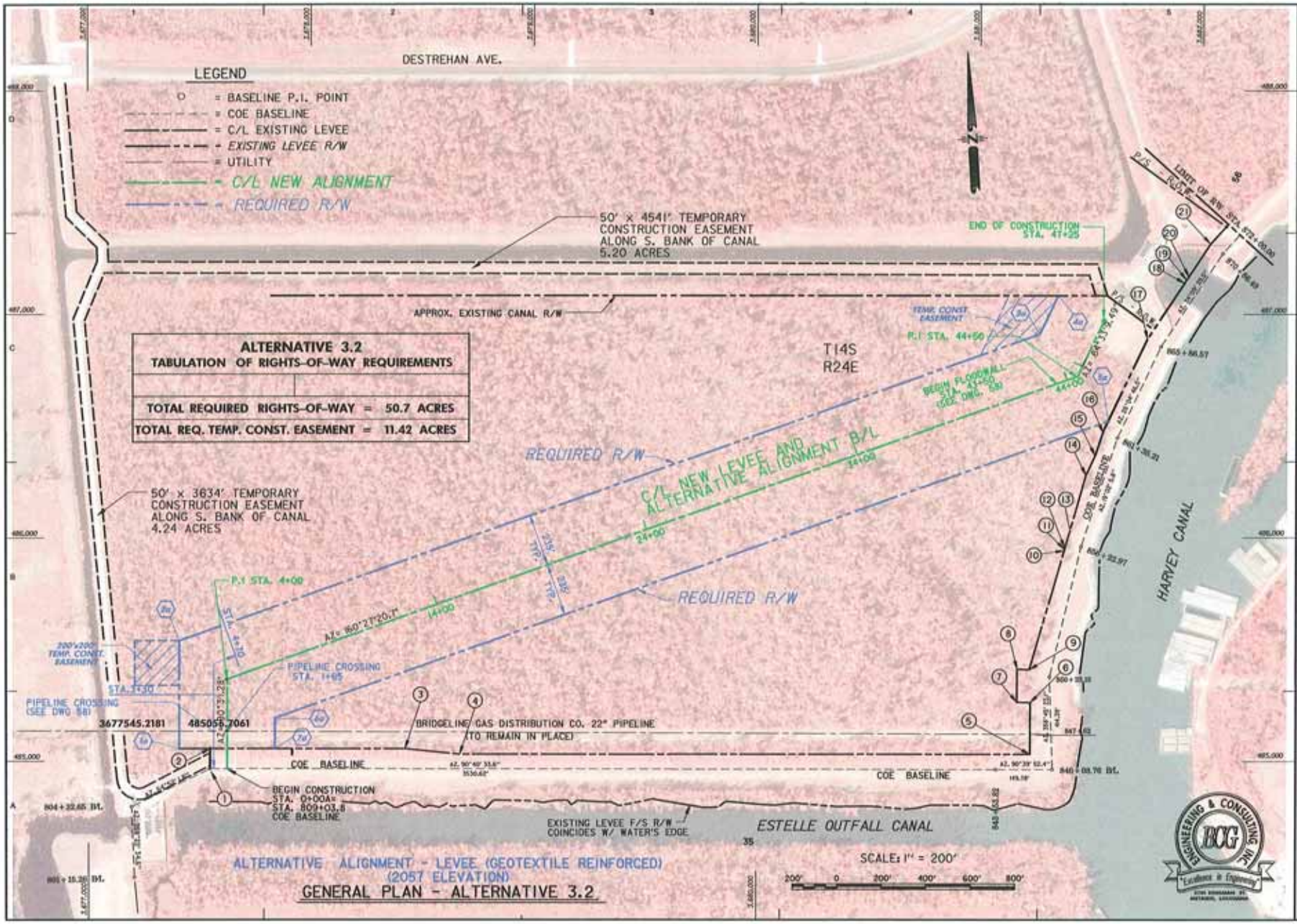
ALTERNATIVE 3.1
TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER
38

ALTERNATIVE 3.2

ALTERNATIVE ALIGNMENT LEVEE

(GEOTEXTILE REINFORCED)


DESTREHAN AVE.
LEGEND
= BASELINE P.I. POINT
= COE BASELINE
= C/L EXISTING LEVEE
= EXISTING LEVEE R/W
= UTILITY
= C/L NEW ALIGNMENT
= REQUIRED R/W
50' x 4541' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 5.20 ACRES
END OF CONSTRUCTION STA. 41+25
APPROX. EXISTING CANAL R/W
TEMP. CONST. EASEMENT
P.I. STA. 44+50
BEGIN FLOODWALL STA. 41+50 (COE DWG. 58)
ALTERNATIVE 3.2
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS
TOTAL REQUIRED RIGHTS-OF-WAY = 50.7 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT = 11.42 ACRES
T14S
R24E
REQUIRED R/W
C/L NEW LEVEE AND ALTERNATIVE ALIGNMENT B/L
50' x 3634' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 4.24 ACRES
P.I. STA. 4+00
REQUIRED R/W
200'x200' TEMP. CONST. EASEMENT
PIPELINE CROSSING STA. 1+05
PIPELINE CROSSING (SEE DWG 58)
3677545.2181
485055.7061
BRIDGELINE GAS DISTRIBUTION CO. 22" PIPELINE (TO REMAIN IN PLACE)
COE BASELINE
BEGIN CONSTRUCTION STA. 0+00= STA. 809+03.8 COE BASELINE
EXISTING LEVEE F/S R/W COINCIDES W/ WATER'S EDGE
ESTELLE OUTFALL CANAL
HARVEY CANAL
ALTERNATIVE ALIGNMENT - LEVEE (GEOTEXTILE REINFORCED) (2057 ELEVATION)
GENERAL PLAN - ALTERNATIVE 3.2
SCALE: 1" = 200'
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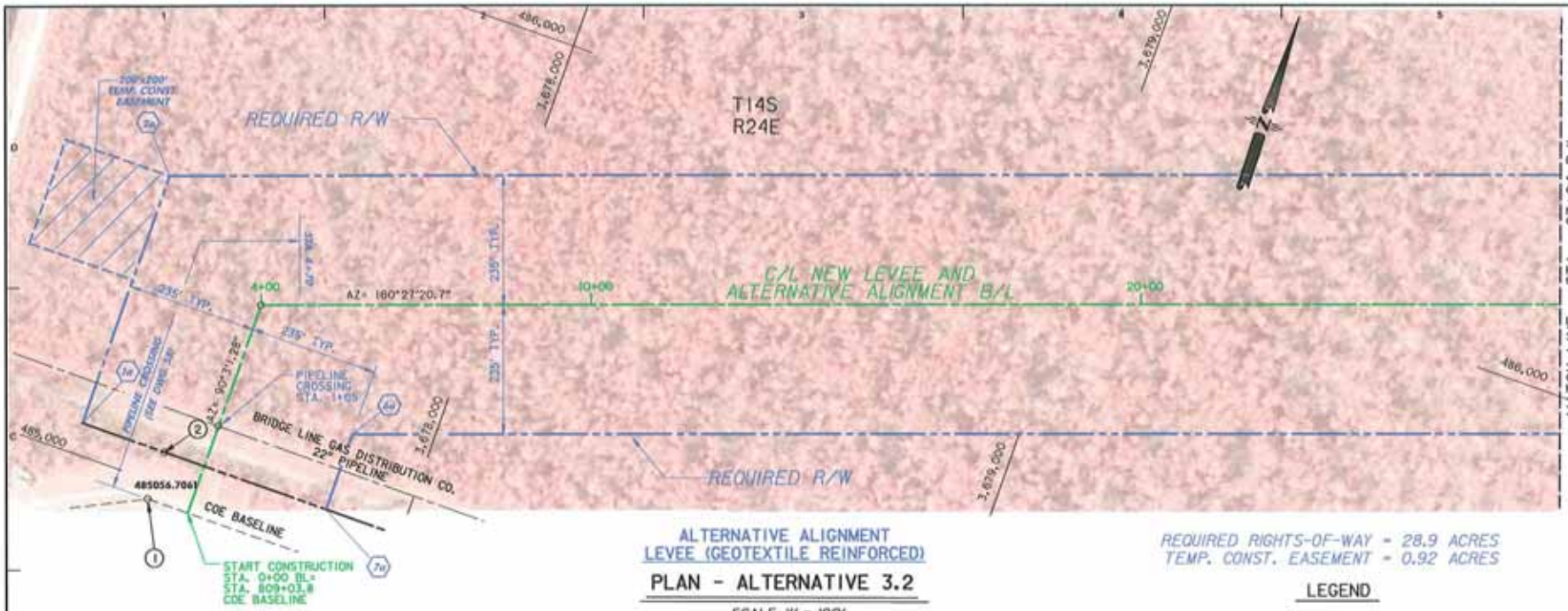
GENERAL PLAN ALTERNATIVE 3.2
SHEET IDENTIFICATION NUMBER
37



ALTERNATIVE ALIGNMENT
LEVEE (GEOTEXTILE REINFORCED)

PLAN - ALTERNATIVE 3.2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY = 28.9 ACRES
TEMP. CONST. EASEMENT = 0.92 ACRES

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY				
POINT	BL STA	OFFSET	X	Y
1	808+23.20	0.00'		
2	808+23.20	90.00'	3677545.22	485056.71

REQUIRED R.O.W.		
POINT	LOCATION X	LOCATION Y
1a	3677407.10	485056.83
2a	3677407.52	485539.74
6a	3677837.22	485193.54
7a	3677837.10	485056.45

LAYOUT C/L NEW ALIGNMENT		
C/L STATION	LOCATION X	LOCATION Y
0+00.0	3677822.37	484944.64
4+00	3677822.02	485344.64

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HEM-96-1
CONSTRUCTION OF LEVEE FOR PHASE 1
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 3.2
STA. 0+00 STA. 27+64

SHEET IDENTIFICATION NUMBER
38

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ALTERNATIVE ALIGNMENT
LEVEE (GEOTEXTILE REINFORCED)

PLAN - ALTERNATIVE 3.2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY - 21.8 ACRES
TEMP. CONST. EASEMENT - 1.06 ACRES

LEGEND

- = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY				
POINT	B/L STA	OFFSET	X	Y
14	859+32.58	81.20'	3681477.75	486280.11
15	860+29.00	70.15'	3681518.21	486366.70
16	861+35.21	70.22'	3681553.20	486471.84
17	865+86.57	70.17'	3681751.61	486888.80
18	868+81.40	70.00'	3681917.17	487138.66
19	868+97.99	71.29'	3681925.25	487153.20
20	869+15.29	70.00'	3681935.98	487167.05

REQUIRED R.O.W.		
POINT	LOCATION X	LOCATION Y
3a	3681268.65	486910.39
4a	3681250.78	487083.00
5a	3681576.67	486521.00

LAYOUT CL NEW ALIGNMENT		
CL STATION	LOCATION X	LOCATION Y
44+50	3681439.01	486721.50
47+25	3681557.21	486969.90

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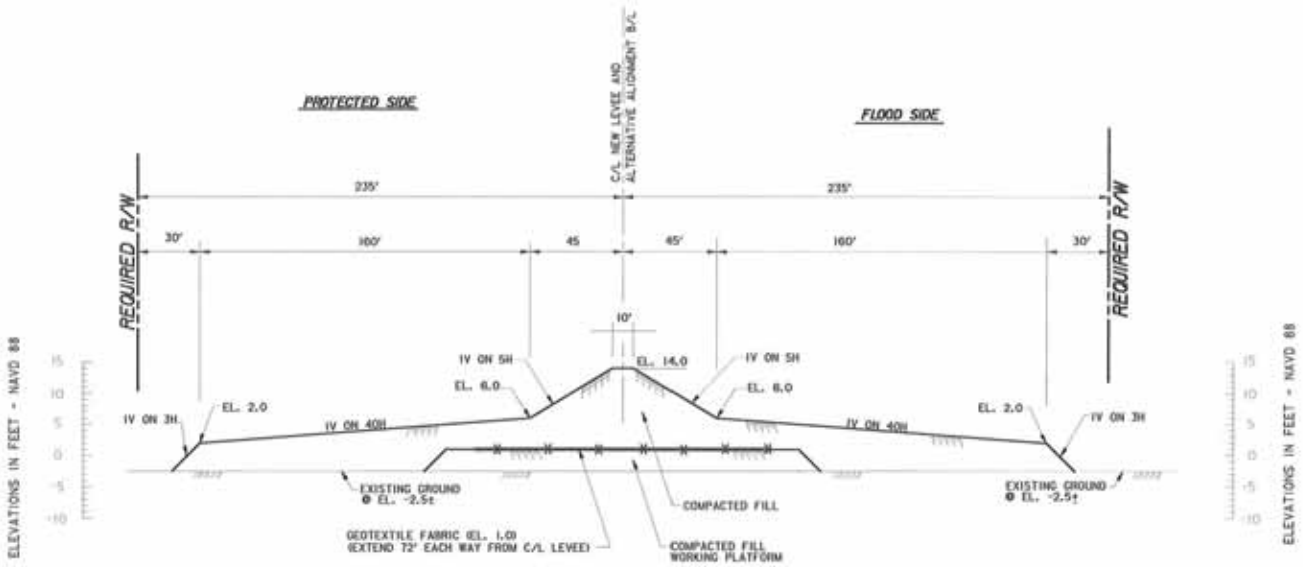
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HBC/NG3
IMPROVEMENTS TO THE EXISTING LEVEE ALIGNMENT
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
ST. JOHN THE BAPTIST PARISH, LOUISIANA

PLAN - ALTERNATIVE 3.2
STA. 27+64-STA. 47+25

SHEET IDENTIFICATION NUMBER
39



TYPICAL DESIGN SECTION - ALTERNATIVE ALIGNMENT - LEVEE (GEOTEXTILE REINFORCED)

STA. 4+70 TO STA. 43+50

30' 0 30' 60' 90' 120'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

NOTES:

1. STA. 0+00 TO STA. 4+70 PIPELINE CROSSING (SEE DWG. 58)
2. STA. 43+50 TO STA. 47+25 FLOODWALL REQ'D (SEE DWG. 58)
3. ALL STATIONING REFERENCED TO ALTERNATIVE ALIGNMENT BASELINE.
4. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
5. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
6. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.

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NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

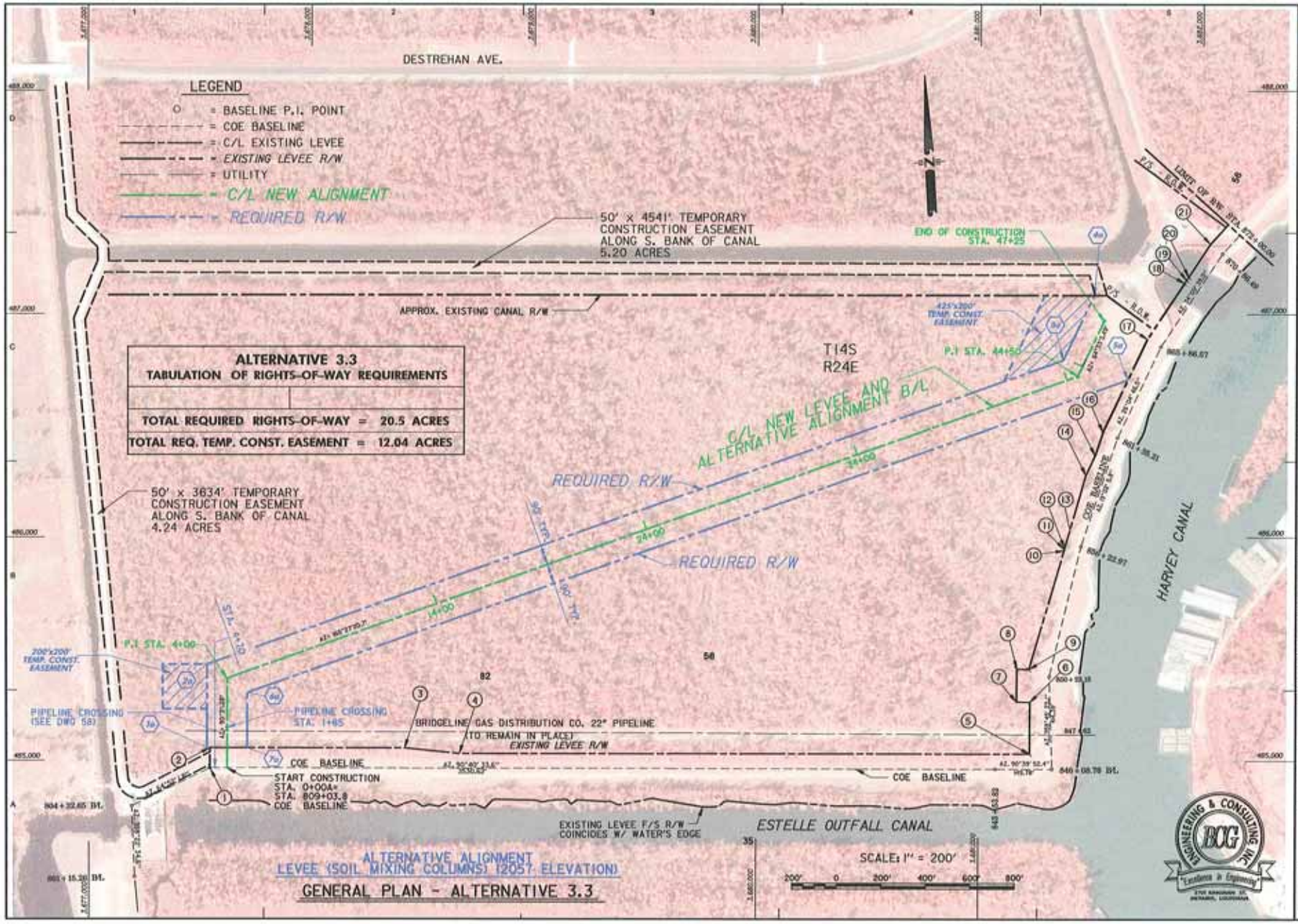
ALTERNATIVE 3.2
TYPICAL DESIGN SECTIONS

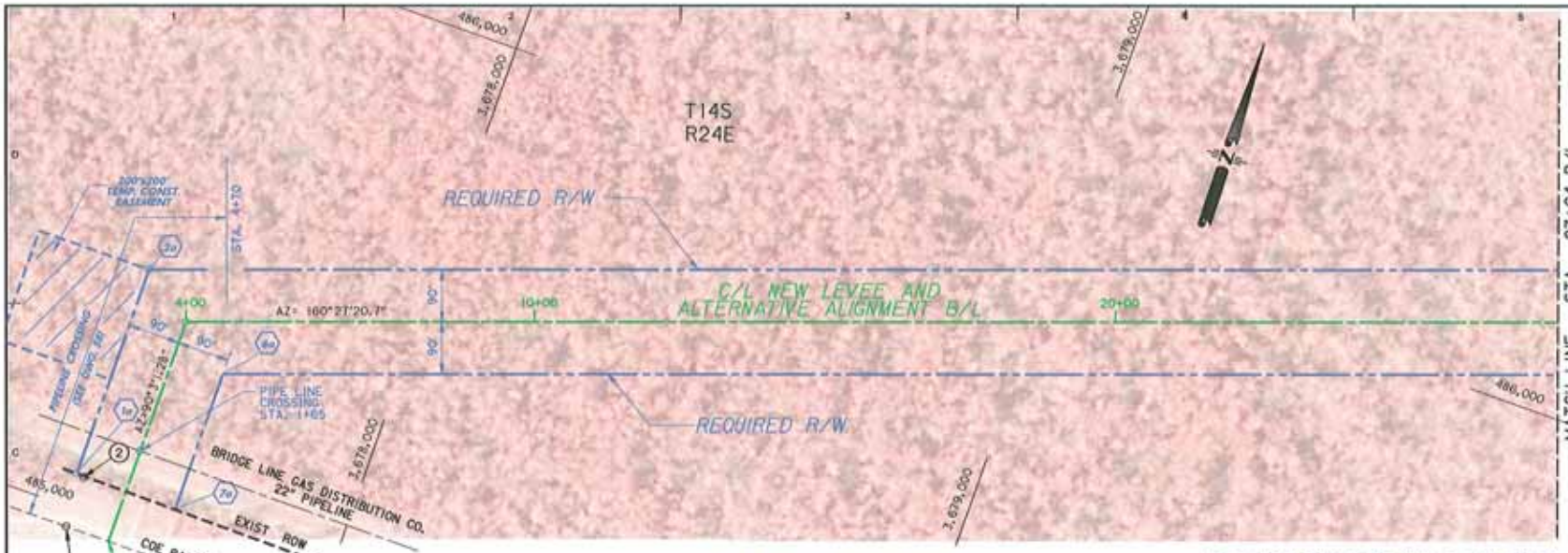
SHEET IDENTIFICATION NUMBER
40

ALTERNATIVE 3.3

ALTERNATIVE ALIGNMENT LEVEE

(SOIL MIXING COLUMNS)


DESTREHAN AVE.
LEGEND
= BASELINE P.I. POINT
= COE BASELINE
= C/L EXISTING LEVEE
= EXISTING LEVEE R/W
= UTILITY
= C/L NEW ALIGNMENT
= REQUIRED R/W
50' x 4541' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 5.20 ACRES
END OF CONSTRUCTION STA. 47+25
APPROX. EXISTING CANAL R/W
425'x200' TEMP. CONST. EASEMENT
P.I STA. 44+50
T14S
R24E
C/L NEW LEVEE AND ALTERNATIVE ALIGNMENT B/L
REQUIRED R/W
REQUIRED R/W
COE BASELINE
HARVEY CANAL
50' x 3634' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 4.24 ACRES
P.I STA. 4+00
200'x200' TEMP. CONST. EASEMENT
PIPELINE CROSSING (SEE DWG 58)
PIPELINE CROSSING STA. 1+65
BRIDGELINE GAS DISTRIBUTION CO. 22" PIPELINE (TO REMAIN IN PLACE)
EXISTING LEVEE R/W
COE BASELINE
START CONSTRUCTION STA. 0+00A+ STA. 809+03.8 COE BASELINE
EXISTING LEVEE F/S R/W COINCIDES W/ WATER'S EDGE
ESTELLE OUTFALL CANAL
ALTERNATIVE 3.3
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS
TOTAL REQUIRED RIGHTS-OF-WAY = 20.5 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT = 12.04 ACRES
ALTERNATIVE ALIGNMENT
LEVEE (SOIL MIXING COLUMNS) (2057 ELEVATION)
GENERAL PLAN - ALTERNATIVE 3.3
SCALE: 1" = 200'
200' 0 200' 400' 600' 800'
US ARMY CORPS OF ENGINEERS
GENERAL PLAN ALTERNATIVE 3.3
SHEET IDENTIFICATION NUMBER
41



ALTERNATIVE ALIGNMENT
LEVEE (SOIL MIXING COLUMNS) (2057 ELEVATION)

PLAN - ALTERNATIVE 3.3

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY - 11.0 ACRES
TEMP. CONST. EASEMENT - 0.9 ACRES

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY				
POINT	BL STA	OFFSET	X	Y
1	808+23.20	0.00'		
2	808+23.20	90.00'	3677545.22	485056.71

REQUIRED R.O.W.		
POINT	LOCATION X	LOCATION Y
1a	3677531.79	485056.73
2a	3677532.72	485430.22
6a	3677712.91	485303.07
7a	3677711.79	485056.56

LAYOUT C/L NEW ALIGNMENT		
C/L STATION	LOCATION X	LOCATION Y
0+00	3677622.06	485366.54
4+00	3677621.71	484966.54

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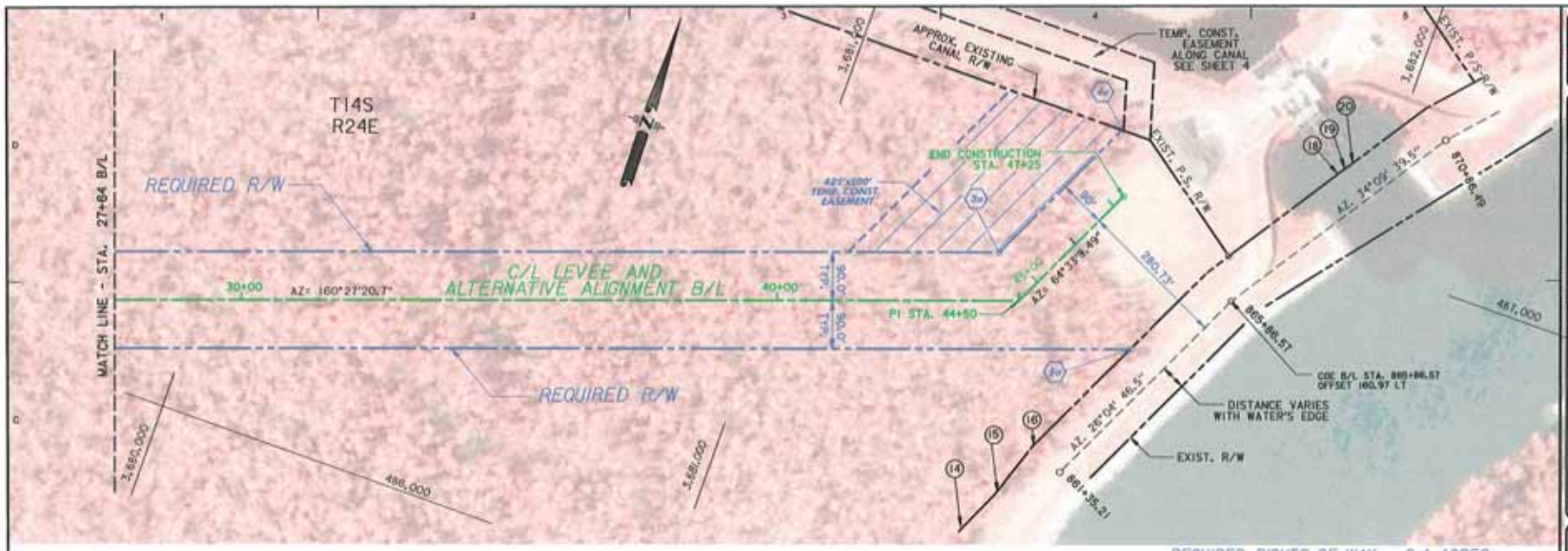
U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HSDRRS-NL2 HURRICANE PROTECTION LEVEE, REACH NL2-E OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 3.3
STA. 0+00 - STA. 27+64

SHEET IDENTIFICATION NUMBER
42



REQUIRED RIGHTS-OF-WAY - 9.4 ACRES
TEMP. CONST. EASEMENT - 1.7 ACRES

ALTERNATIVE ALIGNMENT
LEVEE - (SOIL MIXING COLUMNS) (2057 ELEVATION)

PLAN - ALTERNATIVE 3.3

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY				
POINT	B/L STA	OFFSET	X	Y
14	859+32.58	81.20'	3681477.75	486280.11
15	860+29.00	70.15'	3681518.21	486366.70
16	861+35.21	70.22'	3681553.20	486471.84
17	865+86.57	70.17'	3681751.61	486888.80
18	868+81.40	70.00'	3681917.17	487138.66
19	868+97.99	71.29'	3681925.25	487153.20
20	869+15.29	70.00'	3681935.98	487167.05

REQUIRED R.O.W.		
POINT	LOCATION	
	X	Y
3a	3681273.46	486785.67
4a	3681512.32	487115.55
5a	3681664.60	486706.19

LAYOUT C/L NEW ALIGNMENT		
C/L STATION	LOCATION	
	X	Y
44+50	3681428.70	486721.50
47+25	3681556.90	486969.89

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ANTOINE, LOUISIANA

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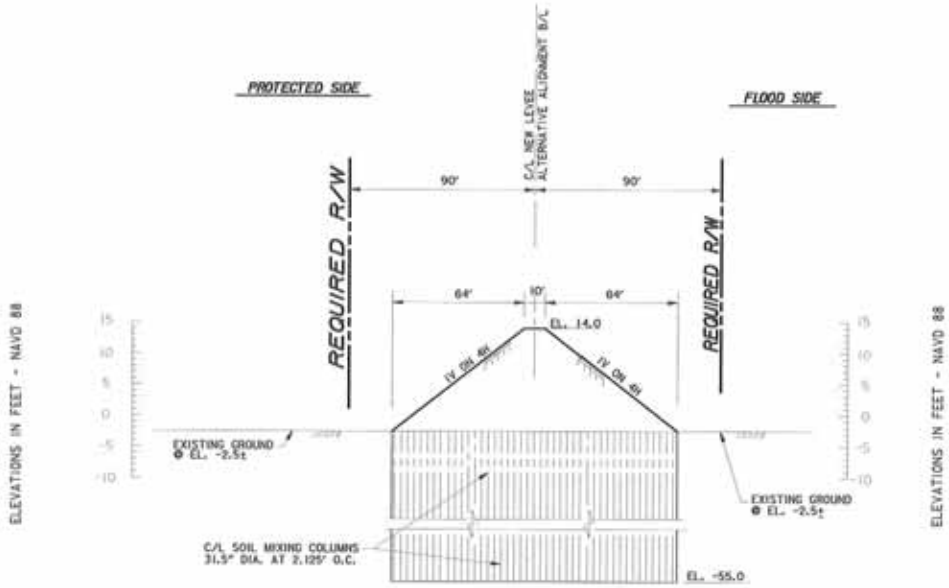
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HSV-Wg 2
HARVEY CANAL WEST BANK LEVEES-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 3.3
STA. 27+84 - STA. 47+25

SHEET IDENTIFICATION NUMBER
43



TYPICAL DESIGN SECTION - ALTERNATIVE ALIGNMENT - LEVEE (SOIL MIXING COLUMN)

STA. 4+70 TO STA. 43+50

HORIZONTAL SCALE: 1" = 30'

30' 0 30' 60' 90' 120'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

NOTES:

1. STA. 0+00 TO STA. 4+70 PIPELINE CROSSING (SEE DWG. 58)
2. STA. 43+50 TO STA. 47+25 FLOODWALL REQ'D (SEE DWG. 58)
3. ALL STATIONING REFERENCED TO ALTERNATIVE ALIGNMENT BASELINE.
4. NO MORE THAN 500 LF OF EXISTING LEVEE TO BE REMOVED @ ANYTIME.
5. FOR SOIL MIXING COLUMN DETAILS, SEE DWG. NO. 75.
6. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
7. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.

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NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ALTERNATIVE SELECTION REPORT - INTRA-COASTAL WATERWAY (GIWW) NAVIGATION IMPROVEMENTS
HARVEY CANAL WEST BANK LEVEE (PHASE 2)
TO NEW ORLEANS PUMPING STATION
JEFFERSON PARISH, LOUISIANA

ALTERNATIVE 3.3
TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER
44

BOG ENGINEERING & CONSULTING INC
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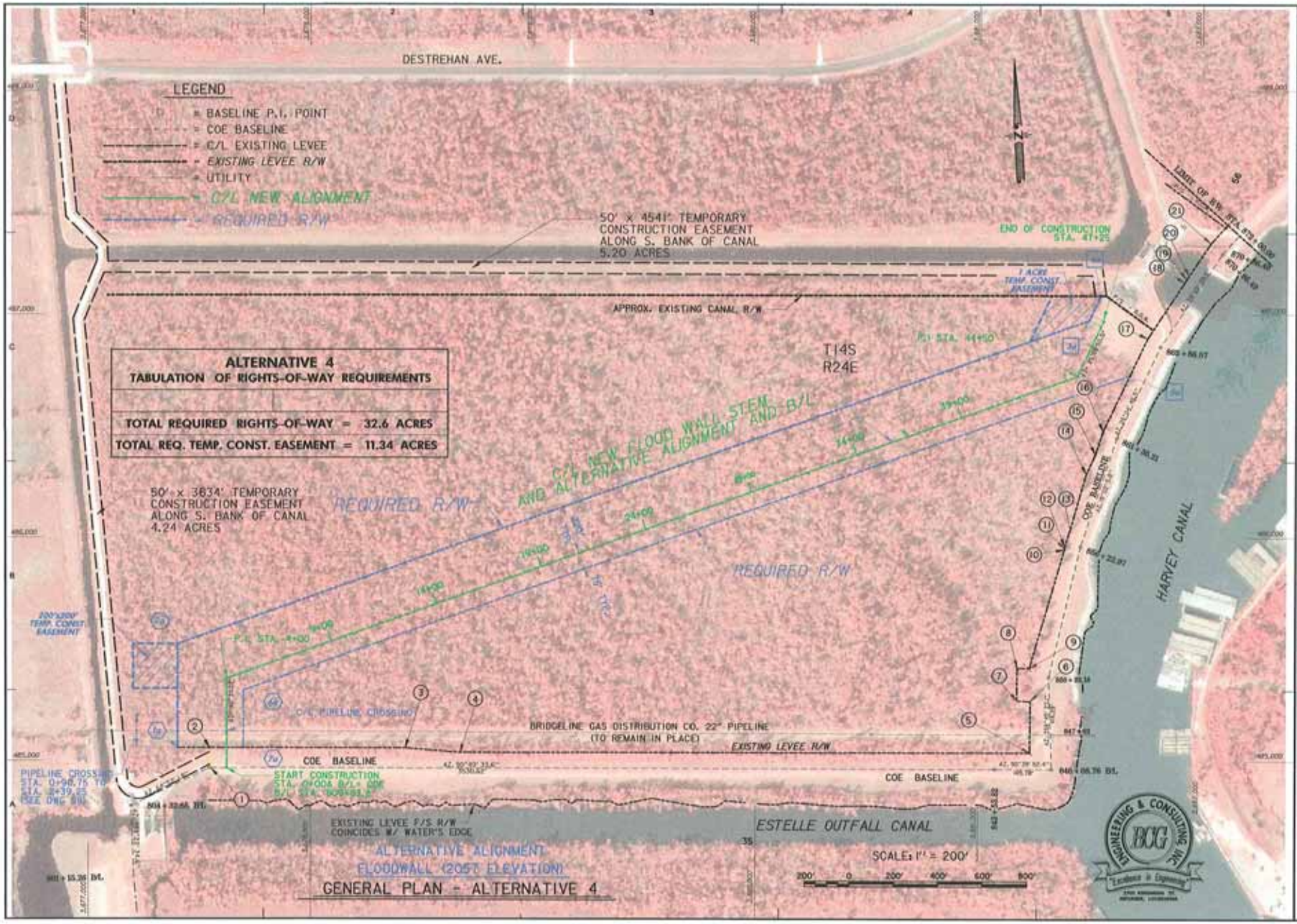
ALTERNATIVE 4

ALTERNATIVE ALIGNMENT FLOODWALL

(2057 ELEVATION)


DESTREHAN AVE.
LEGEND
= BASELINE P.I. POINT
= COE BASELINE
= C/L EXISTING LEVEE
= EXISTING LEVEE R/W
= UTILITY
= C/L NEW ALIGNMENT
= REQUIRED R/W
50' x 4541' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 5.20 ACRES
END OF CONSTRUCTION STA. 47+25
1 ACRE TEMP. CONST. EASEMENT
APPROX. EXISTING CANAL R/W
T14S
R24E
ALTERNATIVE 4
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS
TOTAL REQUIRED RIGHTS-OF-WAY = 32.6 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT = 11.34 ACRES
50' x 3634' TEMPORARY CONSTRUCTION EASEMENT ALONG S. BANK OF CANAL 4.24 ACRES
REQUIRED R/W
C/L NEW FLOOD WALL STEM AND ALTERNATIVE ALIGNMENT AND B/L
REQUIRED R/W
200'x200' TEMP. CONST. EASEMENT
P.I. STA. 4+00
C/L PIPELINE CROSSING
BRIDGELINE GAS DISTRIBUTION CO. 22" PIPELINE (TO REMAIN IN PLACE)
EXISTING LEVEE R/W
COE BASELINE
COE BASELINE
PIPELINE CROSSING STA. 0+98.75 TO STA. 2+39.25 (SEE DWG 8B)
START CONSTRUCTION STA. 0+00A B/L= COE B/L STA. 0+00B B/L
EXISTING LEVEE F/S R/W COINCIDES W/ WATER'S EDGE
ALTERNATIVE ALIGNMENT FLOODWALL (20ST ELEVATION)
ESTELLE OUTFALL CANAL
SCALE: 1" = 200'
HARVEY CANAL
COE BASELINE
LIMIT OF R/W STA. 872+00.00
GENERAL PLAN - ALTERNATIVE 4
ENGINEERING & CONSULTING INC.
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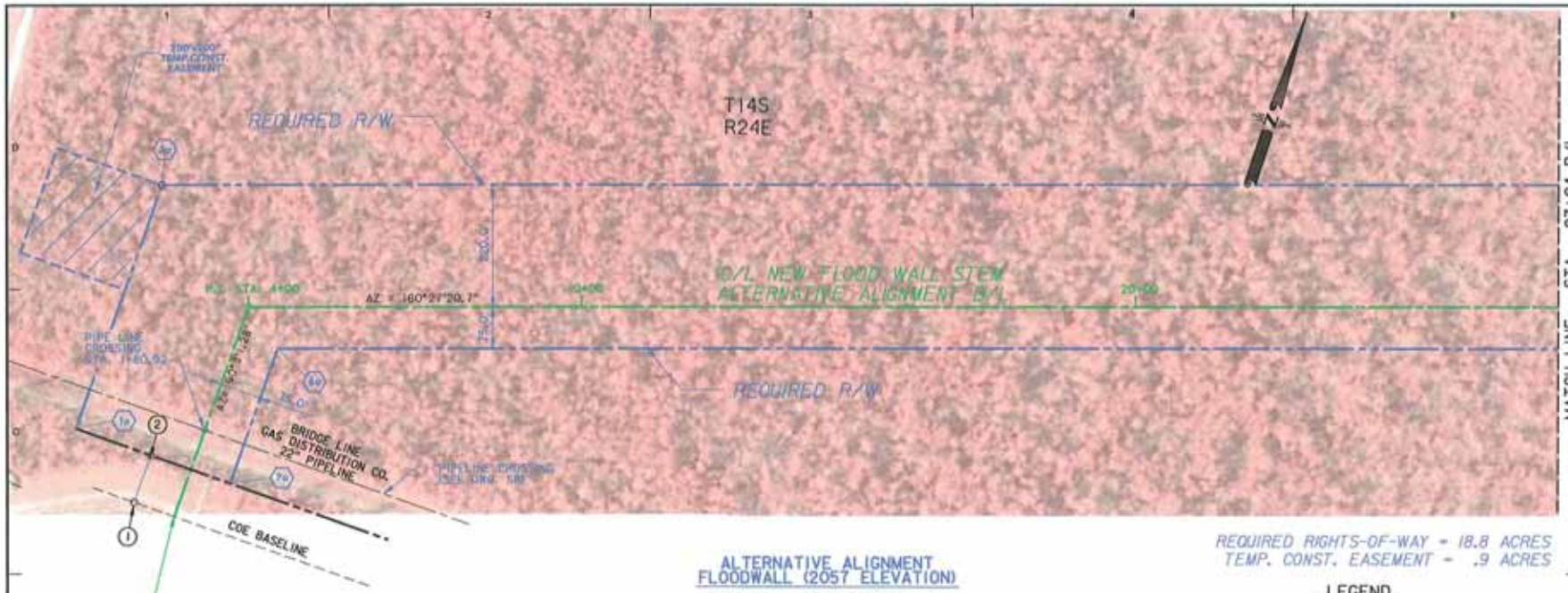
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION
ENGINEERING ALTERNATIVE REPORT - HWY-NG-2
HARVEY CANAL WEST BANK LEVEES-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
GENERAL PLAN
ALTERNATIVE 4
SHEET IDENTIFICATION NUMBER
45



REQUIRED RIGHTS-OF-WAY = 18.8 ACRES
TEMP. CONST. EASEMENT = .9 ACRES

ALTERNATIVE ALIGNMENT
FLOODWALL (2057 ELEVATION)

PLAN - ALTERNATE 4

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY

POINT	B/L STA	OFFSET	X	Y
1	808+23.20	0.00'		
2	808+23.20	90.00'	3677545.22	485056.71

REQUIRED R.O.W.

POINT	LOCATION X	LOCATION Y
1a	3677402.10	485056.83
2a	3677402.51	485522.04
6a	3677697.32	485313.66
7a	3677697.10	485056.57

LAYOUT C/L NEW ALIGNMENT

B/L STATION	LOCATION X	LOCATION Y
0+00.0	3677622.03	484966.64
4+00	3677622.37	485366.64

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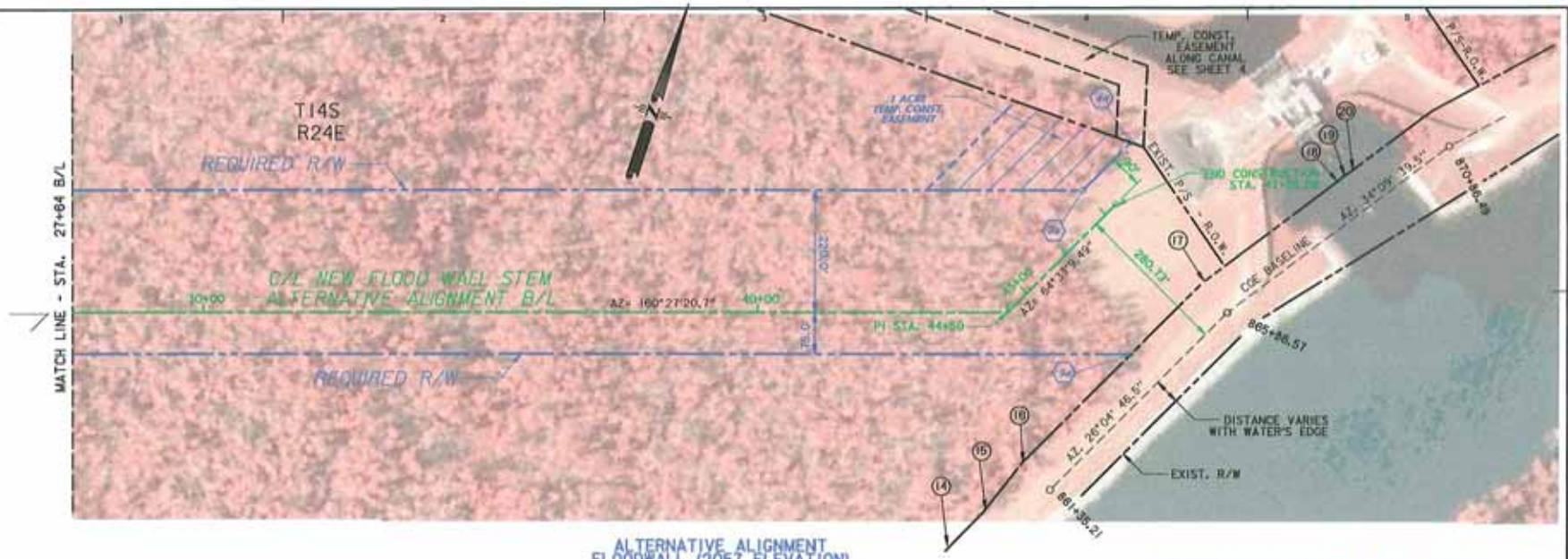
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HBV-1&2 HARVEY CANAL WEST BANK LEVEES-PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 4
STA. 0+00 - STA. 27+64

SHEET IDENTIFICATION NUMBER
45



ALTERNATIVE ALIGNMENT
FLOODWALL (2057 ELEVATION)

PLAN - ALTERNATE 4

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY = 13.8 ACRES
TEMP. CONST. EASEMENT = 1.0 ACRES

LEGEND

- o = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

EXISTING RIGHTS OF WAY				
POINT	BL STA	OFFSET	X	Y
14	859+32.58	81.20'	3681477.75	486280.11
15	860+29.00	70.15'	3681518.21	486366.70
16	861+35.21	70.22'	3681553.20	486471.84
17	865+86.57	70.17'	3681751.61	486888.80
18	868+81.40	70.00'	3681917.17	487138.66
19	868+97.99	71.29'	3681935.25	487153.20
20	869+15.29	70.00'	3681935.98	487167.65

REQUIRED R.O.W.		
POINT	LOCATION X	LOCATION Y
3a	3681492.73	486974.02
4a	3681545.40	487084.70
5a	3681675.15	486725.74

LAYOUT C/L NEW ALIGNMENT		
BL STATION	LOCATION X	LOCATION Y
44+50	3681437.02	486721.51
47+35	3681557.22	486969.89

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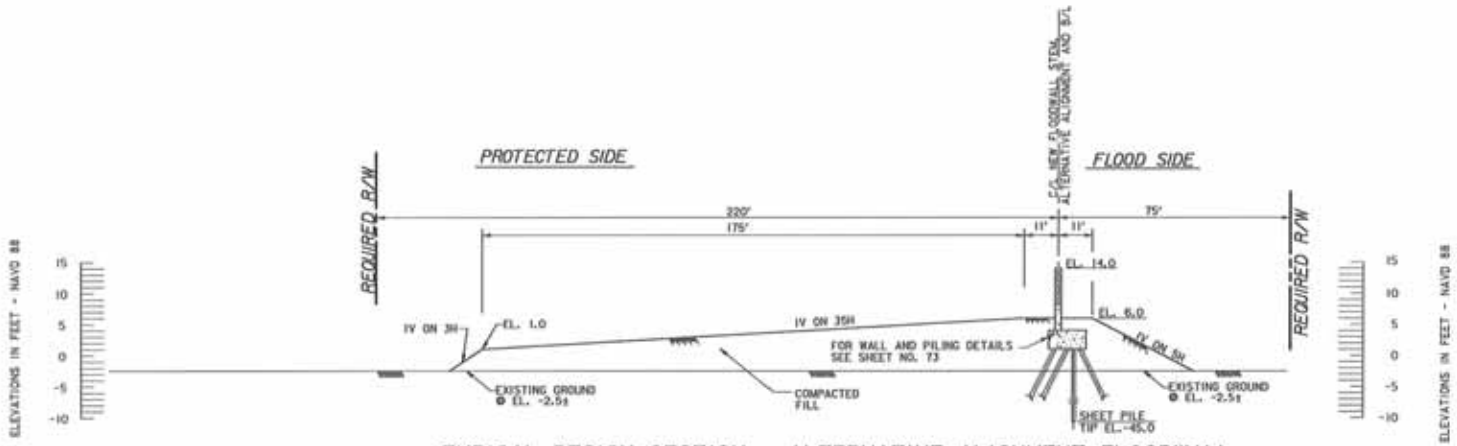
ENGINEERING, HYDROLOGY & HYDRAULICS, HYDROLOGY - HEC-HMS 3.1 HARVEY CANAL WEST BANK LEVEES-PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION JEFFERSON PARISH, LOUISIANA

PLAN - ALTERNATIVE 4
STA. 27+64 - STA. 47+25

SHEET IDENTIFICATION NUMBER
47



TYPICAL DESIGN SECTION - ALTERNATIVE ALIGNMENT FLOODWALL

STA. 0+00 TO STA. 0+90.75 & STA. 2+39.25 TO STA.47+25

HORIZONTAL SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

NOTES:

1. STA. 0+90.75 TO STA. 2+39.25 PIPELINE CROSSING (SEE DWG. 59)
2. ALL STATIONING REFERENCED TO ALTERNATIVE ALIGNMENT BASELINE.
3. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
4. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.

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NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ALTERNATIVE 4
TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER
48

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ALTERNATIVE 5

EXISTING ALIGNMENT

CAP EXISTING SHEET PILE AND LEVEE

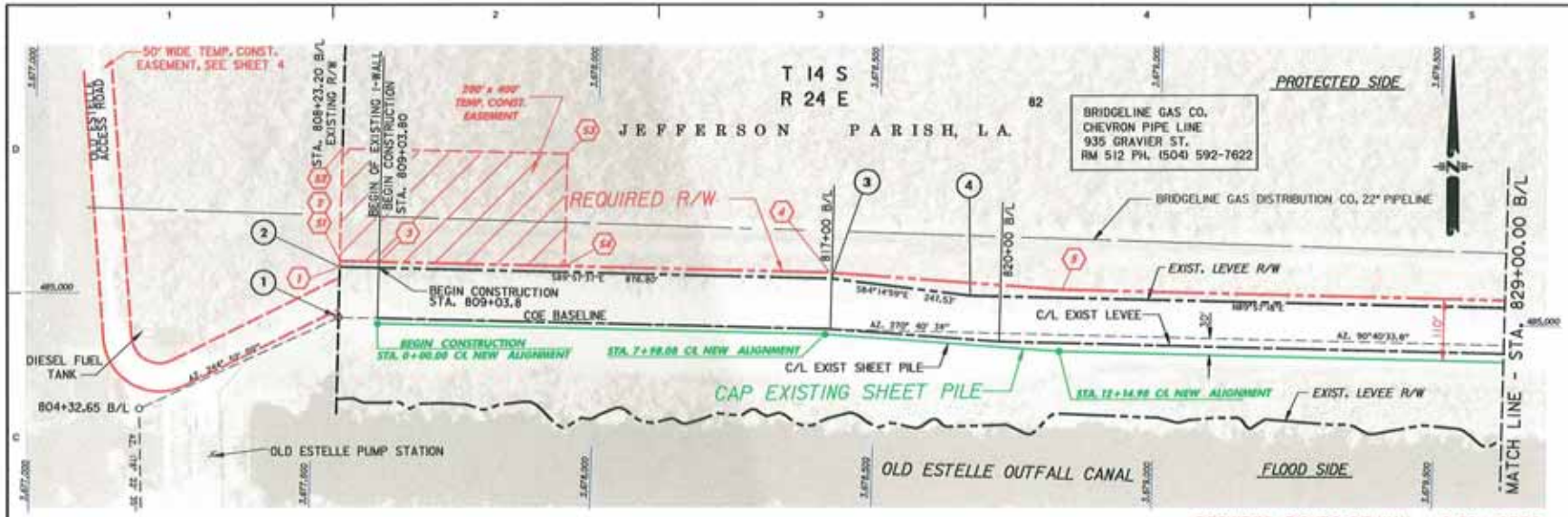
(ELEVATION 10.0)

ALTERNATIVE 5.1

EXISTING ALIGNMENT

CAP EXISTING SHEET PILE AND LEVEE

(UN-REINFORCED)



REQUIRED RIGHTS-OF-WAY = 0.62 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

EXISTING ALIGNMENT-CAP EXISTING SHEET PILE AND LEVEE (UN-REINFORCED) (ELEVATION 10.0 NAVD 88)

PLAN - ALTERNATIVE 5.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY								LAYOUT C/L NEW ALIGNMENT		
EXISTING					REQUIRED					
POINT	LOCATION				TEXT	LOCATION		BL STATION	LOCATION	
	BL STATION	OFF-SET	X	Y		X	Y		X	Y
1	808+23.20	0.00'			1	3677545.33	485056.71	0+00.0	3677614.53	484956.97
2	808+23.20	90.00'	[illegible]	4880062961	2	3677545.33	485067.02	7+98.08	3678412.60	484956.39
3	817+00.00	90.00'	[illegible]	4880052986	3	3677614.62	485066.97	12+14.98	3678828.99	484935.58
4	819+46.00	65.37'	[illegible]	4880080080	4	3678415.39	485066.38	TEMP. CONST. EASEMENT		
					5	3678831.78	485045.58	51	3677545.33	485067.02
								52	3677545.37	485247.02
								53	3677945.37	485266.73
								54	3677945.33	485066.73

ALTERNATIVE 5.1
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.80 TO 829+00.00	0.62 ACRES
829+00.00 TO 850+23.15	1.45 ACRES
850+23.15 TO 866+23.15	5.80 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	7.87 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	13.22 ACRES

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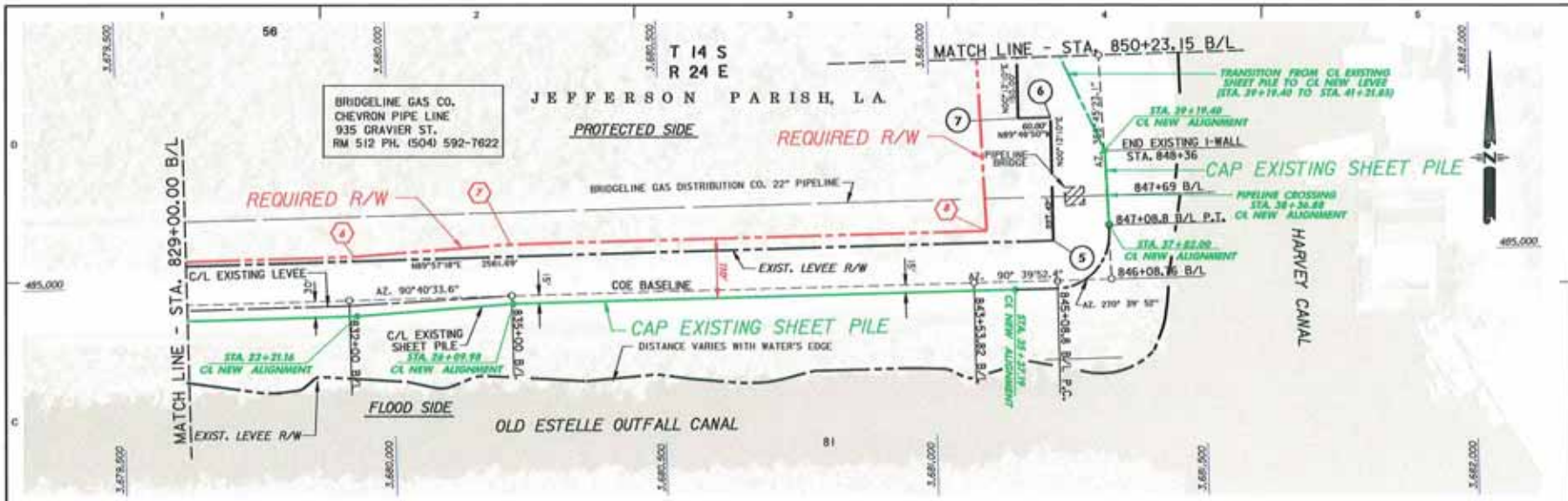
ENGINEERING ALTERNATIVE REPORT, HURRICANE PROTECTION, LAKE PONTCHARTRAIN, PHASE II OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION JEFFERSON PARISH, LOUISIANA

PLAN - ALTERNATE 5.1
B/L STA. 809+03.80 - STA. 829+00.00

SHEET IDENTIFICATION NUMBER
49



REQUIRED RIGHTS-OF-WAY = 1.45 ACRES

EXISTING ALIGNMENT-CAP EXISTING SHEET PILE AND LEVEE (UN-REINFORCED) (ELEVATION 10.0 NAVD 88)

PLAN - ALTERNATIVE 5.1

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- ○ = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY								LAYOUT C/L NEW ALIGNMENT		
EXISTING					REQUIRED					
POINT	LOCATION				TEXT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
5	845+08.00	69.12'	3681224.05	485037.42	6	3679932.81	485045.06	23+21.16	3679935.56	484935.06
6	849+08.30	90.00'	3681224.94	485264.84	7	3680221.36	485059.36	26+09.98	3680224.03	484949.35
7	849+10.50	150.03'	3681164.94	485265.07	8	3681100.98	485058.58	35+37.19	3681151.25	484948.54
								37+82.00	3681327.74	485063.34
								39+19.40	3681323.25	485200.67

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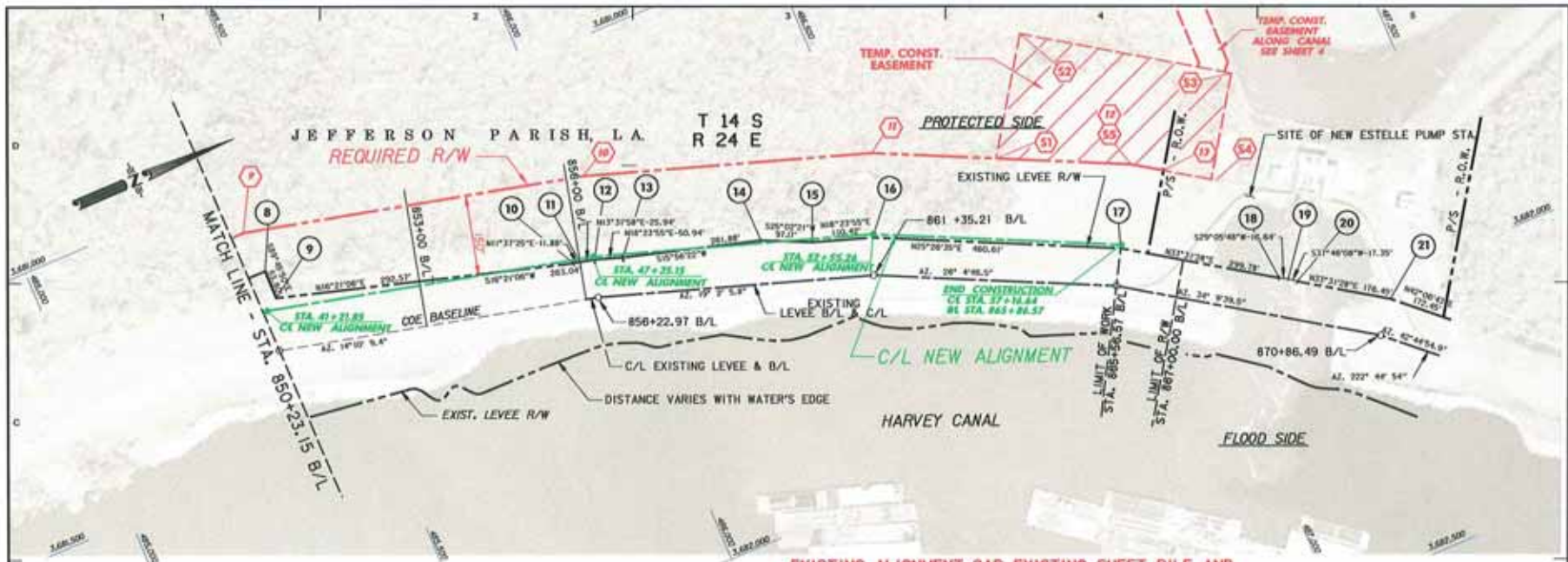
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HBH-1&2 HARVEY CANAL WEST BANK LEVEE-PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 5.1
B/L STA. 829+00.00 - STA. 850+23.15

SHEET IDENTIFICATION NUMBER 50



EXISTING ALIGNMENT-CAP EXISTING SHEET PILE AND LEVEE (UN-REINFORCED) (ELEVATION 10.0 NAVD88)

PLAN - ALTERNATIVE 5.1

REQUIRED RIGHTS-OF-WAY = 5.80 ACRES
TEMP. CONST. EASEMENT = 1.94 ACRES

LEGEND

- ○ = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
POINT	LOCATION B/L STATION	LOCATION OFF-SET	LOCATION X	LOCATION Y	POINT	LOCATION X	LOCATION Y	C/L STATION	LOCATION X	LOCATION Y
8	850+23.15	149.30'	3681170.97	485410.21						
9	850+33.19	96.93'	3681224.76	485410.00	8	3681089.78	485400.75	41+21.85	3681240.36	485385.37
10	855+88.11	69.84'	3681381.23	485943.12	10	3681239.58	486022.94	47+35.15	3681383.93	485981.63
11	855+99.95	70.00'	3681383.63	485954.76	11	3681408.71	486531.26	52+55.26	3681548.13	486475.15
12	856+00.00	70.25'	3681390.10	485981.63	12	3681615.48	486965.78	57+16.64	3681746.37	486891.76
13	856+70.93	70.14'	3681406.76	486031.70	13	3681649.80	487017.57			
14	859+32.58	81.20'	3681477.75	486280.11				TEMP. CONST. EASEMENT		
15	860+29.00	70.15'	3681518.21	486366.70				51	3681507.90	486739.72
16	861+35.21	70.22'	3681553.20	486471.84				52	3681311.84	486869.63
17	865+86.57	70.17'	3681751.61	486888.80				53	3681532.78	487203.07
18	868+81.40	70.00'	3681917.17	487138.66				54	3681699.51	487092.60
19	868+97.99	71.29'	3681925.25	487153.20				55	3681615.48	486965.78
20	869+15.29	70.00'	3681935.98	487167.05						
21	870+86.49	70.20'	3682033.35	487314.00						

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

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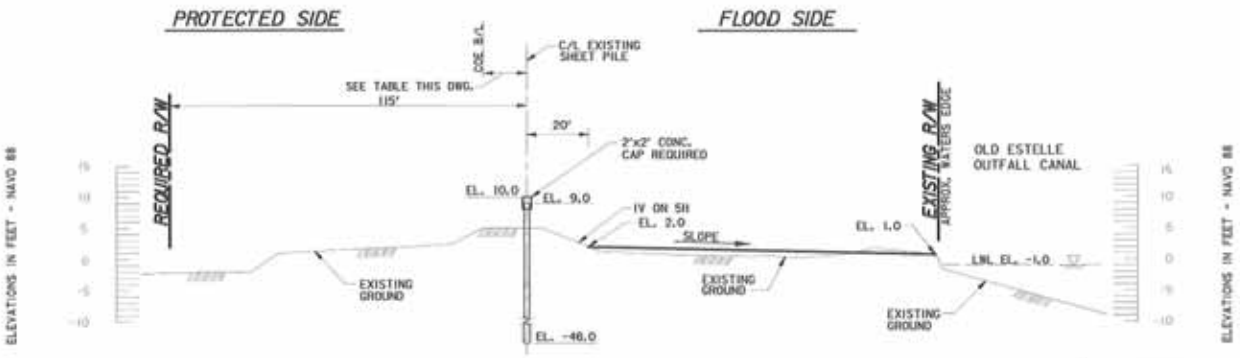
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HSDRA 2 HARVEY CANAL WEST BANK LEVEE, PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 5.1
B/L STA. 850+23.15 - STA. 865+86.57

SHEET IDENTIFICATION NUMBER
51



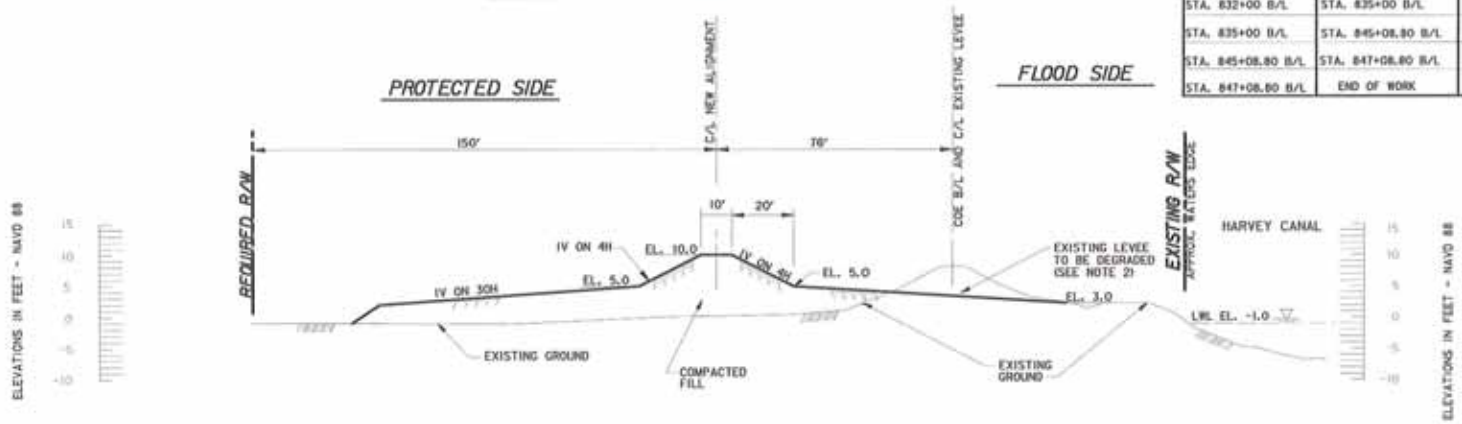
TYPICAL DESIGN SECTION - CAP EXISTING SHEET PILE AND LEVEE (UN-REINFORCED) - EL. 10.0 NAVD

STA. 809+03.80 B/L TO STA. 848+36 B/L

HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 10'

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (ON ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'



TYPICAL DESIGN SECTION - CAP EXISTING SHEET PILE AND LEVEE (UN-REINFORCED) - EL.10.0 NAVD

STA. 848+36 B/L TO STA. 865+86.57 B/L

HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 10'

A NOTES:

1. STA. 840+94.75B/L TO STA. 848+43.25B/L PIPELINE CROSSING (SEE DWG. 75)
2. ALL STATIONING REFERENCED TO ALTERNATIVE ALIGNMENT BASELINE.
3. EXISTING FLOOD PROTECTION TO REMAIN UNTIL EQUIVALENT FLOOD PROTECTION FROM NEW CONSTRUCTION IS IN PLACE.
4. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
5. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ALTERNATIVE 5.1 TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER 62

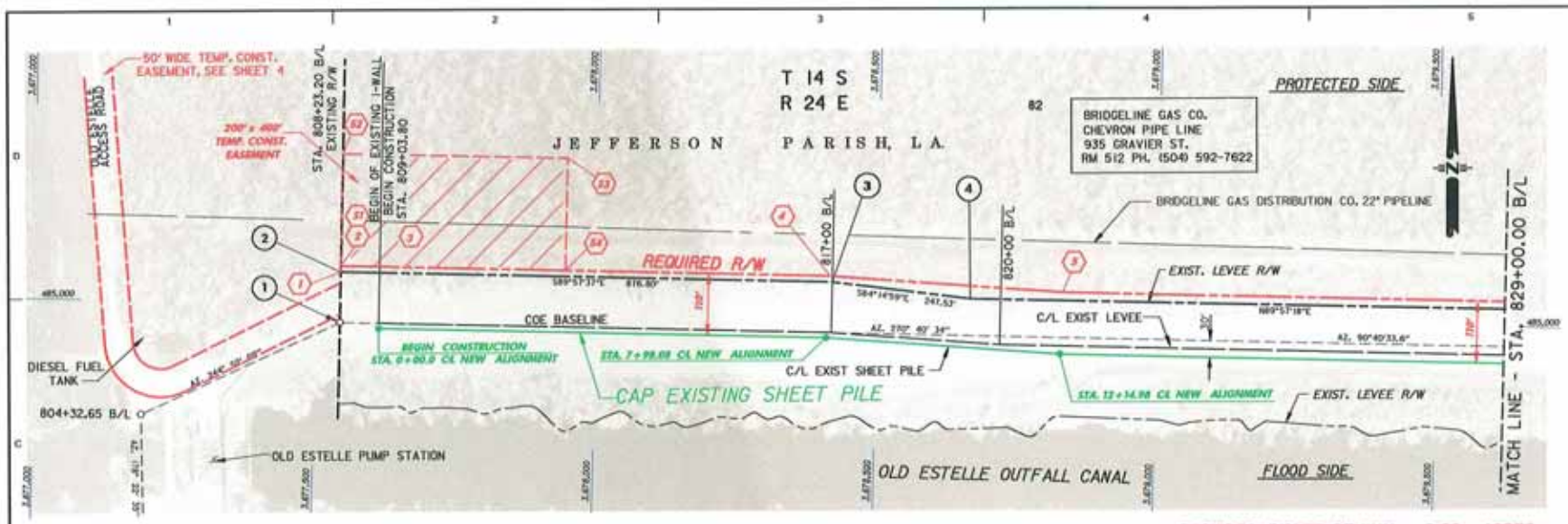
ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

ALTERNATIVE 5.2

EXISTING ALIGNMENT

CAP EXISTING SHEET PILE

AND NEW CAPPED SHEET PILE



EXISTING ALIGNMENT-CAP EXISTING SHEET PILE
AND NEW CAPPED SHEET PILE
(ELEVATION 10.0 NAVD 88)

PLAN - ALTERNATIVE 5.2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

REQUIRED RIGHTS-OF-WAY = 0.62 ACRES
TEMP. CONST. EASEMENT = 1.84 ACRES

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY

EXISTING					REQUIRED			LAYOUT C/L NEW ALIGNMENT		
POINT	LOCATION				POINT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
1	808+23.20	0.00'			1	3677544.99	485056.70	0+00.0	3677614.54	484956.97
2	808+23.20	90.00'	[illegible]	4880050861	2	3677545.23	485067.02	7+98.08	3678412.60	484956.39
3	817+00.00	90.00'	[illegible]	4880052986	3	3677614.62	485066.97	12+14.98	3678828.99	484955.58
4	819+46.00	65.37'	[illegible]	[illegible]	4	3678416.64	485067.93			
					5	3678831.78	485045.58			
								TEMP. CONST. EASEMENT		
								51	3677545.23	485067.02
								52	3677578.11	485267.00
								53	3677945.37	485271.73
								54	3677945.23	485066.73

ALTERNATIVE 5.2
TABULATION OF RIGHTS-OF-WAY REQUIREMENTS

BASELINE STATION	REQUIRED RIGHTS-OF-WAY
809+03.8 TO 829+00	0.62 ACRES
829+00 TO 850+23.15	0.67 ACRES
850+23.15 TO 865+86.57	0 ACRES
TOTAL REQUIRED RIGHTS-OF-WAY =	1.29 ACRES
TOTAL REQ. TEMP. CONST. EASEMENT =	13.31 ACRES

ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

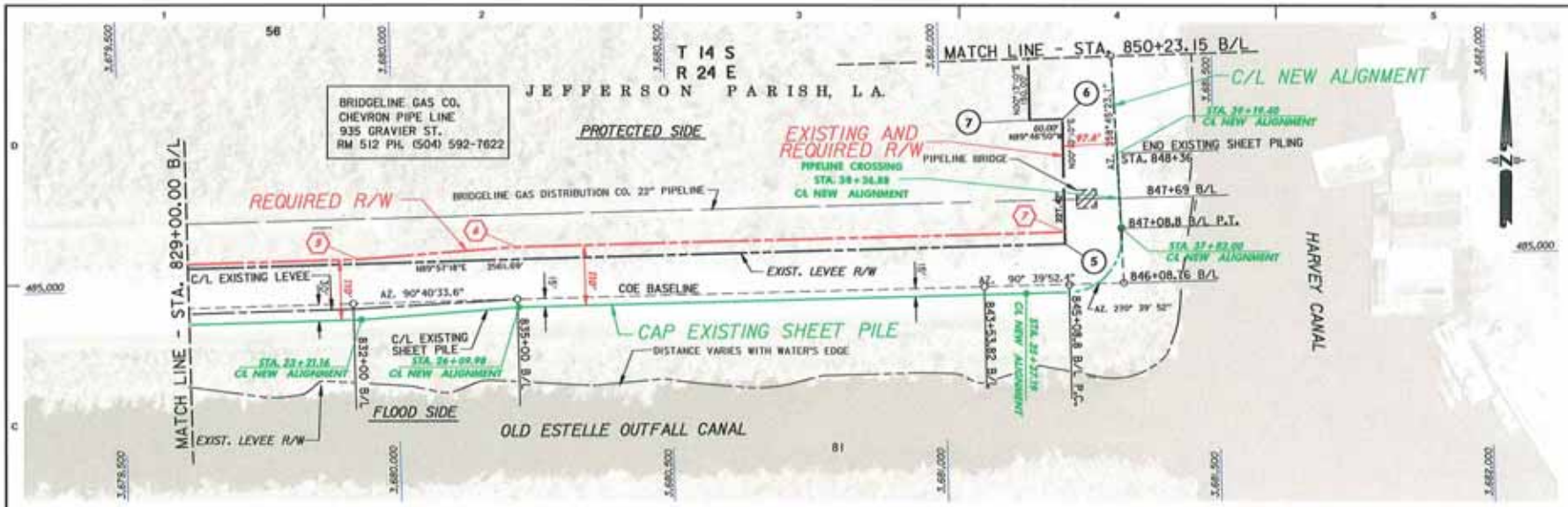
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - REV-1&2 MARTIN BRIDGE, TEST SAMPLE SECTION OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATE 5.2
B/L STA. 809+03.80-STA. 829+00.00

SHEET IDENTIFICATION NUMBER
53



REQUIRED RIGHTS-OF-WAY = .67 ACRES

EXISTING ALIGNMENT-CAP EXISTING SHEET PILE
AND NEW CAPPED SHEET PILE
(ELEVATION 10.0 NAVD 88)

PLAN - ALTERNATIVE 5.2

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

LEGEND

- ○ = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

RIGHTS OF WAY								LAYOUT C/L NEW ALIGNMENT		
EXISTING					REQUIRED					
POINT	LOCATION				POINT	LOCATION		C/L STATION	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y		X	Y
5	845+08.00	69.12'	3681224.05	485037.42	5	3679933.81	485045.06	23+21.16	3679935.56	484935.06
6	849+08.30	90.00'	3681224.94	485264.84	6	3680221.36	485059.36	26+09.98	3680224.03	484949.35
7	849+10.50	150.03'	3681164.94	485265.07	7	3681224.13	485058.47	35+37.19	3681151.25	484948.54
					6	3681224.94	485264.84	37+82.00	3681251.28	485051.81
					7	3681164.94	485265.07	39+19.40	3681320.56	485198.05

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

NO.	DESCRIPTION	DATE	APP.	DESCRIPTION	DATE	APP.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HIRN-1&2
HURRICANE PROTECTION OFFICE - PHASE II
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

PLAN - ALTERNATIVE 5.2
B/L STA. 829+00.00-STA. 850+23.15

SHEET IDENTIFICATION NUMBER
54

ENGINEERING & CONSULTING INC.
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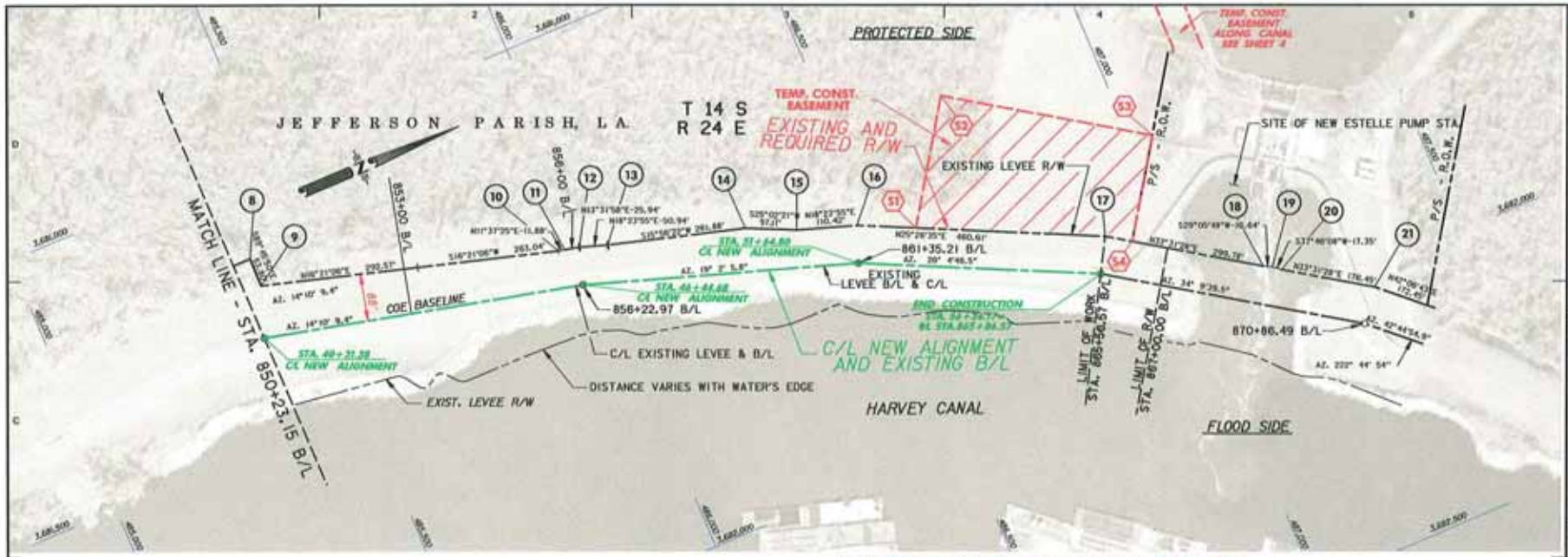


EXISTING ALIGNMENT-CAP EXISTING SHEET PILE AND NEW CAPPED SHEET PILE (ELEVATION 10.0 NAVD 88)

PLAN - ALTERNATIVE 5.2

RIGHTS OF WAY

EXISTING					REQUIRED		
POINT	LOCATION				POINT	LOCATION	
	B/L STATION	OFF-SET	X	Y		X	Y
8	850+23.15	149.30'	3681170.97	485410.21	8	3681170.97	485410.21
9	850+33.19	96.93'	3681224.76	485410.00	9	3681224.76	485410.00
10	855+88.11	69.84'	3681381.23	485943.12	10	3681381.23	485943.12
11	855+99.95	70.00'	3681383.63	485954.76	11	3681383.63	485954.76
12	856+00.00	70.25'	3681390.10	485981.63	12	3681390.10	485981.63
13	856+70.93	70.14'	3681406.76	486031.70	13	3681406.76	486031.70
14	859+32.58	81.20'	3681477.75	486280.11	14	3681477.75	486280.11
15	860+29.00	70.15'	3681518.21	486366.70	15	3681518.21	486366.70
16	861+35.21	70.22'	3681553.20	486471.84	16	3681553.20	486471.84
17	865+86.57	70.17'	3681751.61	486888.80	17	3681751.61	486888.80
18	868+81.40	70.00'	3681917.17	487138.66			
19	868+97.99	71.29'	3681925.25	487153.20			
20	869+15.29	70.00'	3681935.98	487167.05			
21	870+86.49	70.20'	3682033.35	487314.00			

LAYOUT C/L NEW ALIGNMENT

C/L STATION	LOCATION X	LOCATION Y
40+31.38	3681240.36	485385.38
46+44.68	3681383.92	485981.64
51+64.80	3681540.12	486475.15
56+26.17	3681746.37	486891.77

TEMP. CONST. EASEMENT

51	3681600.19	486570.61
52	3681392.17	486708.44
53	3681613.11	487041.89
54	3681779.84	486931.41

REQUIRED RIGHTS-OF-WAY = 0.00 ACRES
TEMP. CONST. EASEMENT = 2.03 ACRES

LEGEND

- O = BASELINE P.I. POINT
- = COE BASELINE
- = C/L EXISTING LEVEE
- = EXISTING LEVEE R/W
- = UTILITY
- = C/L NEW ALIGNMENT
- = REQUIRED R/W

SCALE: 1" = 100'

100' 0 100' 200' 300' 400'

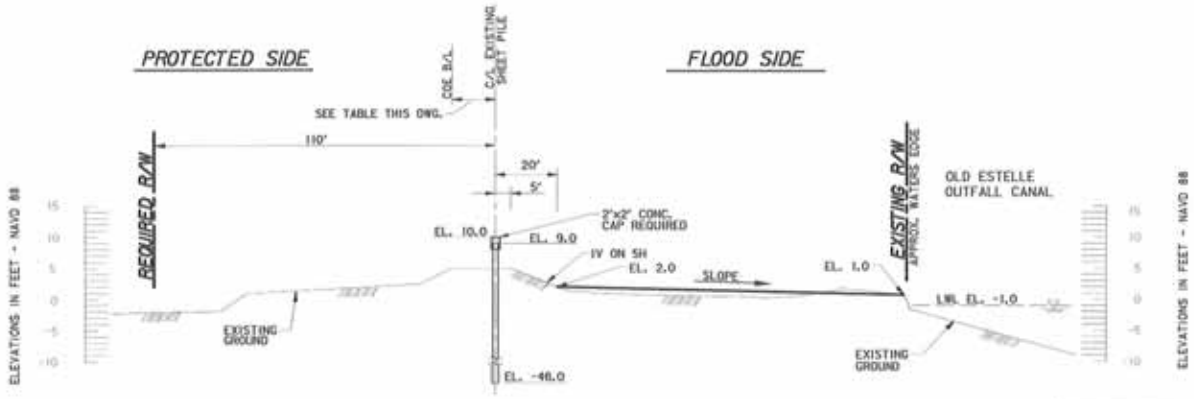
ENGINEERING & CONSULTING INC. BCG "Excellence in Engineering"

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

PLAN - ALTERNATIVE 5.2
B/L STA. 850+23.15-STA. 865+86.57

SHEET IDENTIFICATION NUMBER
55



TYPICAL DESIGN SECTION - SHEET PILE WALL
EXISTING ALIGNMENT - EL. 10.0 NAVD
STA. 809+03.80 B/L TO STA. 846+36 B/L

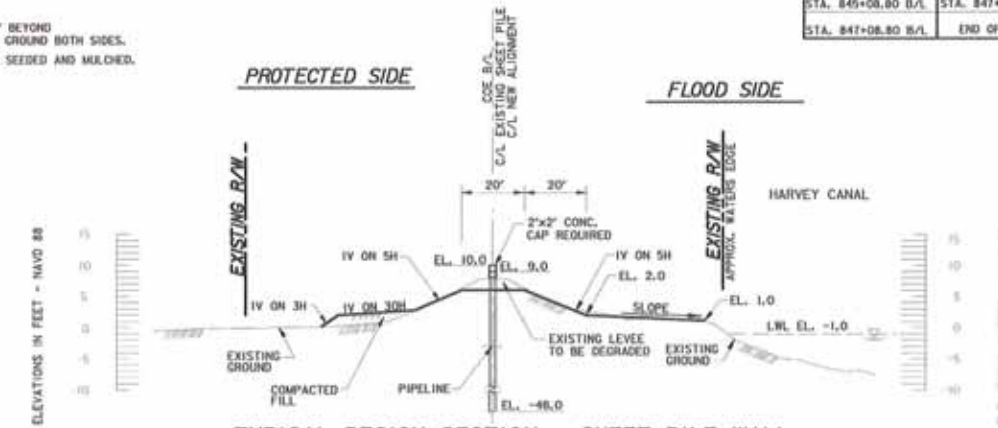
HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 10'

B/L TO EXISTING C/L DISTANCE		
FROM	TO	DISTANCE FROM COE B/L TO C/L EXISTING SHEET PILE OR TO C/L EXISTING LEVEE
BEGINNING OF WORK STA. 809+03.80 B/L	STA. 817+00 B/L	VARIES 0' TO 10.00'
STA. 817+00 B/L	STA. 820+00 B/L	VARIES 10.00' TO 30.00'
STA. 820+00 B/L	STA. 832+00 B/L	30.00'
STA. 832+00 B/L	STA. 835+00 B/L	VARIES 30.00' TO 15.00'
STA. 835+00 B/L	STA. 845+08.80 B/L	15.00'
STA. 845+08.80 B/L	STA. 847+08.80 B/L	VARIES 15.00' TO 0' (IN ALIGNMENT CURVE)
STA. 847+08.80 B/L	END OF WORK	0'

NOTES:

1. CLEARING AND GRUBBING LIMITS TO EXTEND 10' BEYOND POINT WHERE DESIGN SECTION MEETS EXISTING GROUND BOTH SIDES.
2. ALL DISTURBED AREAS ARE TO BE FERTILIZED, SEEDED AND MULCHED.



TYPICAL DESIGN SECTION - SHEET PILE WALL
EXISTING ALIGNMENT - EL. 10.0 NAVD
STA. 848+36 B/L TO STA. 865+86.57 B/L

HORIZONTAL SCALE: 1" = 20'

VERTICAL SCALE: 1" = 10'

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

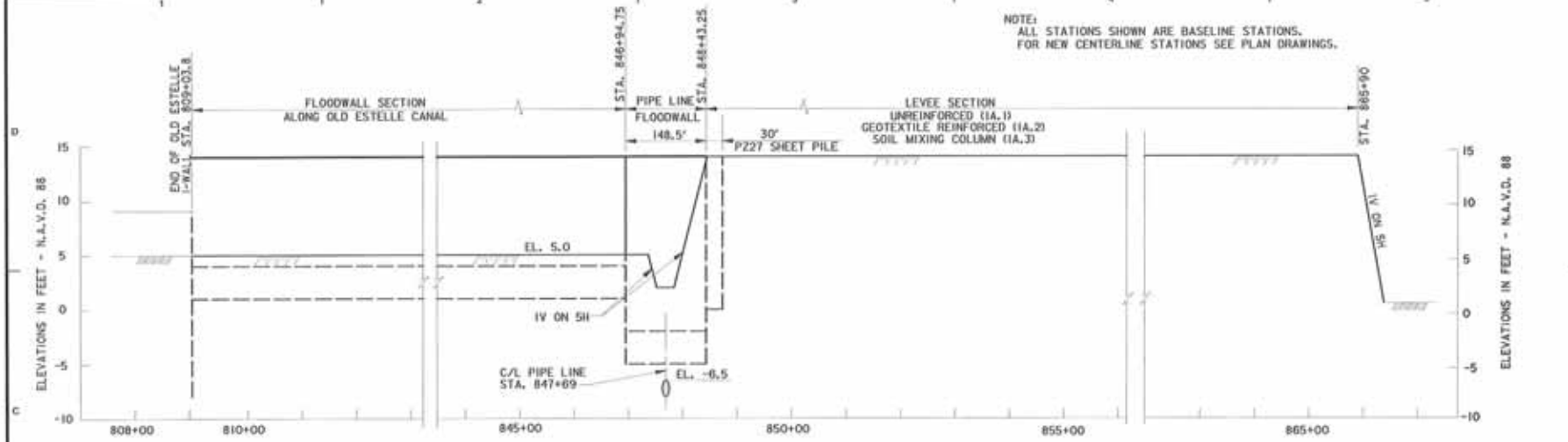
U. S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ALTERNATIVE 5.2
TYPICAL DESIGN SECTIONS

SHEET IDENTIFICATION NUMBER
56

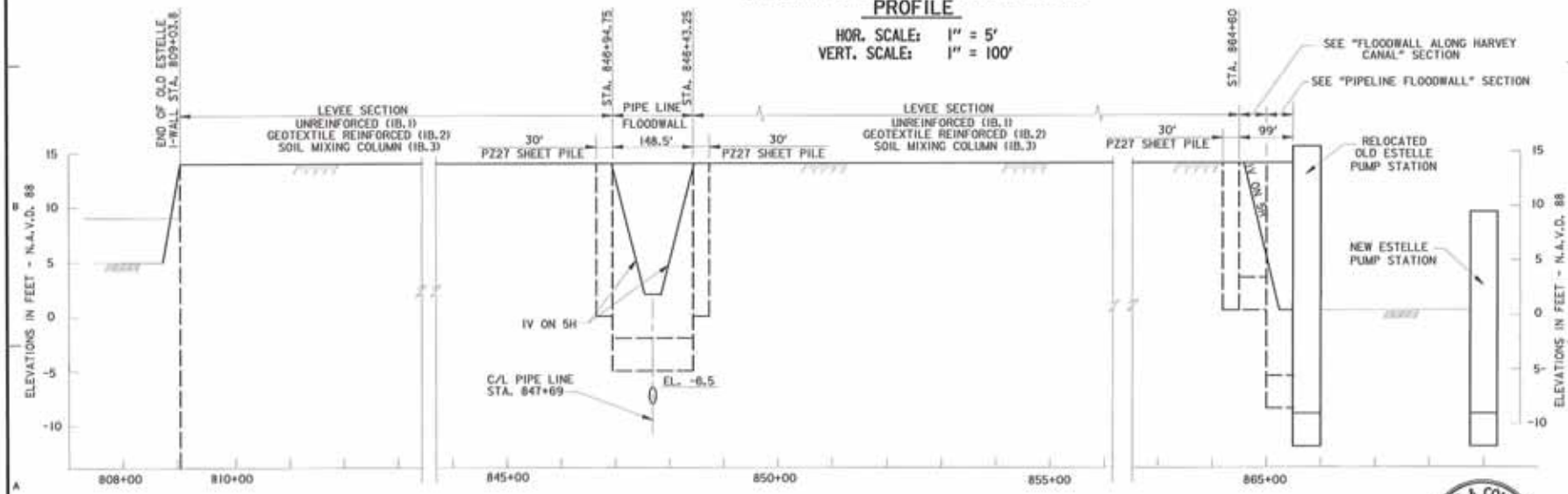
PROFILE SCHEMATICS

NOTE:
ALL STATIONS SHOWN ARE BASELINE STATIONS.
FOR NEW CENTERLINE STATIONS SEE PLAN DRAWINGS.



ALTERNATIVE 1A.1, 1A.2, & 1A.3 PROFILE

HOR. SCALE: 1" = 5'
VERT. SCALE: 1" = 100'



ALTERNATIVE 1B.1, 1B.2, & 1B.3 PROFILE

HOR. SCALE: 1" = 5'
VERT. SCALE: 1" = 100'

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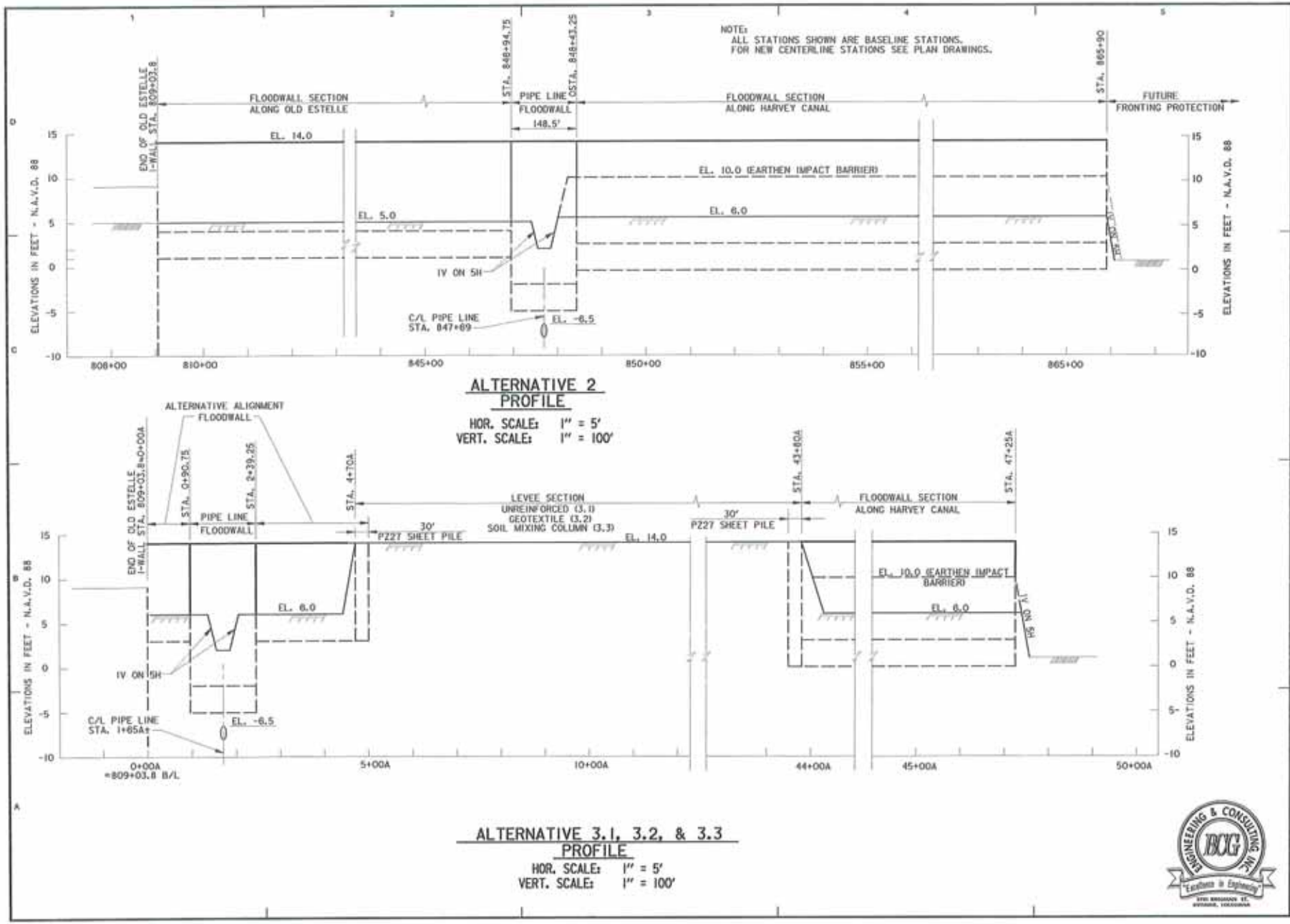
US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING AND DESIGN, NEW ORLEANS, LOUISIANA
HURRICANE PROTECTION PROJECT
HARVEY CANAL WEST BANK LEVEES-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
JEFFERSON PARISH, LOUISIANA

ALTERNATIVES 1A & 1B PROFILE SCHEMATICS

SHEET IDENTIFICATION NUMBER
57


NOTE:
ALL STATIONS SHOWN ARE BASELINE STATIONS.
FOR NEW CENTERLINE STATIONS SEE PLAN DRAWINGS.
END OF OLD ESTELLE I-WALL STA. 809+03.8
STA. 848+94.75
STA. 848+43.25
STA. 865+90
FLOODWALL SECTION ALONG OLD ESTELLE
PIPE LINE FLOODWALL
148.5'
FLOODWALL SECTION ALONG HARVEY CANAL
FUTURE FRONTING PROTECTION
EL. 14.0
EL. 10.0 (EARTHEN IMPACT BARRIER)
EL. 5.0
EL. 6.0
1V ON 5H
C/L PIPE LINE STA. 847+69
EL. -6.5
ELEVATIONS IN FEET - N.A.V.D. 88
808+00
810+00
845+00
850+00
855+00
865+00
ALTERNATIVE 2
PROFILE
HOR. SCALE: 1" = 5'
VERT. SCALE: 1" = 100'
ALTERNATIVE ALIGNMENT FLOODWALL
END OF OLD ESTELLE I-WALL STA. 809+03.8=0+00A
STA. 0+90.75
STA. 2+39.25
STA. 4+70A
STA. 43+60A
STA. 47+25A
PIPE LINE FLOODWALL
30' PZ27 SHEET PILE
LEVEE SECTION
UNREINFORCED (3.1)
GEOTEXTILE (3.2)
SOIL MIXING COLUMN (3.3)
30' PZ27 SHEET PILE
FLOODWALL SECTION ALONG HARVEY CANAL
EL. 14.0
EL. 10.0 (EARTHEN IMPACT BARRIER)
EL. 6.0
1V ON 5H
C/L PIPE LINE STA. 1+65A±
EL. -6.5
0+00A =809+03.8 B/L
5+00A
10+00A
44+00A
45+00A
50+00A
ALTERNATIVE 3.1, 3.2, & 3.3
PROFILE
HOR. SCALE: 1" = 5'
VERT. SCALE: 1" = 100'
ENGINEERING & CONSULTING INC.
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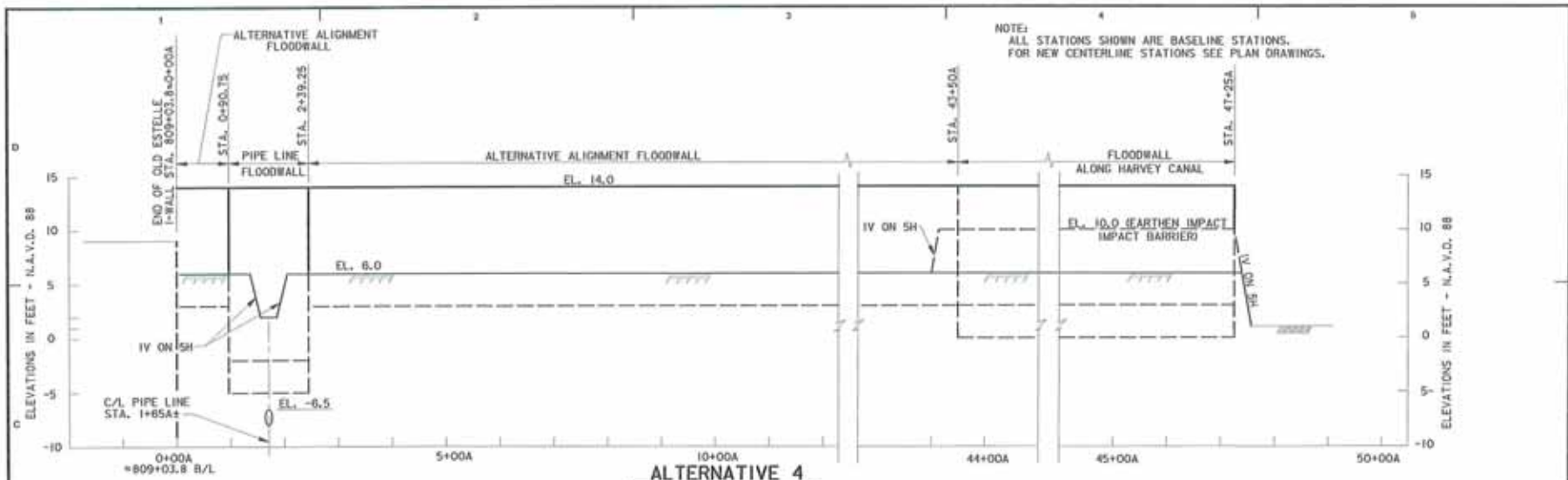
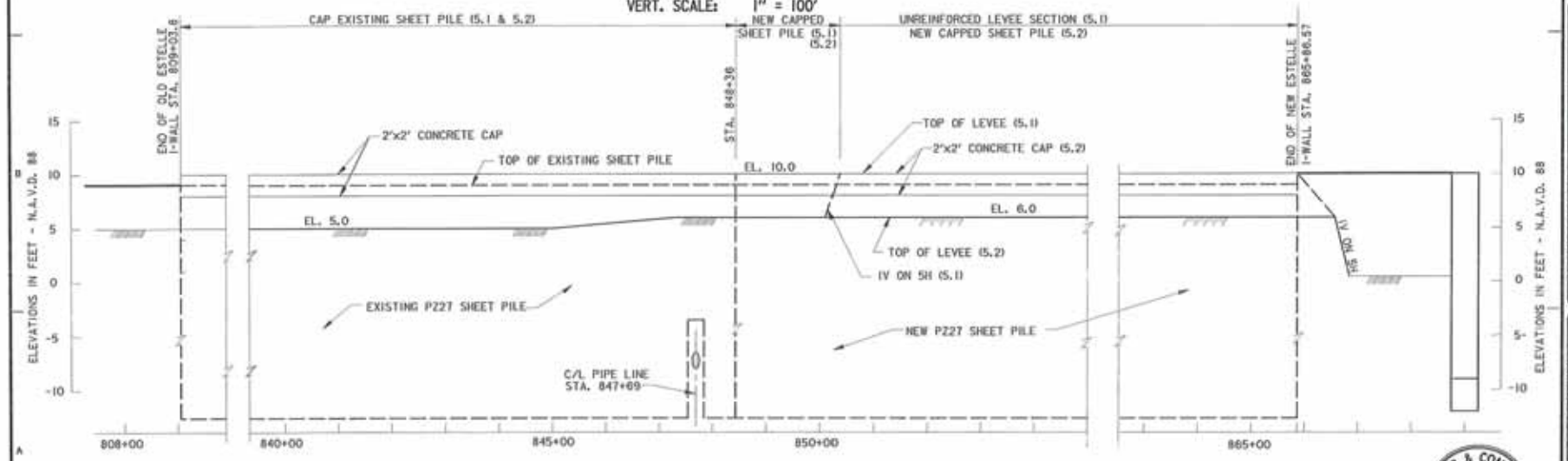
NEW ORLEANS DISTRICT
U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION
ALTERNATIVES 2 & 3
PROFILE SCHEMATICS
SHEET IDENTIFICATION NUMBER
58



ALTERNATIVE 4 PROFILE

HOR. SCALE: 1" = 5'
VERT. SCALE: 1" = 100'



ALTERNATIVE 5 PROFILE

HOR. SCALE: 1" = 5'
VERT. SCALE: 1" = 100'

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING & CONSULTING INC.
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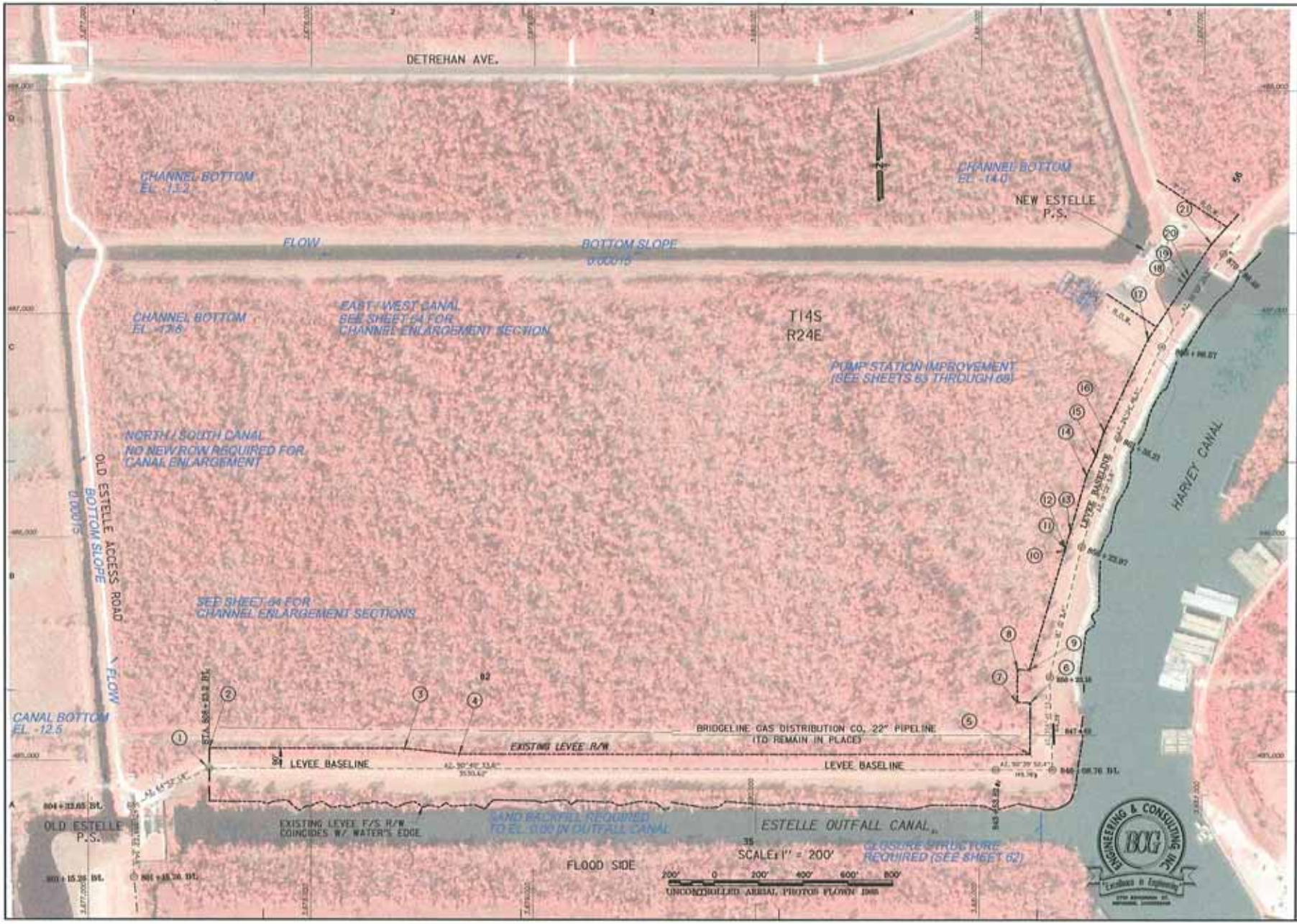
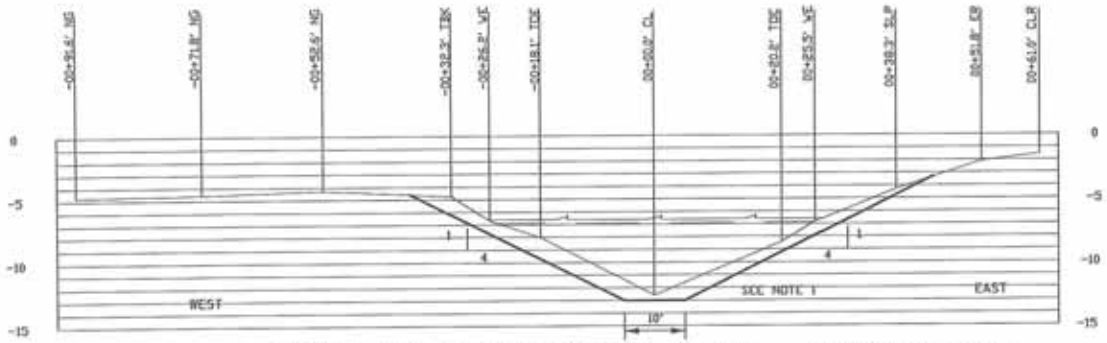
ALTERNATIVES 4 & 5
PROFILE SCHEMATICS

SHEET IDENTIFICATION NUMBER
59

DETAILS AND SECTIONS


DETREHAN AVE.
CHANNEL BOTTOM
EL. -13.2
CHANNEL BOTTOM
EL. -14.0
NEW ESTELLE
P.S.
FLOW
BOTTOM SLOPE
0.00015
CHANNEL BOTTOM
EL. -13.6
EAST / WEST CANAL
SEE SHEET 64 FOR
CHANNEL ENLARGEMENT SECTION
T14S
R24E
PUMP STATION IMPROVEMENT
(SEE SHEETS 63 THROUGH 68)
NORTH / SOUTH CANAL
NO NEW ROW REQUIRED FOR
CANAL ENLARGEMENT
OLD ESTELLE ACCESS ROAD
BOTTOM SLOPE
0.00015
FLOW
SEE SHEET 64 FOR
CHANNEL ENLARGEMENT SECTIONS
HARVEY CANAL
LEVEE BASELINE
CANAL BOTTOM
EL. -12.5
BRIDGELINE GAS DISTRIBUTION CO. 22" PIPELINE
(TO REMAIN IN PLACE)
EXISTING LEVEE R/W
LEVEE BASELINE
LEVEE BASELINE
OLD ESTELLE
P.S.
EXISTING LEVEE F/S R/W
COINCIDES W/ WATER'S EDGE
SAND BACKFILL REQUIRED
TO EL. 0.00 IN OUTFALL CANAL
ESTELLE OUTFALL CANAL
CLOSURE STRUCTURE
REQUIRED (SEE SHEET 62)
FLOOD SIDE
SCALE: 1" = 200'
200' 0 200' 400' 600' 800'
UNCONTROLLED AERIAL PHOTOS FLOWN 1998
US ARMY CORPS
OF ENGINEERS
NEW ORLEANS DISTRICT
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION
ALTERNATIVE 1B
GENERAL PLAN
SHEET
IDENTIFICATION
NUMBER
60



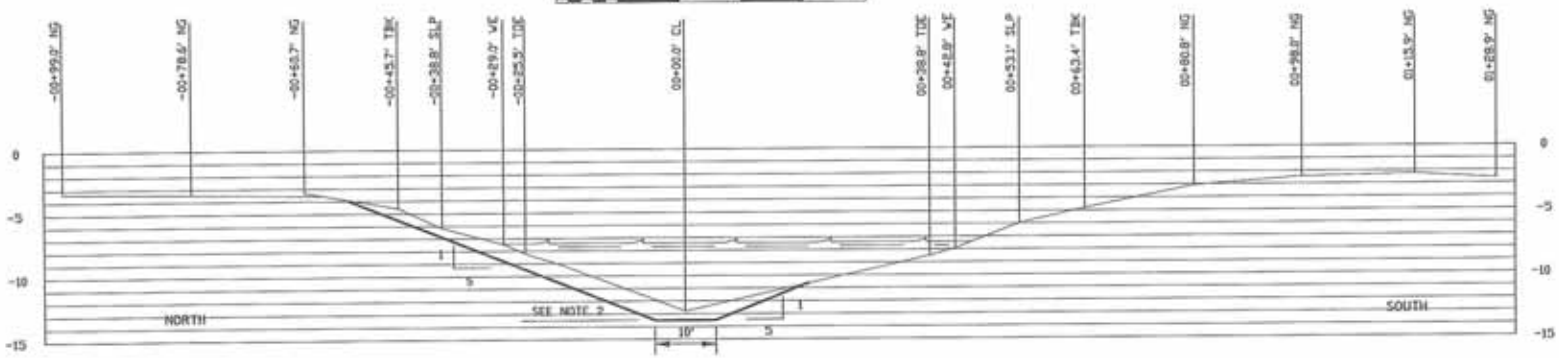
CHANNEL ENLARGEMENT TYPICAL SECTION - EAST/WEST CANAL

HORIZONTAL SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'



CHANNEL ENLARGEMENT TYPICAL SECTION - NORTH/SOUTH CANAL

HORIZONTAL SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

NOTES:

1. BOTTOM ELEVATION VARIES FROM -12.5 AT OLD ESTELLE PUMP STATION TO -12.8 NEAR CONFLUENCE OF THE EAST/WEST AND NORTH/SOUTH CANAL.
2. BOTTOM ELEVATION VARIES FROM -14.0 AT NEW ESTELLE PUMP STATION TO -13.2 NEAR CONFLUENCE OF THE EAST/WEST AND NORTH/SOUTH CANAL.
3. SEE DWG. NO. 57 FOR CANAL LOCATIONS.

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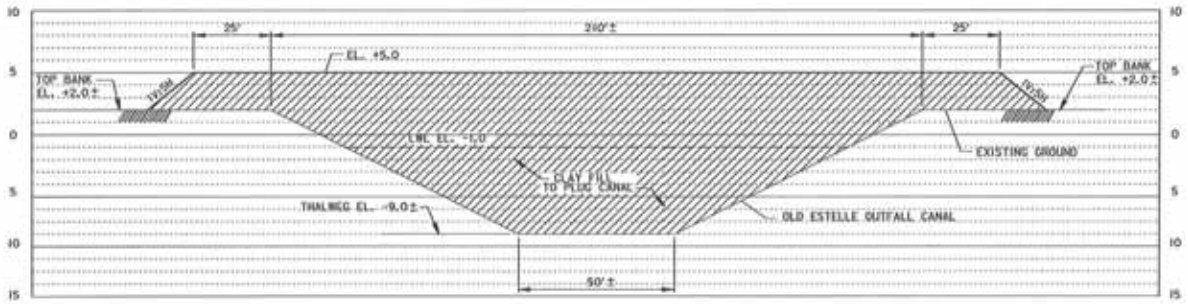
ANTIOCH, LOUISIANA

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

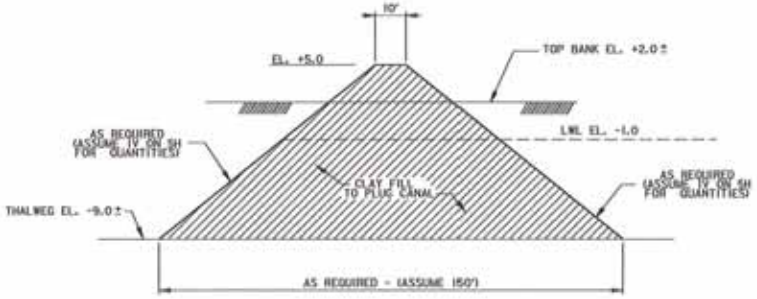
ALTERNATIVE 1.B - CHANNEL ENLARGEMENT SECTIONS

SHEET IDENTIFICATION NUMBER
61



OUTFALL CANAL CLOSURE STRUCTURE
TRANSVERSE CROSS SECTION

NOTES:
1. ASSUMED 50% GREATER QUANTITY FOR ALL FILL BELOW EL.0 DUE TO PLACEMENT IN WATER.
2. GEOTECHINCAL ANAYLSIS NOT PERFORMED FOR CLOSURE STRUCTURE



OUTFALL CANAL CLOSURE STRUCTURE
LONGITUDINAL CROSS SECTION

SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

HORIZONTAL

SCALE: 1" = 5'

5' 0 5' 10' 15' 20'

VERTICAL

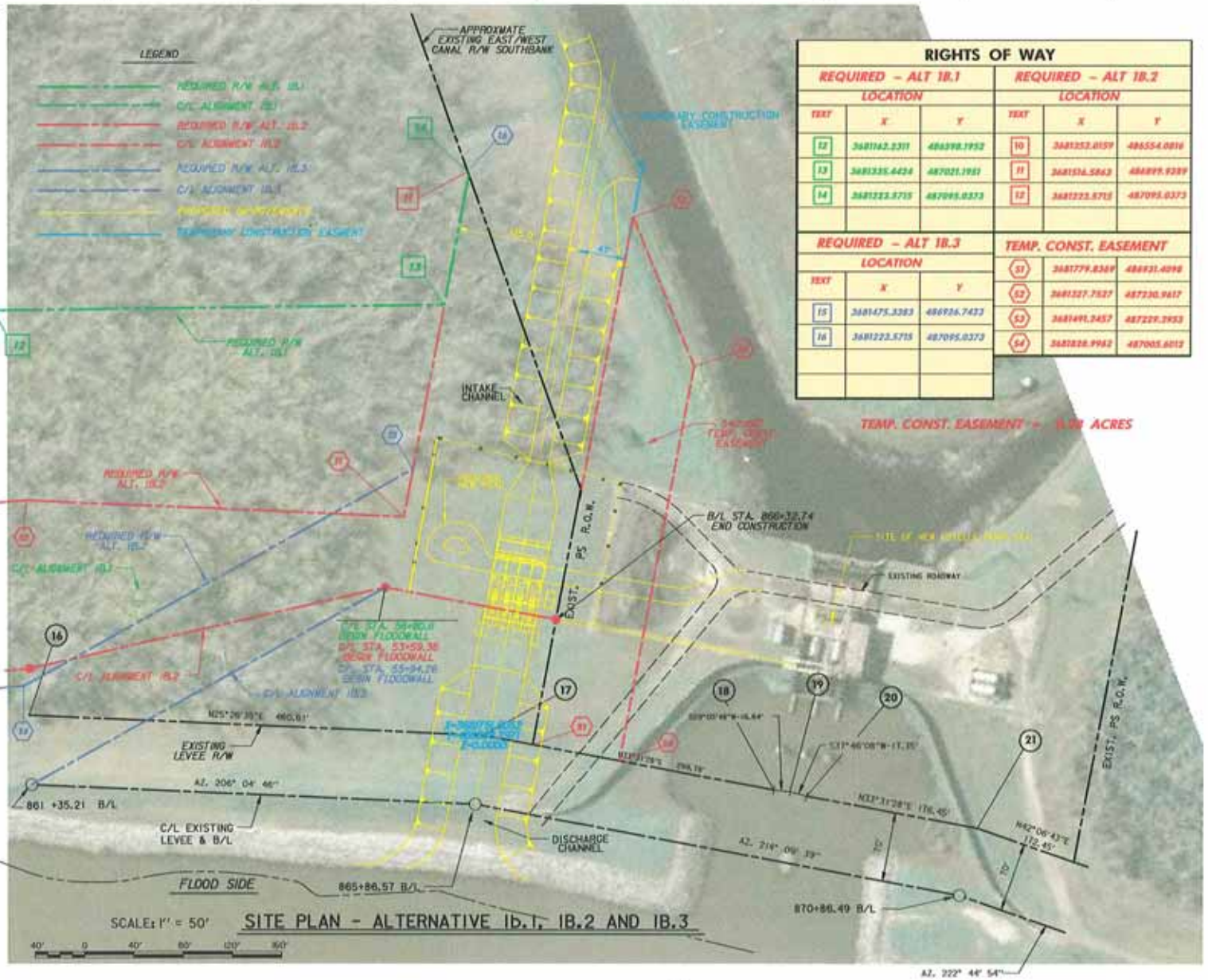
US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - HBV-1 & 2 HARVEY CANAL, WEST BANK LEVEES, PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

ALT.1B - OUTFALL CANAL CLOSURE STRUCTURE

SHEET IDENTIFICATION NUMBER 62



RIGHTS OF WAY

REQUIRED – ALT 1B.1 LOCATION			REQUIRED – ALT 1B.2 LOCATION		
TEXT	X	Y	TEXT	X	Y
12	3681142.2311	486398.1952	10	3681252.0159	486554.0816
13	3681335.4424	487021.1951	11	3681516.5863	486899.9389
14	3681223.5715	487095.0373	12	3681223.5715	487095.0373

REQUIRED – ALT 1B.3 LOCATION		
TEXT	X	Y
15	3681475.3383	486936.7473
16	3681223.5715	487095.0373

TEMP. CONST. EASEMENT		
51	3681779.8369	486831.4098
52	3681327.7537	487230.9417
53	3681491.3457	487229.2953
54	3681838.9982	487005.6012

TEMP. CONST. EASEMENT – 8.98 ACRES

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

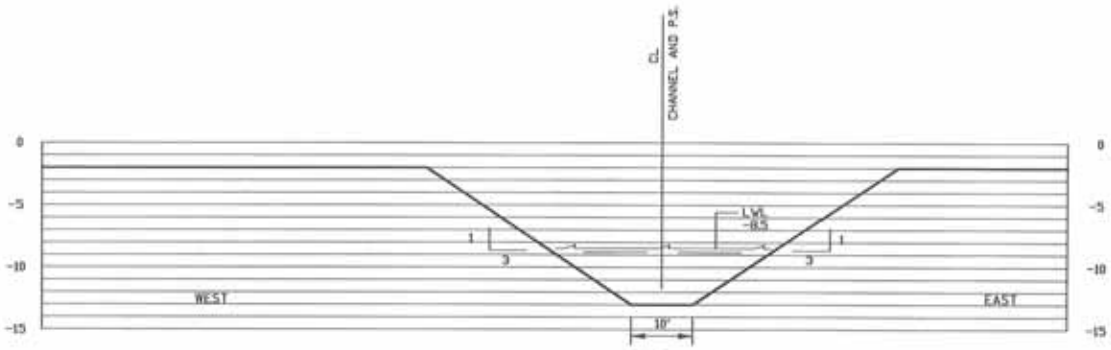
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS DISTRICT MISSISSIPPI VALLEY DIVISION

ENGINEERING AND CONSTRUCTION – HURRICANE PROTECTION PROJECT – HPC-184-2 PARIS'S CANAL, WEST BANK LEVEES-PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

ALTERNATIVE 1B P.S.-SITE PLAN

SHEET IDENTIFICATION NUMBER 63

BCG ENGINEERING & CONSULTING INC. "Excellence in Engineering"



SECTION A 63 64

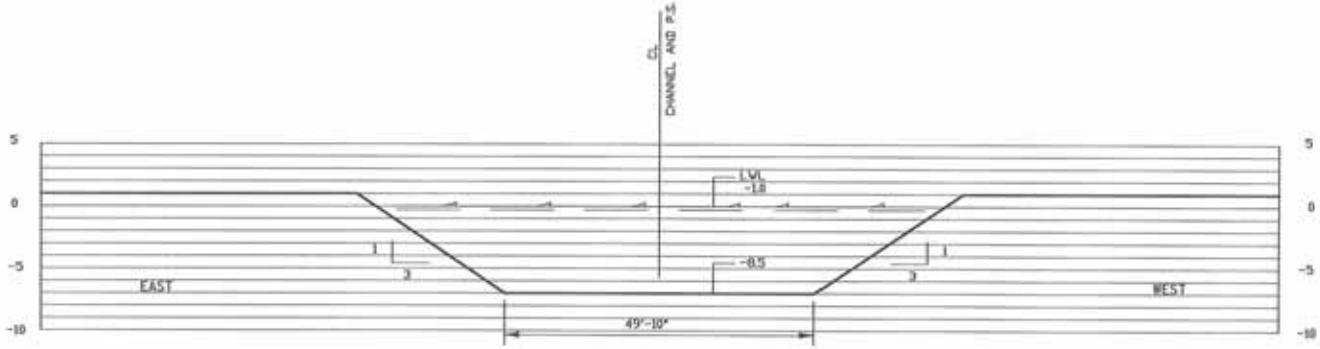
P.S. INLET CHANNEL ENLARGEMENT TYPICAL SECTION FROM EAST/WEST CANAL

HORIZONTAL SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'



SECTION B 63 64

P.S. DISCHARGE CHANNEL ENLARGEMENT TYPICAL SECTION TO HARVEY CANAL

HORIZONTAL SCALE: 1" = 20'

20' 0 20' 40' 60' 80'

VERTICAL SCALE: 1" = 10'

10' 0 10' 20' 30' 40'

NOTES:

1. INLET CHANNEL BOTTOM ELEVATION VARIES FROM -15.0 AT RELOCATED OLD ESTELLE PUMP STATION TO -12.8 NEAR CONFLUENCE OF THE EAST/WEST CANAL.
2. DISCHARGE CHANNEL BOTTOM ELEVATION VARIES FROM -8.5 AT RELOCATED OLD ESTELLE PUMP STATION TO THE HARVEY CANAL.
3. SEE DWG. NO. 63 FOR CHANNELS LOCATION.

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

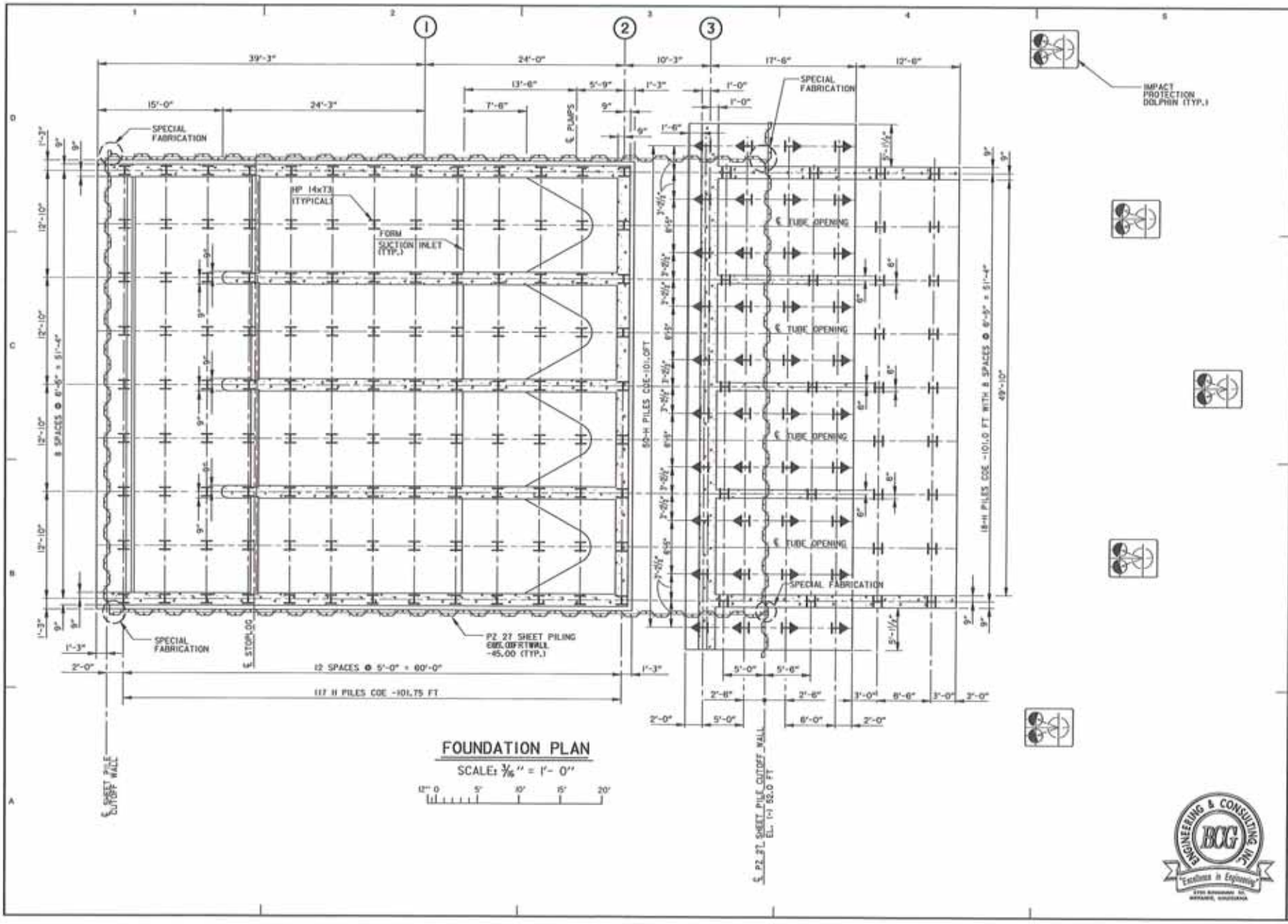
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - WBV-Mg.2
HARVEY CANAL WEST BANK LEVEES-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
JEFFERSON PARISH, LOUISIANA

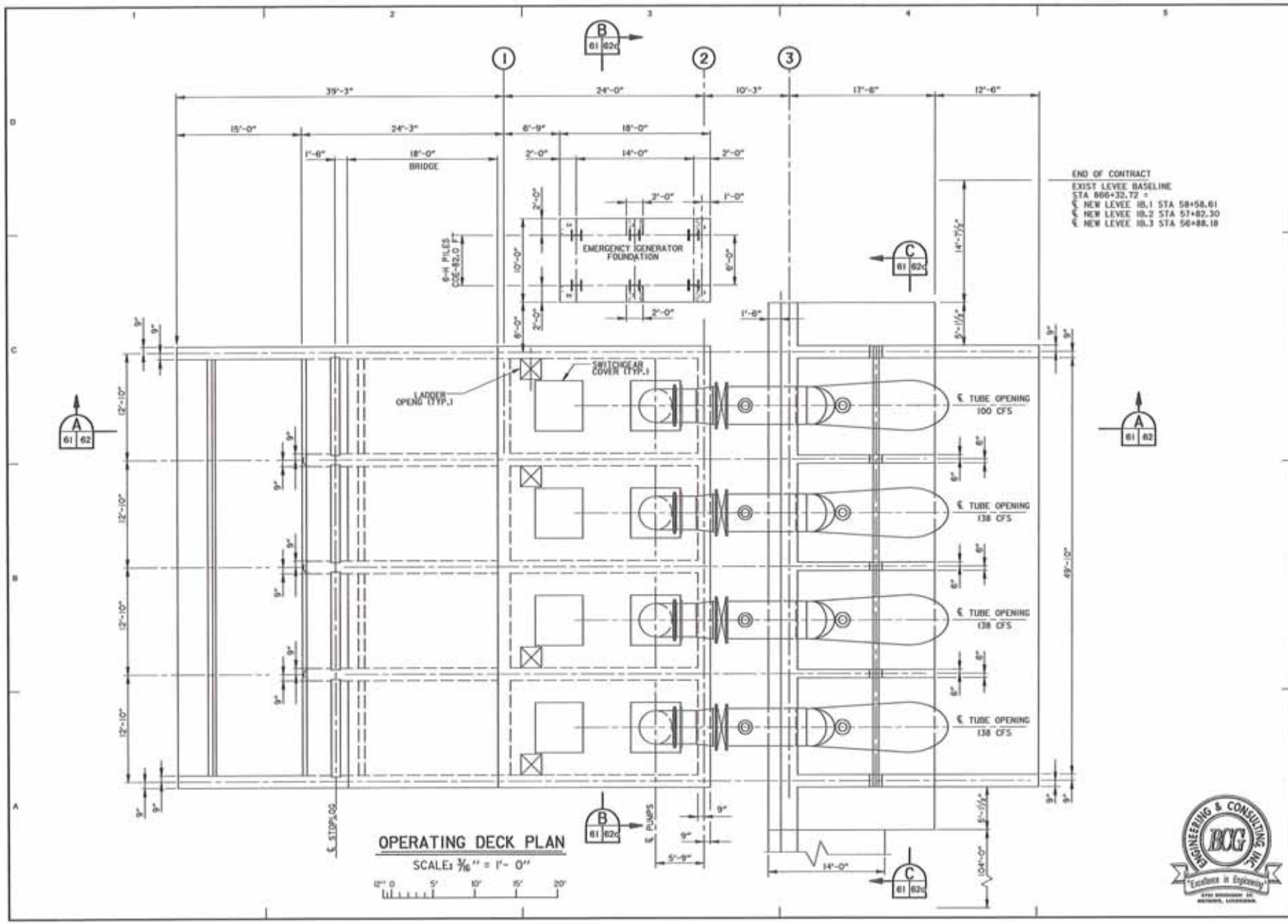
ALTERNATIVE 1.B - CHANNEL
P.S. ENLARGEMENT SECTIONS

SHEET IDENTIFICATION NUMBER
64

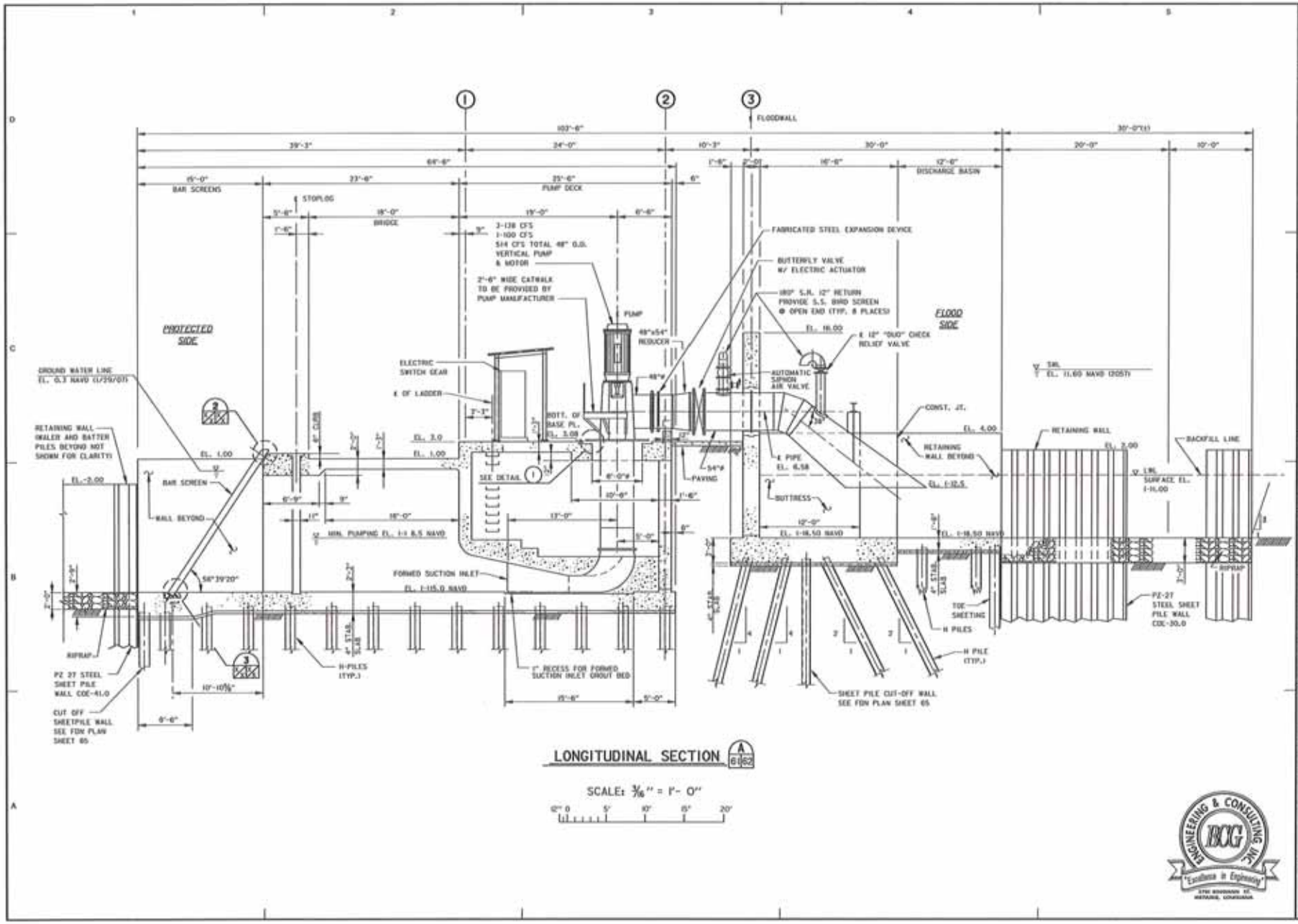
ENGINEERING & CONSULTING INC.
BCG
"Excellence in Engineering"
3700 BOUGAINE ST.
METAIRIE, LOUISIANA



FOUNDATION PLAN
SCALE: 3/16" = 1'- 0"
SPECIAL FABRICATION
HP 14x73 (TYPICAL)
FORM SUCTION INLET (TYP.)
℄ TUBE OPENING
PZ 27 SHEET PILING
12 SPACES @ 5'-0" = 60'-0"
117 H PILES COE -101.75 FT
50-H PILES COE-101.0FT
18-H PILES COE -101.0 FT WITH 8 SPACES @ 6'-5" = 51'-4"
8 SPACES @ 6'-5" = 51'-4"
IMPACT PROTECTION DOLPHIN (TYP.)
℄ PZ 27 SHEET PILE CUTOFF WALL EL. (-) 52.0 FT
℄ SHEET PILE CUTOFF WALL
℄ STOPLOG
℄ PUMPS
US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION
ENGINEERING ALTERNATIVE REPORT - NEW 1 & 2
HARVEY CANAL WEST BANK LEVEE-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
ALTERNATIVE 1B
P.S.-FOUNDATION PLAN
SHEET IDENTIFICATION NUMBER
65
ENGINEERING & CONSULTING INC.
BCG
"Excellence in Engineering"



OPERATING DECK PLAN
SCALE: 3/16" = 1'- 0"
EMERGENCY GENERATOR FOUNDATION
6-H PILES COE-82.0 FT
SWITCHGEAR COVER (TYP.)
LADDER OPENG (TYP.)
℄ TUBE OPENING 100 CFS
℄ TUBE OPENING 138 CFS
℄ TUBE OPENING 138 CFS
℄ TUBE OPENING 138 CFS
END OF CONTRACT
EXIST LEVEE BASELINE
STA 866+32.72 =
℄ NEW LEVEE IB.1 STA 58+58.61
℄ NEW LEVEE IB.2 STA 57+82.30
℄ NEW LEVEE IB.3 STA 56+88.18
℄ STOPLOG
℄ PUMPS
BRIDGE
39'-3"
24'-0"
10'-3"
17'-6"
12'-6"
15'-0"
24'-3"
6'-9"
18'-0"
1'-6"
18'-0"
2'-0"
14'-0"
2'-0"
1'-0"
10'-0"
6'-0"
14'-7½"
5'-11½"
12'-10"
49'-10"
5'-9"
14'-0"
104'-0"
ENGINEERING & CONSULTING, INC.
BCG
"Excellence in Engineering"
US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION
ENGINEERING ALTERNATIVE REPORT - VIBH-1&2
HARVEY CANAL WEST BANK LEVEES-PHASE 2
OLD ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION
ALTERNATIVE 1B
P.S.-OPERATING DECK PLAN
SHEET IDENTIFICATION NUMBER
66



LONGITUDINAL SECTION

SCALE: 3/16" = 1'- 0"

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

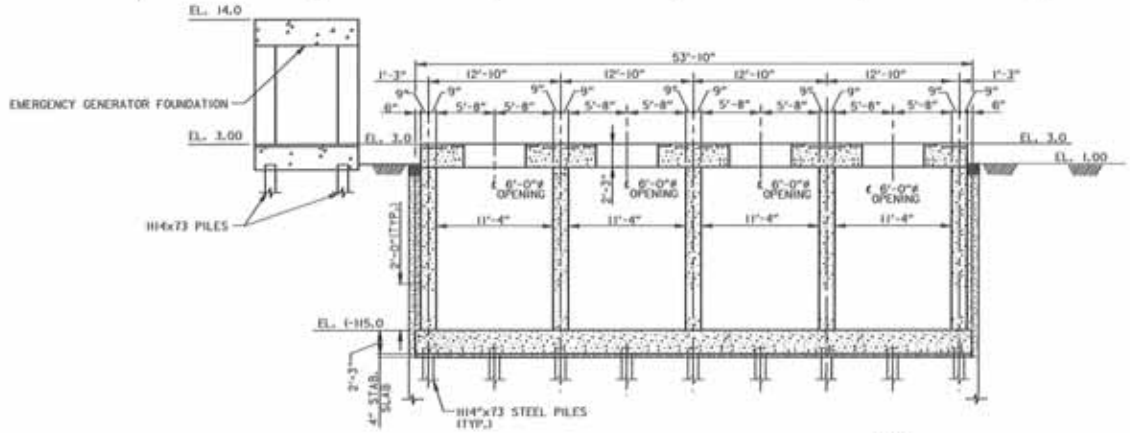
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

ENGINEERING ALTERNATIVE REPORT - NEW ORLEANS DISTRICT
HURRICANE PROTECTION OF EAST JEFFERSON PARISH
O.L. ESTELLE PUMPING STATION
TO NEW ESTELLE PUMPING STATION

ALTERNATIVE 1B
P.S.-LONGITUDINAL SECTION

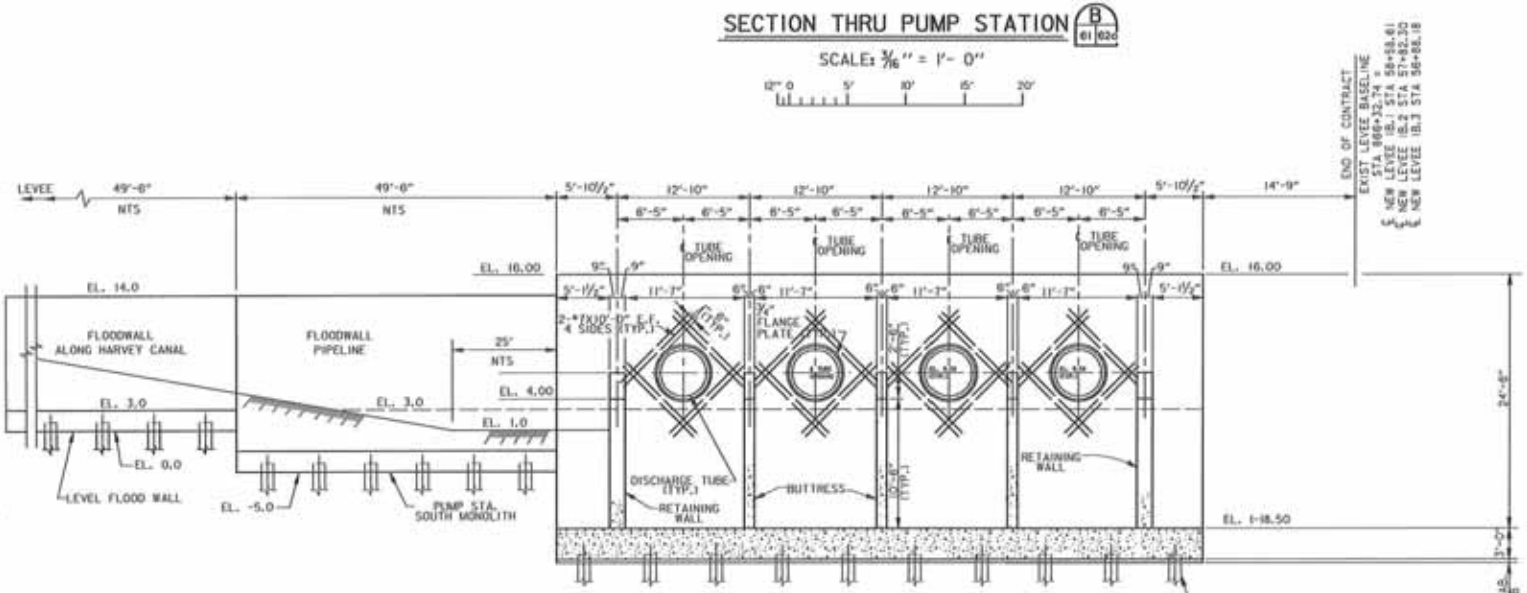
SHEET IDENTIFICATION NUMBER
87

ENGINEERING & CONSULTING INC.
BCG
"Excellence in Engineering"



SECTION THRU PUMP STATION (B / 61 | 62c)

SCALE: 3/16" = 1'- 0"



SECTION THRU FLOOD WALL (C / 61 | 62c)

SCALE: 3/16" = 1'- 0"

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA MISSISSIPPI VALLEY DIVISION

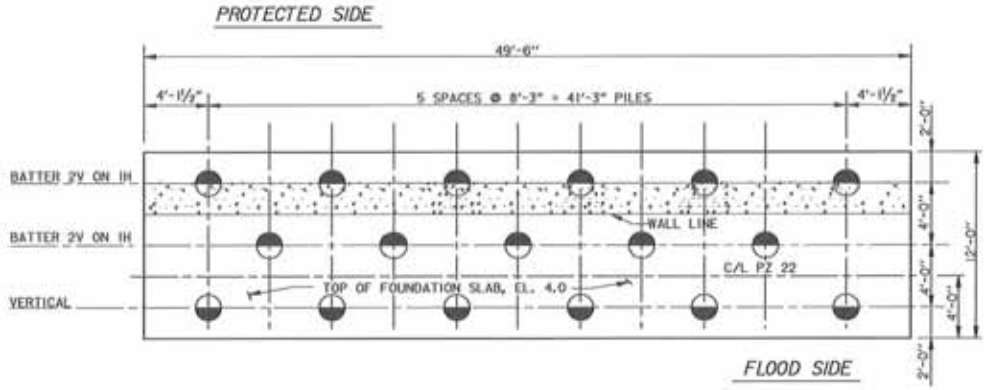
ENGINEERING ALTERNATIVE REPORT - HPH-1&2 HARVEY CANAL WETT BARRIER - PHASE 2 OLD ESTELLE PUMPING STATION TO NEW ESTELLE PUMPING STATION

ALTERNATIVE 1B P.S.-TYPICAL SECTIONS

SHEET IDENTIFICATION NUMBER 08

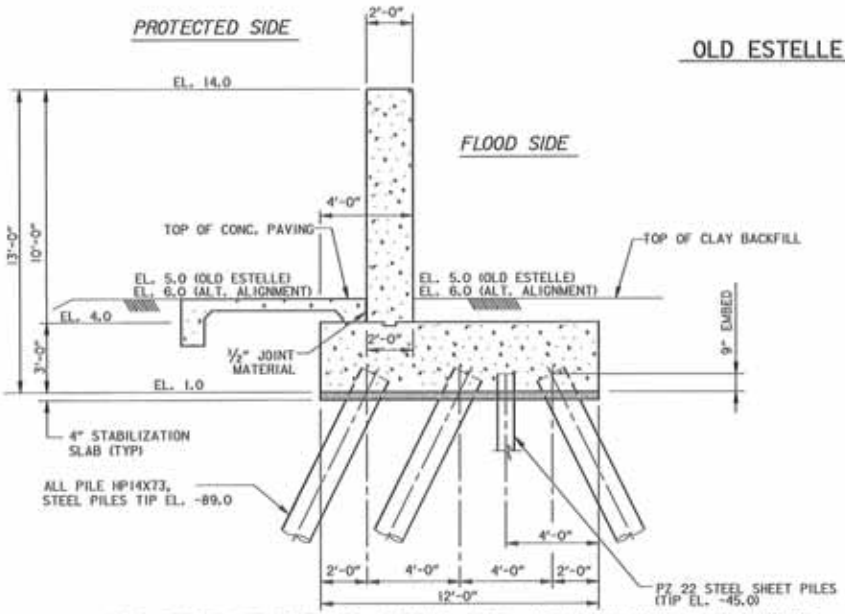
BCG ENGINEERING & CONSULTING INC. "Excellence in Engineering"

FLOODWALL & MIXING DETAILS



OLD ESTELLE OUTFALL CANAL AND ALTERNATIVE ALIGNMENT
FLOODWALL FOUNDATION PLAN

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



OLD ESTELLE OUTFALL CANAL AND ALTERNATIVE ALIGNMENT
FLOODWALL SECTION

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

NOTE:
ALL PILES HP14X73

PILE LEGEND

DIRECTION OF BATTER

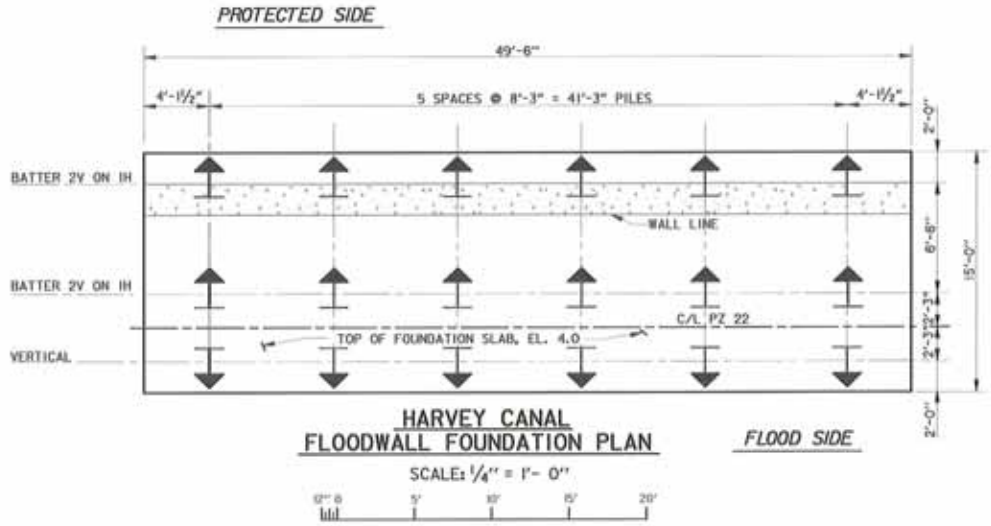
BATTER PILE (TIP EL. -89.0)

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

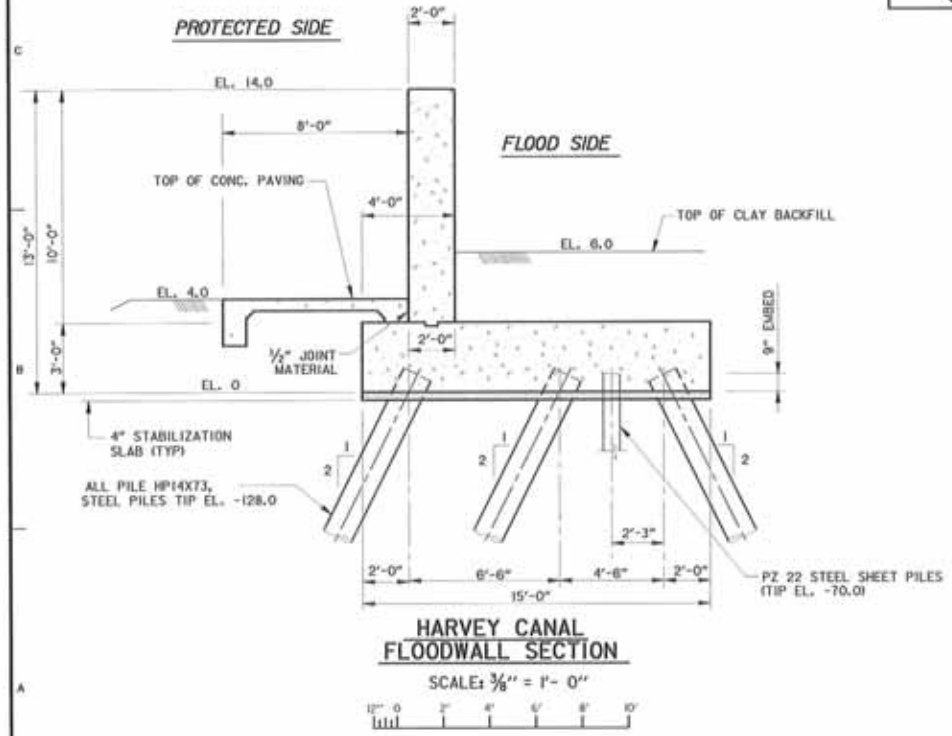
OLD ESTELLE OUTFALL CANAL
FLOODWALL-TYPICAL SECTIONS

SHEET IDENTIFICATION NUMBER
71



HARVEY CANAL FLOODWALL FOUNDATION PLAN

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



HARVEY CANAL FLOODWALL SECTION

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

NOTE:
ALL PILES HP14X73

PILE LEGEND

DIRECTION OF BATTER

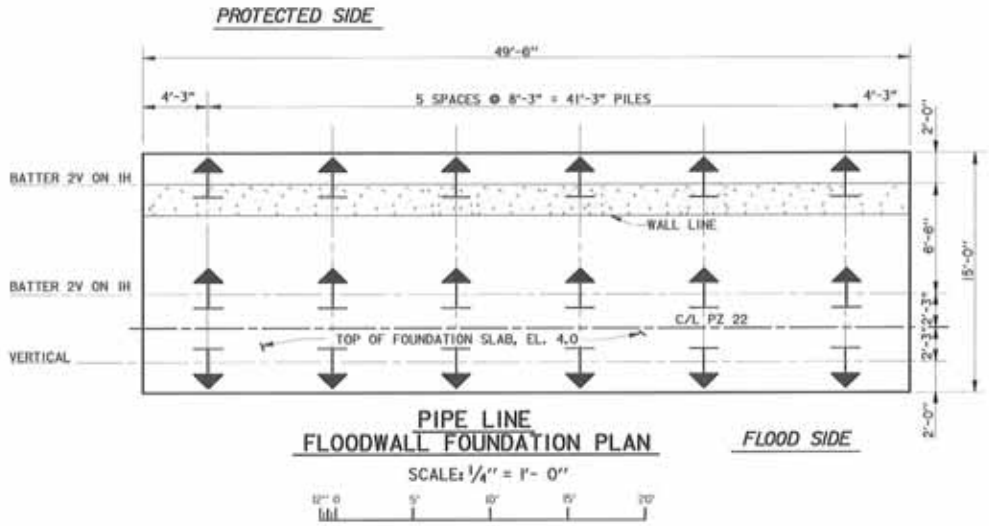
BATTER PILE (TIP EL. -128.0)

U.S. ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

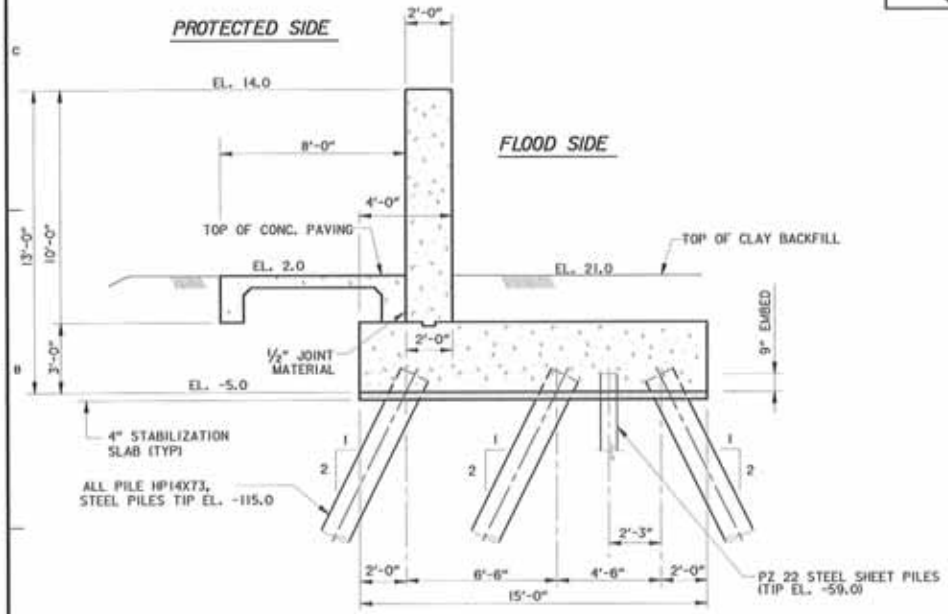
HARVEY CANAL
FLOODWALL-TYPICAL SECTIONS

SHEET IDENTIFICATION NUMBER
72



PIPE LINE
FLOODWALL FOUNDATION PLAN

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



PIPE LINE
FLOODWALL SECTION

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

NOTE:
ALL PILES HP14X73

PILE LEGEND

DIRECTION OF BATTER

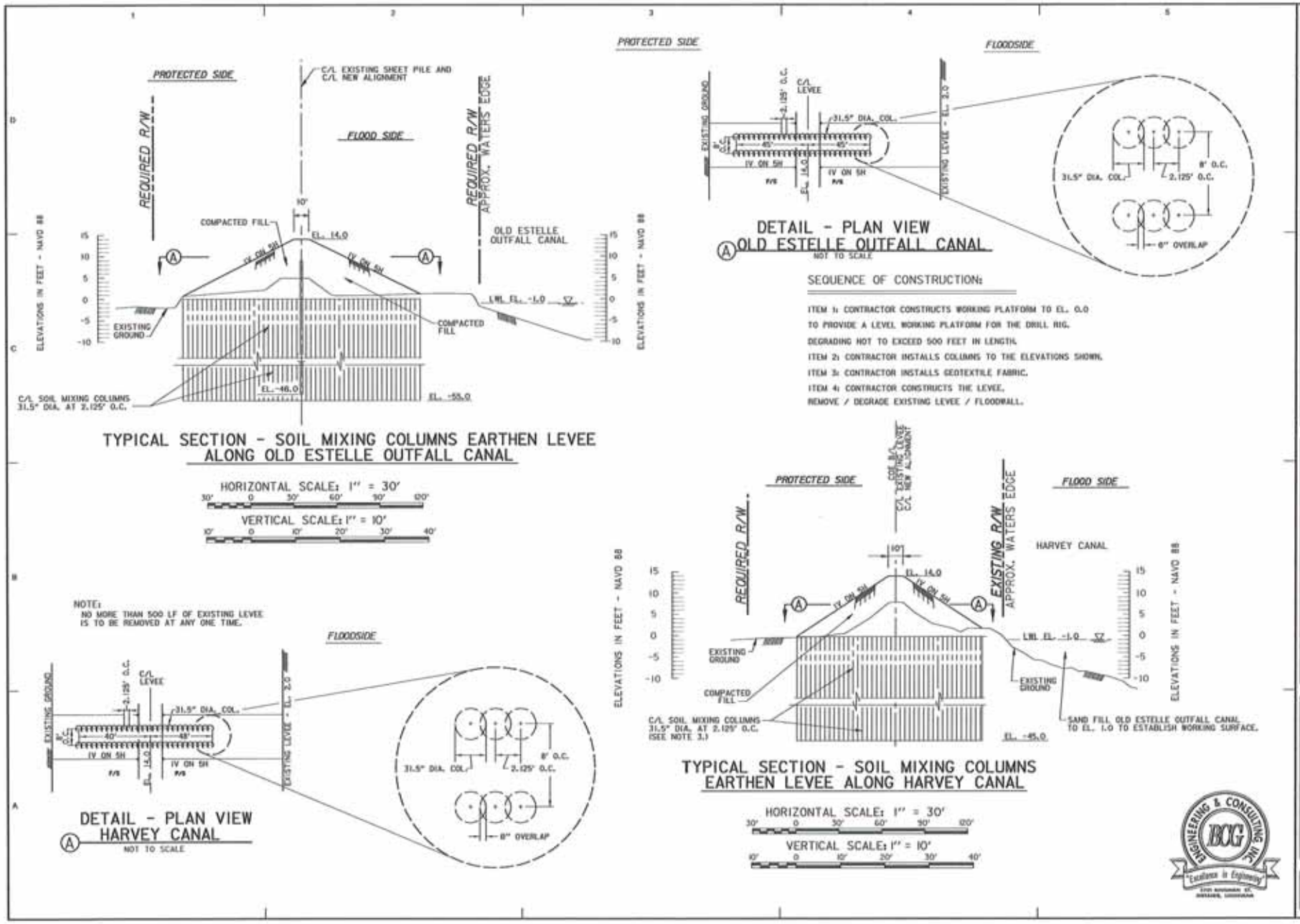
BATTER PILE (TIP EL. -115.0)

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION

PIPE LINE
FLOODWALL-TYPICAL SECTION

SHEET IDENTIFICATION NUMBER
73


PROTECTED SIDE
FLOOD SIDE
C/L EXISTING SHEET PILE AND C/L NEW ALIGNMENT
REQUIRED R/W
REQUIRED R/W APPROX. WATERS EDGE
OLD ESTELLE OUTFALL CANAL
COMPACTED FILL
EL. 14.0
1V ON 5H
EXISTING GROUND
LWL EL. -1.0
EL. -46.0
EL. -55.0
C/L SOIL MIXING COLUMNS 31.5" DIA. AT 2.125' O.C.
ELEVATIONS IN FEET - NAVD 88
TYPICAL SECTION - SOIL MIXING COLUMNS EARTHEN LEVEE ALONG OLD ESTELLE OUTFALL CANAL
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'
NOTE:
NO MORE THAN 500 LF OF EXISTING LEVEE IS TO BE REMOVED AT ANY ONE TIME.
FLOODSIDE
EXISTING GROUND
C/L LEVEE
2.125' O.C.
31.5" DIA. COL.
40'
48'
1V ON 5H
EL. 14.0
EXISTING LEVEE - EL. 2.0
8' O.C.
8" OVERLAP
DETAIL - PLAN VIEW HARVEY CANAL
NOT TO SCALE
PROTECTED SIDE
FLOODSIDE
EXISTING GROUND
C/L LEVEE
2.125' O.C.
31.5" DIA. COL.
45'
1V ON 5H
EL. 14.0
EXISTING LEVEE - EL. 2.0
8' O.C.
6" OVERLAP
DETAIL - PLAN VIEW OLD ESTELLE OUTFALL CANAL
NOT TO SCALE
SEQUENCE OF CONSTRUCTION:
ITEM 1: CONTRACTOR CONSTRUCTS WORKING PLATFORM TO EL. 0.0 TO PROVIDE A LEVEL WORKING PLATFORM FOR THE DRILL RIG. DEGRADING NOT TO EXCEED 500 FEET IN LENGTH.
ITEM 2: CONTRACTOR INSTALLS COLUMNS TO THE ELEVATIONS SHOWN.
ITEM 3: CONTRACTOR INSTALLS GEOTEXTILE FABRIC.
ITEM 4: CONTRACTOR CONSTRUCTS THE LEVEE.
REMOVE / DEGRADE EXISTING LEVEE / FLOODWALL.
PROTECTED SIDE
FLOOD SIDE
C/L EXISTING LEVEE C/L NEW ALIGNMENT
REQUIRED R/W
EXISTING R/W APPROX. WATERS EDGE
HARVEY CANAL
EL. 14.0
1V ON 5H
EXISTING GROUND
COMPACTED FILL
LWL EL. -1.0
C/L SOIL MIXING COLUMNS 31.5" DIA. AT 2.125' O.C. (SEE NOTE 3.)
EL. -45.0
SAND FILL OLD ESTELLE OUTFALL CANAL TO EL. 1.0 TO ESTABLISH WORKING SURFACE.
ELEVATIONS IN FEET - NAVD 88
TYPICAL SECTION - SOIL MIXING COLUMNS EARTHEN LEVEE ALONG HARVEY CANAL
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'
ENGINEERING & CONSULTING INC
BCG
"Excellence in Engineering"
US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
NEW ORLEANS DISTRICT
MISSISSIPPI VALLEY DIVISION
SOIL MIXING COLUMN DETAILS
SHEET IDENTIFICATION NUMBER
74

SURVEY SECTIONS AND PROFILES

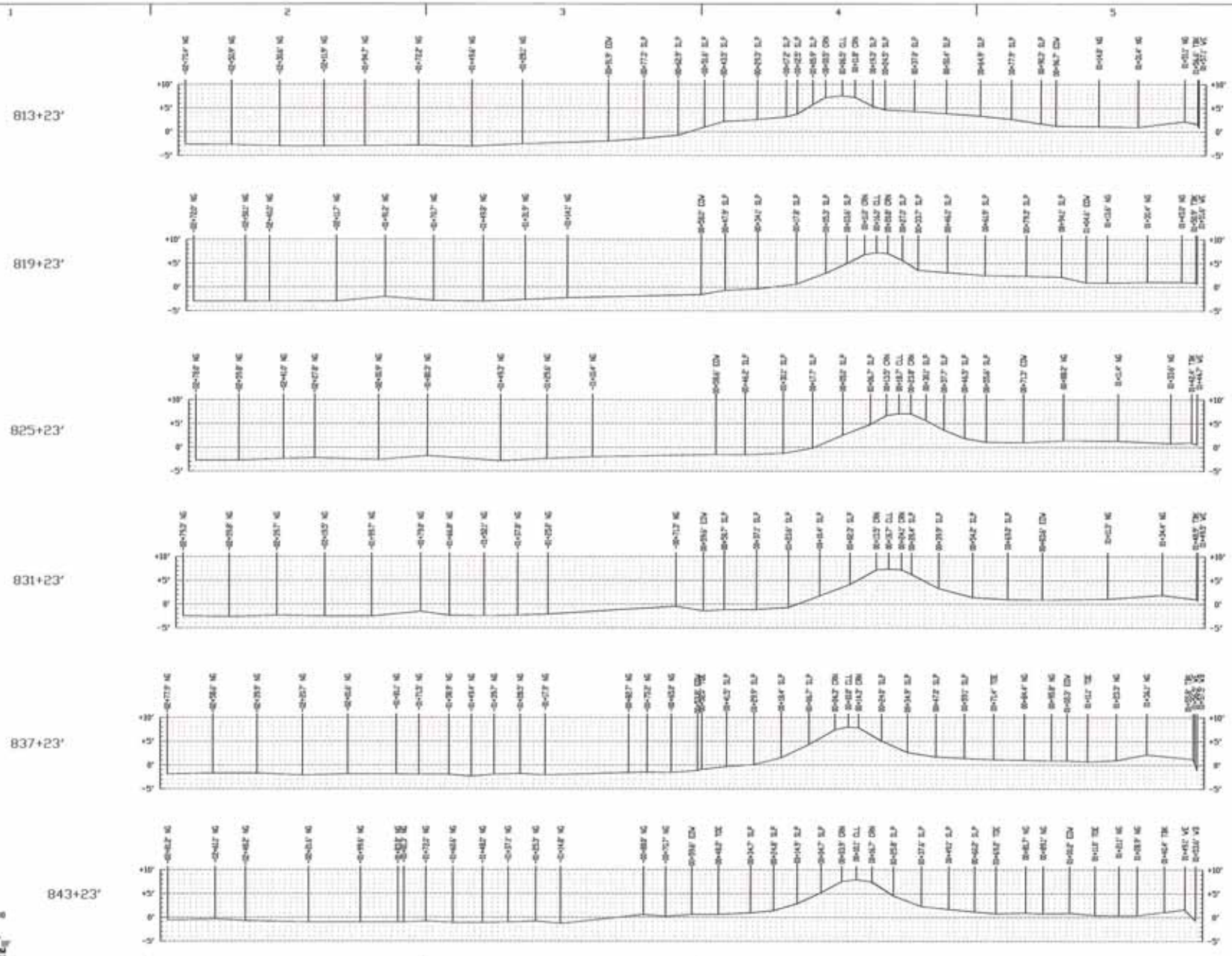
PRELIMINARY

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

SHEET IDENTIFICATION NUMBER

1 OF 3

PRELIMINARY



VERTICAL DATUM NAVD 88
ALL X-SECTIONS
HORZ. 0' 5' 10'
SCALE IN FEET
VERT. 0' 5' 10'
SCALE IN FEET

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

NO	DESCRIPTION	DATE	APPR	NO	DESCRIPTION	DATE	APPR

DESIGNED BY | DATE 10/31/2008
DWN BY | CKD BY | SOLICITATION NO.
SUBMITTED BY | CONTRACT NO.
FILE NAME | CONTRACTOR
FILE NUMBER
SCALE | PLOT SCALE | PLOT DATE

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

CH2M HILL Technologies
Transforming Ideas

VETERANS AND COUNTY OF ORLEANS, LA
HURRICANE PROTECTION PROJECT

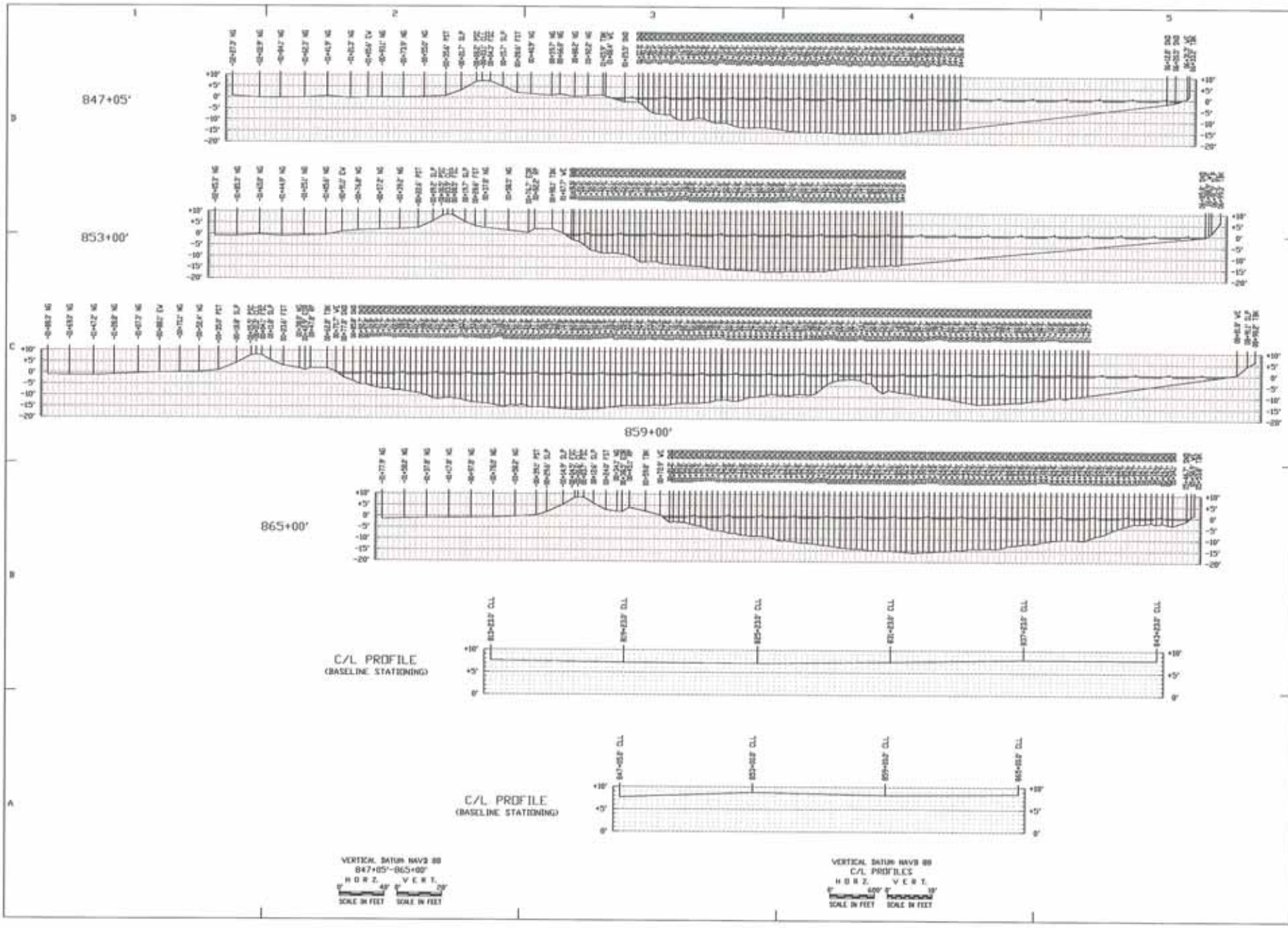
ENGINEERING & TERRITIC RIVER-VERONICA
HARVEY CANAL VCT DAM, CONTROL-HARVEY
TO MAIN CONTROL PURPOSE STRUCTURE

JEFFERSON PARISH, LOUISIANA

STA. 813+23' 3/L TO STA. 843+23' 3/L
Dal Central Pump Station to the Central Pump Station

SHEET IDENTIFICATION NUMBER
2 OF 3

PRELIMINARY



PRELIMINARY

US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT

NUM	DESCRIPTION	DATE	APPR	NUM	DESCRIPTION	DATE	APPR

DATE SYSTEM
SOLICITATION NO
CONTRACT NO
FILE NUMBER

DESIGNED BY
DWN BY
CKD BY
SUBMITTED BY
FILE NAME
SIZE
PLOT SCALE
PLOT DATE

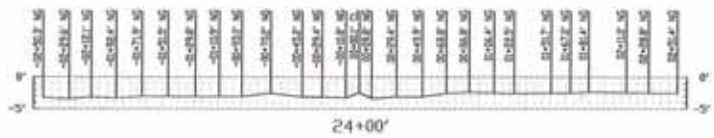
U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

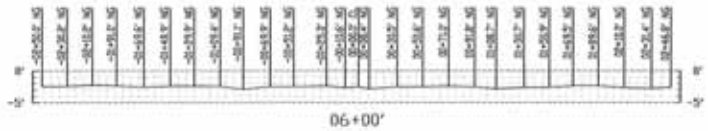
D'Q Technologies

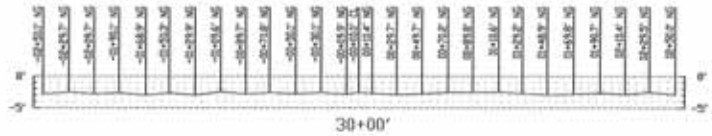
HURRICANE PROTECTION PROJECT
ENGINEERING ALTERNATIVE REDESIGN-VETERANS MEMORIAL BLVD. VET MEM LEVEE-PHASE V
TO D.D ESTELLE PUMPING STATION
JEFFERSON PARISH, LOUISIANA
Proposed Alternate V-Line Levee

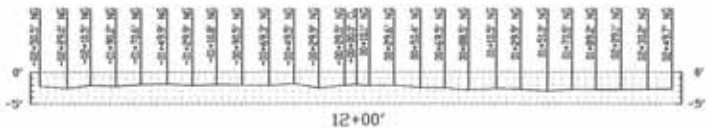
SHEET IDENTIFICATION NUMBER
1 OF 2

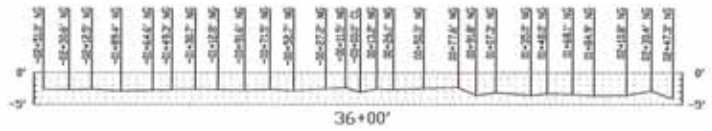
PRELIMINARY

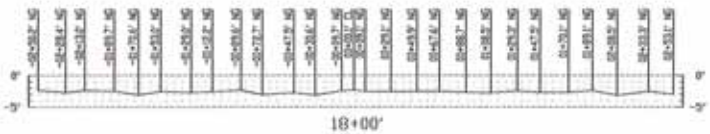


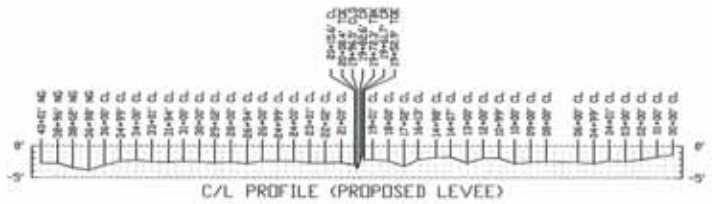












VERTICAL DATUM NAVD 88
00+00'-36+00'
HORZ. VERT.
SCALE IN FEET SCALE IN FEET

VERTICAL DATUM NAVD 88
C/L PROFILE (PROPOSED LEVEE)
HORZ. VERT.
SCALE IN FEET SCALE IN FEET

US ARMY CORPS OF ENGINEERS
NEW ORLEANS DISTRICT

NO.	DESCRIPTION	DATE	APPR.	NO.	DESCRIPTION	DATE	APPR.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

DESIGNED BY
DATE 10/01/2008
DWN BY
CKD BY
SUBMITTED BY
SELECTED NO.
CONTRACT NO.
FILE NAME
FILE NUMBER
TITLE
PLOT SCALE
PLOT DATE

C+C Technologies

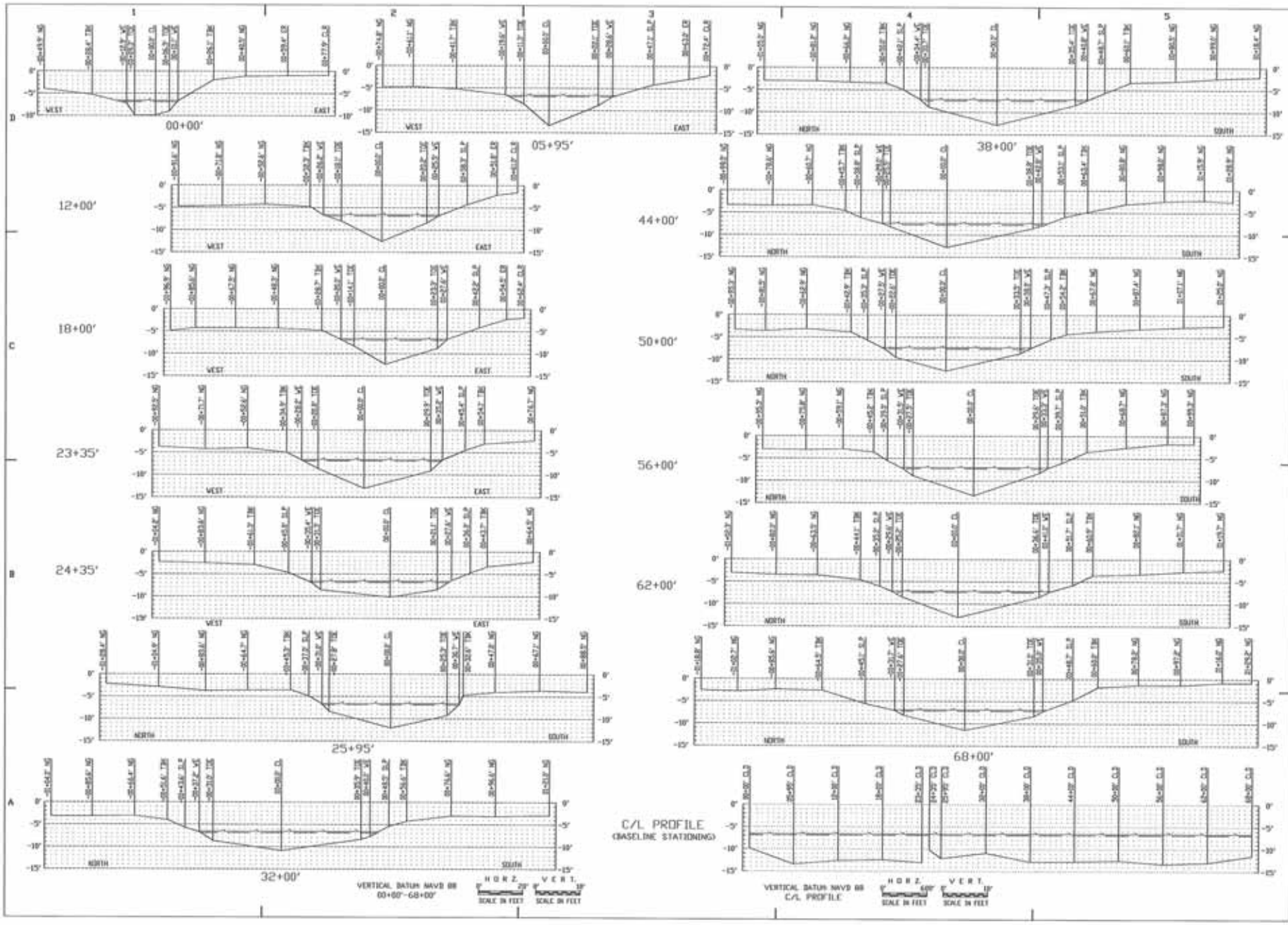
VICKSBURG VICINITY, WARREN CO., MS
MISSISSIPPI RIVER & TRIBUTARIES
ENGINEERING ALTERNATIVE REVIEW/FEASIBILITY STUDY (DMS), KOT DMS LEVEES/FLOODWALL
TL-1, LEVEE SYSTEM, PHASE 2, SITE 1
Proposed Alternate V-Line Levee

SHEET IDENTIFICATION NUMBER
2 OF 2

PRELIMINARY

US ARMY CORPS OF ENGINEERS

SHEET IDENTIFICATION NUMBER

1 OF 2

PRELIMINARY